APPENDIX C

- **2008 Congestion Management Program Update (Excerpts)**
- **Year 2030 Intersection LOS Worksheets (HCM Method) With and Without Project Traffic**

APPENDIX C

- **2006 Congestion Management Program Update (Excerpts)**
- **Year 2030 Intersection LOS Worksheets (HCM Method) With and Without Project Traffic**

7 PAGES
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2006 CONGESTION MANAGEMENT PROGRAM UPDATE

EXCERPTS
pg. 9, 18, 20, 21, 56, 68.

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CHAPTER 2
CMP ROADWAY MONITORING

INTRODUCTION

CMP enabling legislation requires that SANDAG define and monitor the performance of a CMP roadway system. In instances when there is a decline in the system's performance or when performance standards are not met, then certain remedial actions are to be taken. The requirements for roadway monitoring are summarized below.

- A CMP roadway system is to be designated by SANDAG and, at a minimum, the system shall include all state highways and principal arterials. All new state highways and principal arterials shall be added to the designated system.
- A CMP Level of Service (LOS) standard is to be established for the CMP system. At a minimum, the standard cannot be below LOS "E" or the LOS in place when the CMP system was originally designated, whichever is the lower standard.
- The CMP system shall be monitored every two years against the CMP LOS standard.
- Whenever the CMP system LOS standards are not met for a given roadway segment, then a Deficiency Plan shall be prepared (See Chapter 6 for a further discussion concerning Deficiency Plans.)

ROADWAY MONITORING DEFINITIONS

Roadway System Definition

As required by State legislation, the original CMP roadway system was defined in 1991, consisting of freeways, state highways, and principal arterials. Since 1991, there have been a number of additions to the system, primarily adding new highways as they were opened. The current CMP system is shown in Map 2-1 and with the segment definitions provided in Exhibit 2-1. As shown on Table 2-1 below, the 2004 CMP roadway system consists of 704 route miles (center-line), including 323 route miles of state freeways, 283 route miles of state highways, and 98 miles of CMP principal arterials. The CMP system, shown in Map 2-1, includes those roadways that serve the highest level of regional traffic, serve major regional facilities, and provide significant inter-community traffic service and freeway congestion relief. The CMP system includes only 8 percent of total street and highway mileage, but currently carries about 61 percent of total Vehicle Miles Traveled (VMT) within the region.

* DOES NOT ACCOUNT FOR RECENT 6-LANE IMPROVEMENTS

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Exhibit 2-3 (Cont.)
Deficient Roadway Segments[1]

CMP Route	Limits	Affected Local Jurisdiction
Conventional Highways		
SR 67	Mapleview Street to SR 78	San Diego County & Poway
SR 76	Melrose Avenue to East Vista Way	Oceanside & San Diego County
	East Vista Way to South Mission Avenue	San Diego County
SR 78	Washington Avenue to Oak Hill Road	Escondido
	SR 67 to 7th Street	San Diego County
SR 94	Avocado Boulevard to Jamacha Boulevard	San Diego County
	Jamacha Boulevard to Jamacha Road	San Diego County
	Jamacha Road to Lyons Valley Road	San Diego County
Arterials		
Palomar Airport Road	I-5 to College Boulevard	Carlsbad
San Marcos Boulevard	Rancho Santa Fe Road to SR 78[2]	San Marcos
Olivenhain Road	El Camino Real to Rancho Santa Fe Road[2]	Encinitas *
* Rancho Santa Fe Road	Olivenhain Road to Melrose Drive	Carlsbad
La Jolla Village Drive	Lebon Dive to Town Center Drive	San Diego City
La Jolla Village Drive	Town Center Drive to Eastgate Mall[2]	San Diego City
Miramar Road	Cabot Drive to Black Mountain Road[2]	San Diego City
Miramar Road	Black Mountain Road to I-15	San Diego City
Balboa Avenue	Ruffin Road to I-15[2]	San Diego City
Sea World Drive	I-5 to Friars Road[2]	San Diego City
Friars Road	Sea World Drive to Napa Street[2]	San Diego City
Friars Road	Napa Street to Via Las Cumbres	San Diego City
Friars Road	River Run Drive to I-15[2]	San Diego City
Nimitz Boulevard	West Point Loma to Chatsworth Boulevard[2]	San Diego City
Nimitz Boulevard	Chatsworth Boulevard to Rosecrans Street[2]	San Diego City
North Harbor Drive	Winship Lane to Laurel Street[2]	San Diego City
North Harbor Drive	Laurel Street to Hawthorne Street[2]	San Diego City
Pacific Highway	Hawthorne Street to Harbor Drive[2]	San Diego City
Harbor Drive	Pacific Highway to 5th Avenue[2]	San Diego City
Harbor Drive	28th Street to 32nd Street[2]	San Diego City
Harbor Drive	32nd Street to I-5	San Diego & National City

[1] All segments not meeting CMP Level of Service standard are considered deficient and will require Deficiency Plans.

[2] This is a new deficient segment previously unreported.

Other LOS Changes

There were no other changes in other conventional highway LOS designations.

CMP Arterials

Deficient Segments

For CMP arterials there has been an increase in the number of deficient segments as shown in Table 2-6, however deficient mileage actually declined by 1.8 miles. Specific changes in LOS F designations follow Table 2-6.

Table 2-6
Changes in Deficient (LOS F) Arterial Segments

	2004 CMP	2006 CMP	Difference
Number LOS "F" Segments	19	21	+2
LOS "F" Mileage	25.20	23.39	-1.8

Improved Arterial Segments: When compared to the previous CMP update (2004), the following previously deficient CMP arterials no longer operate at LOS F and do not require deficiency plans:

- El Camino Real; College Blvd. to Oceanside Blvd.
- Palomar Airport Road; El Camino Real to Business Park Dr.
- Scripps Poway Parkway; Scripps Highland Rd. to Scripps Summit Dr.
- Balboa Avenue; Clairemont Dr. to Genesee Ave.
- Fletcher Parkway; Cuyamaca St. to SR 67
- Nimitz Boulevard; Rosecrans St. to N. Harbor Dr. (partial)
- Otay Mesa Road; Otay Mesa Center Rd. to Piper Ranch Road

New Deficient Segments: Based upon 2005 traffic data the following new, previously unreported deficient segments now operate at LOS F and will require deficiency plans:

- San Marcos Boulevard; Rancho Santa Fe Rd to SR 78.
- Olivenhain Road; El Camino Real to Rancho Santa Fe Rd.
- La Jolla Village Drive; Towne Centre Dr. to Eastgate Mall
- Miramar Road; Cabot Dr. to Black Mountain Rd.
- Balboa Avenue; Ruffin Rd. to I-15
- Friars Road; Sea World Drive to Morena Blvd.
- Friars Road; River Run Dr. to W. Ramp I-15
- North Harbor Drive; Laurel St. to Hawthorne St.
- Pacific Highway; Hawthorne St. to Harbor Dr.
- Harbor Drive; Pacific Highway to 5th Ave.
- Harbor Drive; 28th St. to 32nd St.

Other LOS Changes

Based upon a review of other LOS changes for CMP arterials there has been an overall net increase in improved segments and mileage as noted in Table 2-7 below.

Table 2-7
Summary of Changes in Other Arterial LOS Designations

	Number	Mileage
Improved Segments	17	23.87
Worsening Segments	12	13.38
Net Improved Segments	+5	+10.49

Conclusions

As required by state law and SANDAG policy, CMP Deficiency Plans are required for the deficient CMP roadway segment identified in Exhibit 2-2. One strategy by which SANDAG addresses this requirement is through the Regional Transportation Plan. If the RTP improvements result in a deficient segment improving to LOS E or better, then no further action is required. For those segments that are not addressed by RTP improvements additional analysis and recommendations will be required. The specific Deficiency Plan requirements, SANDAG's approach to meeting these requirements, and status report on plan preparation are discussed in greater detail in Chapter 6, Deficiency Plans.

Automated Traffic Data Collection

As noted in the Evaluation Methodology section, data is collected automatically for many freeway segments using loop detectors embedded in the freeway pavement. Regional funds currently are programmed to install additional loop detectors on the region's freeway system. In cooperation with the University of California, Berkeley, SANDAG and Caltrans are using this data under a program titled "Performance Monitoring Systems (PeMS)" to provide ongoing freeway performance monitoring data. An expansion of automated traffic monitoring to include conventional highways and CMP arterials would be beneficial to the region in two ways. First, the data would be collected automatically, thus reducing the costs for manual data collection and reduce the burden on local agencies. Second, data would be collected on an ongoing basis, allowing continuous monitoring of traffic data to assist in identifying trends in traffic growth. Finally, expansion of automated data collection would allow the performance monitoring features of PeMS to be expanded throughout the region.

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DEFICIENCY PLAN APPROACH

As required by statute, the deficient roadway segments identified in Exhibit 2-2 in Chapter 2 (Roadway Monitoring) will require a deficiency plan analysis. Due to the systemwide nature of congestion in the San Diego region the approach chosen to address the deficiency plan requirements is through the Regional Transportation Plan (RTP). The RTP is the primary transportation policy document in the San Diego region that identifies long-range transportation issues and proposes near-term and long-range programs and projects to address those issues. The process to use the RTP to address the deficiency plan requirements is described below and illustrated in Exhibit 6-1.

- The current Regional Transportation Plan will be evaluated by SANDAG to determine if RTP recommended improvements result in deficient roadway segments improving to the CMP LOS standard (LOS E).

- Deficient roadway segments that are not eliminated by the RTP recommendations should be included in either subregional planning studies or addressed in individual area or corridor Deficiency Plans.

- Some of the remaining deficient segments may be located within the study area of a new subregional planning study. SANDAG and local jurisdictions should collaborate to identify opportunities for subregional planning studies and establish criteria to prioritize them. SANDAG will process budget amendments as necessary to include prioritized subregional studies in the Overall ork Program. These studies can help coordinate the development of regional highway, light rail, and bus-rapid transit projects with local land use and transportation plans. Any deficient CMP segments within the study area boundary or affected by development within the study area should be analyzed in those studies.

- Individual or corridor deficiency plans should be prepared for segments not addressed by either the RTP or a subregional planning study. SANDAG will collaborate with local agencies to initiate Deficiency Plan preparation outside the context of the RTP or subregional planning studies.

- Deficiency plans should consider low-cost and near-term improvements to address congestion.

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Table A-3
2006 CMP Arterials Level of Service Analysis

CMP Route / Segments	Length (Miles)	2005 LOS	Exceed Standard?
Manchester Avenue/El Camino Real (I-5 to SR 76/Mission Avenue)			
Manchester Ave.; I-5 to El Camino Real	1.13	B	
El Camino Real; Manchester Ave. to Encinitas Boulevard	1.72	B	
El Camino Real; Encinitas Boulevard to Garden View Road	0.88	D	
El Camino Real; Garden View Road to Olivenhain Road	0.63	D	
OK * El Camino Real; Olivenhain Road to College Boulevard	5.91	D	NO
El Camino Real; College Boulevard to Plaza Drive	3.88	E	
El Camino Real; Plaza Drive to Vista Way	0.26	E	
El Camino Real; Vista Way to Oceanside Boulevard	1.35	B	
El Camino Real; Oceanside Boulevard to SR 76	1.69	B	
Palomar Airport Road/San Marcos Boulevard (I-5 to SR 78)			
Palomar Airport Rd; I-5 to College Boulevard	1.32	F	Yes
Palomar Airport Rd; College Boulevard to El Camino Real	2.33	B	
Palomar Airport Rd; El Camino Real to Business Park Drive	2.31	B	
San Marcos Blvd.; Business Park Dr. to Rancho Santa Fe Rd	1.19	D	
San Marcos Blvd.; Rancho Santa Fe Road to SR 78	1.88	F	Yes
Olivenhain Road/Rancho Santa Fe Road (El Camino Real to SR 78)			
* Olivenhain Rd.; El Camino Real to Rancho Santa Fe Road	1.01	F	Yes
* Rancho Santa Fe Rd.; Olivenhain Road to Melrose Drive	3.06	F	Yes
OK * Rancho Santa Fe Rd.; Melrose Drive to San Marcos Blvd.	2.20	A	NO
Rancho Santa Fe Rd.; San Marcos Blvd. to SR 78	1.46	B	
Centre City Parkway (I-15 North to I-15 South)			
Centre City Pkwy.; Country Club Lane to Mission Ave.	2.21	D	
Centre City Pkwy.; Mission Ave. to 2nd Avenue	0.82	D	
Centre City Pkwy; 2nd Avenue to Felicita Towne Center	1.49	B	
Centre City Pkwy; Felicita Towne Center to Citracado Pkwy.	0.74	A	
Scripps Poway Parkway (I-15 to SR 67)			
Scripps Poway Pkwy.; I-15 to Scripps Highland Drive	0.29	E	
Scripps Poway Pkwy.; Scripps Highland Dr to Scripps Summit	0.43	D	
Scripps Poway Pkwy.; Scripps Summit to Springbrook Dr.	1.71	C	
Scripps Poway Pkwy.; Springbrook Dr to Pomerado Road	0.78	C	
Scripps Poway Pkwy.; Pomerado Road to Community Road	0.90	C	
Scripps Poway Pkwy.; Community Road to SR 67	4.70	A	

2005 STUDY DOES NOT ACCOUNT FOR IMPROVEMENTS TO SIX LANES

YEAR 2030
RAW DATA

Intersection Number	Node Number	Intersection
1	7878	Rancho Santa Fe Rd/San Marcos Blvd
2	7944	Rancho Santa Fe Rd/Lake San Marcos Dr
3	8013	Rancho Santa Fe Rd/Camino Del Arroyo Dr
4	8242	Rancho Santa Fe Rd/Island Dr
5	7907	Melrose Dr/Palomar Airport Rd
6	8076	Melrose Dr/Rancho Bravado
7	8099	Melrose Dr/Poinsettia Ln/Paseo Corto
8	22233	Melrose Dr/Carillo Wy
9	8316	Melrose Dr/Alga Rd
10	8404	Rancho Santa Fe Rd/Melrose Dr
11	8438	Rancho Santa Fe Rd/La Costa Meadows Dr
12	23261	Rancho Santa Fe Rd/San Elijo Rd
13	8712	Rancho Santa Fe Rd/La Costa Ave
14	8754	Rancho Santa Fe Rd/Camino De Los Coches
15	8793	Rancho Santa Fe Rd/Calle Barcelona
16	8820	Rancho Santa Fe Rd/Olivenhain Rd
17	8994	Rancho Santa Fe Rd/El Camino Del Norte
18	8470	El Camino Real/Aviara Pkwy/Alga Rd
19	8625	El Camino Real/Costa Del Mar Rd
20	8677	I-5 SB Ramps/La Costa Ave
21	8671	I-5 NB Ramps/La Costa Ave
22	8669	Piraeus Ave/La Costa Ave
23	8645	Saxony Rd/La Costa Ave
24	8662	El Camino Real/La Costa Ave
25	8653	La Costa Ave/Viejo Castilla Wy
26	8658	La Costa Ave/Romeria St
27	8656	La Costa Ave/Cadencia St
28	8853	I-5 SB Ramps/Leucadia Blvd
29	8857	I-5 NB Ramps/Leucadia Blvd
30	8855	Clark Ave/Leucadia Blvd
31	8859	Saxony Rd/Leucadia Blvd
32	8851	Sidonia St/Leucadia Blvd
33	8849	Quail Gardens Dr/Leucadia Blvd
34	8818	Garden View Rd/Leucadia Blvd
35	8829	Town Center Pl/Leucadia Blvd
36	8834	El Camino Real/Leucadia Blvd/Olivenhain Rd
37	22196	Amargosa Dr/Olivenhain Rd
38	8729	Calle Timiteo/La Costa Ave
39	8723	Camino De Los Coches/La Costa Ave
40	8540	San Elijo Road/Melrose Drive
41	8574	San Elijo Road/Fallsview Road

2030 AM

FROM	THRU	TO	Combined Purposes	ak Hour Fac	Movement	Total Peak Hour
Rancho Santa Fe Rd/El Camino Del Norte						
8975	8994	8996	1813	0.038	SBL	69
8975	8994	9168	19613	0.038	SBT	745
8996	8994	8975	9246	0.038	WBR	351
8996	8994	9168	2040	0.038	WBL	78
9168	8994	8975	10984	0.038	NBT	417
9168	8994	8996	730	0.038	NBR	28
Rancho Santa Fe/Olivenhain Rd						
4287	8820	8793	0	0.038	SBL	0
4287	8820	8846	615	0.038	SBT	23
4287	8820	22196	0	0.038	SBR	0
8793	8820	4287	0	0.038	WBR	0
8793	8820	8846	11956	0.038	WBL	454
8793	8820	22196	25845	0.038	WBT	982
8846	8820	4287	174	0.038	NBT	7
8846	8820	8793	15491	0.038	NBR	589
8846	8820	22196	11599	0.038	NBL	441
22196	8820	4287	0	0.038	EBL	0
22196	8820	8793	25996	0.038	EBT	988
22196	8820	8846	1895	0.038	EBR	72
Rancho Santa Fe/Calle Barcelona						
1063	8793	8754	2922	0.038	WBR	111
1063	8793	8820	3777	0.038	WBL	144
1063	8793	23253	3097	0.038	WBT	118
8754	8793	1063	751	0.038	SBL	29
8754	8793	8820	33262	0.038	SBT	1264
8754	8793	23253	1526	0.038	SBR	58
8820	8793	1063	1055	0.038	NBR	40
8820	8793	8754	40173	0.038	NBT	1527
8820	8793	23253	259	0.038	NBL	10
23253	8793	1063	948	0.038	EBT	36
23253	8793	8754	2763	0.038	EBL	105
23253	8793	8820	762	0.038	EBR	29
Rancho Santa Fe/Camino De Los Coches						
8731	8754	8762	666	0.038	SBL	25
8731	8754	8793	33763	0.038	SBT	1283
8762	8754	8731	4239	0.038	WBR	161
8762	8754	8793	1775	0.038	WBL	67
8793	8754	8731	44118	0.038	NBT	1676
8793	8754	8762	1741	0.038	NBR	66
Rancho Santa Fe/La Costa Ave						
8707	8712	8729	4447	0.038	EBT	169
8707	8712	8731	4558	0.038	EBR	173
8707	8712	22194	11664	0.038	EBL	443
8729	8712	8707	3627	0.038	WBT	138
8729	8712	8731	463	0.038	WBL	18
8729	8712	22194	1505	0.038	WBR	57
8731	8712	8707	2521	0.038	NBL	96
8731	8712	8729	866	0.038	NBR	33
8731	8712	22194	44970	0.038	NBT	1709
22194	8712	8707	2897	0.038	SBR	110
22194	8712	8729	526	0.038	SBL	20
22194	8712	8731	29409	0.038	SBT	1118

2030 AM

FROM	THRU	TO	Combined Purposes	ak Hour Fac	Movement	Total Peak Hour
Rancho Santa Fe/San Elijo Rd						
8493	23261	8529	5164	0.038	SBL	196
8493	23261	22190	19089	0.038	SBT	725
8529	23261	8493	9942	0.038	WBR	378
8529	23261	22190	17418	0.038	WBL	662
22190	23261	8493	38993	0.038	NBT	1482
22190	23261	8529	30045	0.038	NBR	1142
Rancho Santa Fe/La Costa Meadows						
8422	8438	8451	2189	0.038	SBL	83
8422	8438	8477	24254	0.038	SBT	922
8451	8438	8422	918	0.038	WBR	35
8451	8438	8477	0	0.038	WBL	0
8477	8438	8422	48936	0.038	NBT	1860
8477	8438	8451	0	0.038	NBR	0
Rancho Santa Fe Rd/Melrose Dr						
8355	8404	8407	7042	0.038	SBR	268
8355	8404	8411	3829	0.038	SBL	146
8355	8404	8422	14423	0.038	SBT	548
8407	8404	8355	22514	0.038	EBL	856
8407	8404	8411	10969	0.038	EBT	417
8407	8404	8422	12019	0.038	EBR	457
8411	8404	8355	2778	0.038	WBR	106
8411	8404	8407	15829	0.038	WBT	602
8411	8404	8422	0	0.038	WBL	0
8422	8404	8355	23917	0.038	NBT	909
8422	8404	8407	25936	0.038	NBL	986
8422	8404	8411	0	0.038	NBR	0
Rancho Santa Fe Rd/Island Dr						
4313	8242	8214	1114	0.038	EBL	42
4313	8242	8300	1098	0.038	EBR	42
8214	8242	4313	200	0.038	SBR	8
8214	8242	8300	24196	0.038	SBT	919
8300	8242	4313	294	0.038	NBL	11
8300	8242	8214	48915	0.038	NBT	1859
Rancho Santa Fe Rd/Camino del Arroyo						
790	8013	7944	66	0.038	EBL	3
790	8013	8132	839	0.038	EBR	32
790	8013	14917	267	0.038	EBT	10
7944	8013	790	50	0.038	SBR	2
7944	8013	8132	20837	0.038	SBT	792
7944	8013	14917	3054	0.038	SBL	116
8132	8013	790	398	0.038	NBL	15
8132	8013	7944	53080	0.038	NBT	2017
8132	8013	14917	1626	0.038	NBR	62
14917	8013	790	66	0.038	WBT	3
14917	8013	7944	2785	0.038	WBR	106
14917	8013	8132	614	0.038	WBL	23
Rancho Santa Fe Rd/Lake San Marcos Dr						
804	7944	7878	3668	0.038	WBR	139
804	7944	8013	568	0.038	WBL	22
7878	7944	804	642	0.038	SBL	24
7878	7944	8013	23372	0.038	SBT	888
8013	7944	804	360	0.038	NBR	14
8013	7944	7878	55570	0.038	NBT	2112

2030 AM

FROM	THRU	TO	Combined Purposes	ak Hour Fac	Movement	Total Peak Hour
Rancho Santa Fe Rd/San Marcos Blvd						
7841	7878	7856	15392	0.038	SBR	585
7841	7878	7880	2151	0.038	SBL	82
7841	7878	7944	10537	0.038	SBT	400
7856	7878	7841	5140	0.038	EBL	195
7856	7878	7880	23875	0.038	EBT	907
7856	7878	7944	839	0.038	EBR	32
7880	7878	7841	1808	0.038	WBR	69
7880	7878	7856	37022	0.038	WBT	1407
7880	7878	7944	12638	0.038	WBL	480
7944	7878	7841	20821	0.038	NBT	791
7944	7878	7856	2462	0.038	NBL	94
7944	7878	7880	35955	0.038	NBR	1366
Melrose Dr/Alga Rd						
4268	8316	8292	629	0.038	WBR	24
4268	8316	8331	338	0.038	WBT	13
4268	8316	8407	548	0.038	WBL	21
8292	8316	4268	54	0.038	SBL	2
8292	8316	8331	1296	0.038	SBR	49
8292	8316	8407	16281	0.038	SBT	619
8331	8316	4268	81	0.038	EBT	3
8331	8316	8292	11866	0.038	EBL	451
8331	8316	8407	24935	0.038	EBR	948
8407	8316	4268	90	0.038	NBR	3
8407	8316	8292	36506	0.038	NBT	1387
8407	8316	8331	13355	0.038	NBL	507
Melrose Dr/Carillo Way						
808	22233	884	51	0.038	WBT	2
808	22233	8139	277	0.038	WBR	11
808	22233	8220	1176	0.038	WBL	45
884	22233	808	46	0.038	EBT	2
884	22233	8139	3160	0.038	EBL	120
884	22233	8220	1752	0.038	EBR	67
8139	22233	808	167	0.038	SBL	6
8139	22233	884	450	0.038	SBR	17
8139	22233	8220	14704	0.038	SBT	559
8220	22233	808	454	0.038	NBR	17
8220	22233	884	596	0.038	NBL	23
8220	22233	8139	47952	0.038	NBT	1822
Melrose Dr/Poinsettia Ln						
816	8099	8077	5	0.038	WBR	0
816	8099	8139	512	0.038	WBL	19
816	8099	8174	605	0.038	WBT	23
8077	8099	816	6	0.038	SBL	0
8077	8099	8139	13870	0.038	SBT	527
8077	8099	8174	4670	0.038	SBR	177
8139	8099	816	263	0.038	NBR	10
8139	8099	8077	49853	0.038	NBT	1894
8139	8099	8174	1274	0.038	NBL	48
8174	8099	816	234	0.038	EBT	9
8174	8099	8077	18926	0.038	EBL	719
8174	8099	8139	939	0.038	EBR	36
Melrose Dr/Rancho Bravado						
4269	8076	7907	879	0.038	EBL	33
4269	8076	8077	182	0.038	EBR	7
7907	8076	4269	65	0.038	SBR	2
7907	8076	8077	18364	0.038	SBT	698
8077	8076	4269	89	0.038	NBL	3
8077	8076	7907	68695	0.038	NBT	2610

FROM	THRU	TO	Combined Purposes	ak Hour Fac	Movement	Total Peak Hour
Melrose Dr/Palomar Airport Rd						
7835	7907	7912	18132	0.038	SBR	689
7835	7907	7942	4288	0.038	SBL	163
7835	7907	8076	11630	0.038	SBT	442
7912	7907	7835	18929	0.038	EBL	719
7912	7907	7942	26334	0.038	EBT	1001
7912	7907	8076	5119	0.038	EBR	195
7942	7907	7835	6390	0.038	WBR	243
7942	7907	7912	44610	0.038	WBT	1695
7942	7907	8076	1680	0.038	WBL	64
8076	7907	7835	42483	0.038	NBT	1614
8076	7907	7912	14304	0.038	NBL	544
8076	7907	7942	12787	0.038	NBR	486
El Camino Real/Olivenhain Rd						
8785	8834	8829	2575	0.038	SBL	98
8785	8834	8862	24026	0.038	SBT	913
8785	8834	22197	1219	0.038	SBL	46
8829	8834	8785	800	0.038	EBL	30
8829	8834	8862	1105	0.038	EBR	42
8829	8834	22197	13058	0.038	EBT	496
8862	8834	8785	32816	0.038	NBT	1247
8862	8834	8829	271	0.038	NBL	10
8862	8834	22197	12984	0.038	NBR	493
22197	8834	8785	10677	0.038	WBR	406
22197	8834	8829	20498	0.038	WBT	779
22197	8834	8862	11806	0.038	WBL	449
El Camino Real/La Costa Ave						
8647	8662	8660	2756	0.038	SBL	105
8647	8662	8665	16255	0.038	SBR	618
8647	8662	8684	27391	0.038	SBT	1041
8660	8662	8647	10829	0.038	WBR	412
8660	8662	8665	7344	0.038	WBT	279
8660	8662	8684	1140	0.038	WBL	43
8665	8662	8647	29653	0.038	EBL	1127
8665	8662	8660	3735	0.038	EBT	142
8665	8662	8684	3705	0.038	EBR	141
8684	8662	8647	51185	0.038	NBT	1945
8684	8662	8660	863	0.038	NBR	33
8684	8662	8665	7466	0.038	NBL	284
El Camino Real/Costa Del Mar Rd						
1023	8625	8570	3230	0.038	WBR	123
1023	8625	8647	4314	0.038	WBL	164
8570	8625	1023	1520	0.038	SBL	58
8570	8625	8647	42872	0.038	SBT	1629
8647	8625	1023	2160	0.038	NBR	82
8647	8625	8570	89948	0.038	NBT	3418

2030 AM

FROM	THRU	TO	Combined Purposes	ak Hour Fac	Movement	Total Peak Hour
El Camino Real/Alga Rd						
8426	8470	8467	897	0.038	SBR	34
8426	8470	8472	3382	0.038	SBL	129
8426	8470	8570	23737	0.038	SBT	902
8467	8470	8426	1824	0.038	EBL	69
8467	8470	8472	5877	0.038	EBT	223
8467	8470	8570	5411	0.038	EBR	206
8472	8470	8426	8088	0.038	WBR	307
8472	8470	8467	7478	0.038	WBT	284
8472	8470	8570	11901	0.038	WBL	452
8570	8470	8426	67591	0.038	NBT	2568
8570	8470	8467	10110	0.038	NBL	384
8570	8470	8472	14923	0.038	NBR	567
SB I-5 Ramps/La Costa Ave						
8623	8677	8671	3453	0.038	SBL	131
8623	8677	8680	1462	0.038	SBR	56
8623	8677	8709	0	0.038	SBT	0
8671	8677	8680	41211	0.038	WBT	1566
8671	8677	8709	13576	0.038	WBL	516
8680	8677	8671	13354	0.038	EBT	507
8680	8677	8709	3072	0.038	EBR	117
NB I-5 Ramps/La Costa Ave						
8670	8671	8654	11905	0.038	WBR	452
8670	8671	8677	53484	0.038	WBT	2032
8677	8671	8654	5723	0.038	EBL	217
8677	8671	8670	11085	0.038	EBT	421
8714	8671	8654	0	0.038	NBT	0
8714	8671	8670	3862	0.038	NBR	147
8714	8671	8677	1303	0.038	NBL	50
La Costa Ave/Piraeus St						
8645	8669	8670	29932	0.038	WBT	1137
8645	8669	8706	606	0.038	WBL	23
8670	8669	8645	14285	0.038	EBT	543
8670	8669	8706	662	0.038	EBR	25
8706	8669	8645	17799	0.038	NBR	676
8706	8669	8670	35458	0.038	NBL	1347
La Costa Ave/Saxony Rd						
8665	8645	8669	28587	0.038	WBT	1086
8665	8645	8759	2478	0.038	WBL	94
8669	8645	8665	31632	0.038	EBT	1202
8669	8645	8759	452	0.038	EBR	17
8759	8645	8665	5461	0.038	NBR	208
8759	8645	8669	1950	0.038	NBL	74

2030 AM

FROM	THRU	TO	Combined Purposes	ak Hour Fac	Movement	Total Peak Hour
La Costa Ave/Viejo Castilla Wy						
1030	8653	8676	0	0.038	SBL	0
1030	8653	22980	6533	0.038	SBR	248
8676	8653	1030	0	0.038	WBR	0
8676	8653	22980	10156	0.038	WBT	386
22980	8653	1030	664	0.038	EBL	25
22980	8653	8676	5318	0.038	EBT	202
La Costa Ave/Romeria St						
1030	8658	8656	3503	0.038	SBL	133
1030	8658	8672	0	0.038	SBR	0
1030	8658	22984	189	0.038	SBT	7
8656	8658	1030	575	0.038	WBR	22
8656	8658	8672	10156	0.038	WBT	386
8656	8658	22984	0	0.038	WBL	0
8672	8658	1030	0	0.038	EBL	0
8672	8658	8656	5318	0.038	EBT	202
8672	8658	22984	0	0.038	EBR	0
22984	8658	1030	118	0.038	NBT	4
22984	8658	8656	134	0.038	NBR	5
22984	8658	8672	0	0.038	NBL	0
La Costa Ave/Cadencia St						
1024	8656	8658	3809	0.038	SBR	145
1024	8656	8686	4659	0.038	SBL	177
8658	8656	1024	565	0.038	EBL	21
8658	8656	8686	8389	0.038	EBT	319
8686	8656	1024	806	0.038	WBR	31
8686	8656	8658	6922	0.038	WBT	263
La Costa Ave/Calle Timiteo						
1054	8729	1056	678	0.038	SBT	26
1054	8729	8712	1236	0.038	SBR	47
1054	8729	8723	1686	0.038	SBL	64
1056	8729	1054	994	0.038	NBT	38
1056	8729	8712	2836	0.038	NBL	108
1056	8729	8723	321	0.038	NBR	12
8712	8729	1054	2494	0.038	EBL	95
8712	8729	1056	1480	0.038	EBR	56
8712	8729	8723	1865	0.038	EBT	71
8723	8729	1054	3411	0.038	WBR	130
8723	8729	1056	185	0.038	WBL	7
8723	8729	8712	1522	0.038	WBT	58
SB I-5 Ramps/Leucadia Blvd						
8812	8853	8852	1345	0.038	SBR	51
8812	8853	8856	2749	0.038	SBL	104
8812	8853	8876	0	0.038	SBT	0
8852	8853	8856	11378	0.038	EBT	432
8852	8853	8876	6455	0.038	EBR	245
8856	8853	8852	5244	0.038	WBT	199
8856	8853	8876	11583	0.038	WBL	440
NB I-5 Ramps/Leucadia Blvd						
8855	8857	8848	6507	0.038	WBR	247
8855	8857	8856	15136	0.038	WBT	575
8856	8857	8848	5928	0.038	EBL	225
8856	8857	8855	8200	0.038	EBT	312
8897	8857	8848	42996	0.038	NBT	1634
8897	8857	8855	7231	0.038	NBR	275
8897	8857	8856	1692	0.038	NBL	64

2030 AM

FROM	THRU	TO	Combined Purposes	ak Hour Fac	Movement	Total Peak Hour
Leucadia Blvd/Clark Ave						
1068	8855	1091	16	0.038	SBT	1
1068	8855	8857	1158	0.038	SBR	44
1068	8855	8858	884	0.038	SBL	34
1091	8855	1068	15	0.038	NBT	1
1091	8855	8857	2131	0.038	NBL	81
1091	8855	8858	823	0.038	NBR	31
8857	8855	1068	208	0.038	EBL	8
8857	8855	1091	272	0.038	EBR	10
8857	8855	8858	14950	0.038	EBT	568
8858	8855	1068	181	0.038	WBR	7
8858	8855	1091	0	0.038	WBL	0
8858	8855	8857	18354	0.038	WBT	697
Leucadia Blvd/Saxony Rd						
8838	8859	8851	59	0.038	SBL	2
8838	8859	8858	1566	0.038	SBR	60
8838	8859	8891	2851	0.038	SBT	108
8851	8859	8838	2	0.038	WBR	0
8851	8859	8858	15655	0.038	WBT	595
8851	8859	8891	9166	0.038	WBL	348
8858	8859	8838	512	0.038	EBL	19
8858	8859	8851	14934	0.038	EBT	567
8858	8859	8891	1211	0.038	EBR	46
8891	8859	8838	2502	0.038	NBT	95
8891	8859	8851	2481	0.038	NBR	94
8891	8859	8858	1314	0.038	NBL	50
Leucadia Blvd/Sidonia St						
1076	8851	1090	9	0.038	SBT	0
1076	8851	8849	838	0.038	SBL	32
1076	8851	8859	841	0.038	SBR	32
1090	8851	1076	11	0.038	NBT	0
1090	8851	8849	897	0.038	NBR	34
1090	8851	8859	280	0.038	NBL	11
8849	8851	1076	277	0.038	WBR	11
8849	8851	1090	0	0.038	WBL	0
8849	8851	8859	23703	0.038	WBT	901
8859	8851	1076	216	0.038	EBL	8
8859	8851	1090	0	0.038	EBR	0
8859	8851	8849	17258	0.038	EBT	656
Leucadia Blvd/Quail Gardens Dr						
8818	8849	8822	339	0.038	WBR	13
8818	8849	8851	22848	0.038	WBT	868
8818	8849	8871	6245	0.038	WBL	237
8822	8849	8818	1682	0.038	SBL	64
8822	8849	8851	0	0.038	SBR	0
8822	8849	8871	1103	0.038	SBT	42
8851	8849	8818	18104	0.038	EBT	688
8851	8849	8822	23	0.038	EBL	1
8851	8849	8871	866	0.038	EBR	33
8871	8849	8818	7148	0.038	NBR	272
8871	8849	8822	187	0.038	NBT	7
8871	8849	8851	1132	0.038	NBL	43
Leucadia Blvd/Garden View Rd						
8786	8818	8829	173	0.038	SBL	7
8786	8818	8849	6973	0.038	SBR	265
8786	8818	8905	471	0.038	SBT	18
8829	8818	8786	722	0.038	WBR	27
8829	8818	8849	19323	0.038	WBT	734
8829	8818	8905	28	0.038	WBL	1
8849	8818	8786	6886	0.038	EBL	262
8849	8818	8829	17541	0.038	EBT	667
8849	8818	8905	2507	0.038	EBR	95
8905	8818	8786	3899	0.038	NBT	148
8905	8818	8829	194	0.038	NBR	7
8905	8818	8849	3135	0.038	NBL	119

FROM	THRU	TO	Combined Purposes	ak Hour Fac	Movement	Total Peak Hour
Leucadia Blvd/Town Center Pl						
1073	8829	1083	97	0.038	SBT	4
1073	8829	8818	477	0.038	SBR	18
1073	8829	8834	0	0.038	SBL	0
1083	8829	1073	83	0.038	NBT	3
1083	8829	8818	783	0.038	NBL	30
1083	8829	8834	1202	0.038	NBR	46
8818	8829	1073	1996	0.038	EBL	76
8818	8829	1083	2152	0.038	EBR	82
8818	8829	8834	13760	0.038	EBT	523
8834	8829	1073	0	0.038	WBR	0
8834	8829	1083	4531	0.038	WBL	172
8834	8829	8818	18813	0.038	WBT	715
Olivenhain Rd/Amargosa Dr						
4287	22196	8820	0	0.038	SBL	0
4287	22196	8865	40	0.038	SBT	2
4287	22196	22197	5091	0.038	SBR	193
8820	22196	4287	0	0.038	WBR	0
8820	22196	8865	174	0.038	WBL	7
8820	22196	22197	37270	0.038	WBT	1416
8865	22196	4287	54	0.038	NBT	2
8865	22196	8820	1807	0.038	NBR	69
8865	22196	22197	1713	0.038	NBL	65
22197	22196	4287	514	0.038	EBL	20
22197	22196	8820	26084	0.038	EBT	991
22197	22196	8865	283	0.038	EBR	11
Camino De Los Coches/La Costa Ave						
1051	8723	8729	1741	0.038	WBT	66
1051	8723	8740	1338	0.038	WBL	51
8729	8723	1051	1426	0.038	EBT	54
8729	8723	8740	2445	0.038	EBR	93
8740	8723	1051	1283	0.038	NBR	49
8740	8723	8729	3378	0.038	NBL	128
San Elijo Road/Melrose Dr						
8517	8540	8529	1413	0.038	SBR	54
8517	8540	8574	7378	0.038	SBL	280
8529	8540	8517	1709	0.038	EBL	65
8529	8540	8574	30385	0.038	EBT	1155
8574	8540	8517	15393	0.038	WBR	585
8574	8540	8529	27802	0.038	WBT	1056
San Elijo Road/Fallsview Road						
999	8574	8540	6712	0.038	NBL	255
999	8574	8578	4331	0.038	NBR	165
8540	8574	999	7798	0.038	EBR	296
8540	8574	8578	29965	0.038	EBT	1139
8578	8574	999	5817	0.038	WBL	221
8578	8574	8540	36482	0.038	WBT	1386

Note:
Based on data provided by SANDAG

2030 PM

FROM	THRU	TO	OTAL PEA	Peak Hour Factor	Movement	Total Peak Hour
Rancho Santa Fe Rd/El Camino Del Norte						
8975	8994	8996	8570	0.034	SBL	291
8975	8994	9168	10266	0.034	SBT	349
8996	8994	8975	3330	0.034	WBR	113
8996	8994	9168	1615	0.034	WBL	55
9168	8994	8975	16690	0.034	NBT	567
9168	8994	8996	2799	0.034	NBR	95
Rancho Santa Fe/Olivenhain Rd						
4287	8820	8793	0	0.034	SBL	0
4287	8820	8846	207	0.034	SBT	7
4287	8820	22196	0	0.034	SBR	0
8793	8820	4287	0	0.034	WBR	0
8793	8820	8846	14722	0.034	WBL	501
8793	8820	22196	28699	0.034	WBT	976
8846	8820	4287	443	0.034	NBT	15
8846	8820	8793	9996	0.034	NBR	340
8846	8820	22196	3322	0.034	NBL	113
22196	8820	4287	0	0.034	EBL	0
22196	8820	8793	35667	0.034	EBT	1213
22196	8820	8846	13831	0.034	EBR	470
Rancho Santa Fe/Calle Barcelona						
1063	8793	8754	1165	0.034	WBR	40
1063	8793	8820	1949	0.034	WBL	66
1063	8793	23253	1401	0.034	WBT	48
8754	8793	1063	3131	0.034	SBL	106
8754	8793	8820	41191	0.034	SBT	1400
8754	8793	23253	2888	0.034	SBR	98
8820	8793	1063	5899	0.034	NBR	201
8820	8793	8754	39209	0.034	NBT	1333
8820	8793	23253	555	0.034	NBL	19
23253	8793	1063	3311	0.034	EBT	113
23253	8793	8754	3452	0.034	EBL	117
23253	8793	8820	281	0.034	EBR	10
Rancho Santa Fe/Camino De Los Coches						
8731	8754	8762	2604	0.034	SBL	89
8731	8754	8793	45360	0.034	SBT	1542
8762	8754	8731	647	0.034	WBR	22
8762	8754	8793	1849	0.034	WBL	63
8793	8754	8731	39698	0.034	NBT	1350
8793	8754	8762	4129	0.034	NBR	140
Rancho Santa Fe/La Costa Ave						
8707	8712	8729	5662	0.034	EBT	193
8707	8712	8731	1127	0.034	EBR	38
8707	8712	22194	3259	0.034	EBL	111
8729	8712	8707	5531	0.034	WBT	188
8729	8712	8731	1762	0.034	WBL	60
8729	8712	22194	975	0.034	WBR	33
8731	8712	8707	5272	0.034	NBL	179
8731	8712	8729	2399	0.034	NBR	82
8731	8712	22194	32675	0.034	NBT	1111
22194	8712	8707	11157	0.034	SBR	379
22194	8712	8729	1778	0.034	SBL	60
22194	8712	8731	45074	0.034	SBT	1533
Rancho Santa Fe/San Elijo Rd						
8493	23261	8529	8453	0.034	SBL	287
8493	23261	22190	34898	0.034	SBT	1187
8529	23261	8493	2729	0.034	WBR	93
8529	23261	22190	35578	0.034	WBL	1210
22190	23261	8493	24245	0.034	NBT	824
22190	23261	8529	21507	0.034	NBR	731
Rancho Santa Fe/La Costa Meadows						
8422	8438	8451	6746	0.034	SBL	229
8422	8438	8477	43262	0.034	SBT	1471
8451	8438	8422	1990	0.034	WBR	68
8451	8438	8477	0	0.034	WBL	0
8477	8438	8422	25963	0.034	NBT	883
8477	8438	8451	0	0.034	NBR	0

2030 PM

FROM	THRU	TO	TOTAL PEA	Peak Hour Factor	Movement	Total Peak Hour
Rancho Santa Fe Rd/Melrose Dr						
8355	8404	8407	23263	0.034	SBR	791
8355	8404	8411	2639	0.034	SBL	90
8355	8404	8422	25692	0.034	SBT	874
8407	8404	8355	9347	0.034	EBL	318
8407	8404	8411	18294	0.034	EBT	622
8407	8404	8422	24316	0.034	EBR	827
8411	8404	8355	4477	0.034	WBR	152
8411	8404	8407	16051	0.034	WBT	546
8411	8404	8422	0	0.034	WBL	0
8422	8404	8355	17697	0.034	NBT	602
8422	8404	8407	10257	0.034	NBL	349
8422	8404	8411	0	0.034	NBR	0
Rancho Santa Fe Rd/Island Dr						
4313	8242	8214	413	0.034	EBL	14
4313	8242	8300	428	0.034	EBR	15
8214	8242	4313	1626	0.034	SBR	55
8214	8242	8300	51202	0.034	SBT	1741
8300	8242	4313	1165	0.034	NBL	40
8300	8242	8214	30658	0.034	NBT	1042
Rancho Santa Fe Rd/Camino del Arroyo						
790	8013	7944	58	0.034	EBL	2
790	8013	8132	492	0.034	EBR	17
790	8013	14917	233	0.034	EBT	8
7944	8013	790	83	0.034	SBR	3
7944	8013	8132	57744	0.034	SBT	1963
7944	8013	14917	6571	0.034	SBL	223
8132	8013	790	908	0.034	NBL	31
8132	8013	7944	28874	0.034	NBT	982
8132	8013	14917	1863	0.034	NBR	63
14917	8013	790	579	0.034	WBT	20
14917	8013	7944	7504	0.034	WBR	255
14917	8013	8132	3563	0.034	WBL	121
Rancho Santa Fe Rd/Lake San Marcos Dr						
804	7944	7878	1234	0.034	WBR	42
804	7944	8013	555	0.034	WBL	19
7878	7944	804	4582	0.034	SBL	156
7878	7944	8013	63843	0.034	SBT	2171
8013	7944	804	732	0.034	NBR	25
8013	7944	7878	35704	0.034	NBT	1214
Rancho Santa Fe Rd/San Marcos Blvd						
7841	7878	7856	18610	0.034	SBR	633
7841	7878	7880	3242	0.034	SBL	110
7841	7878	7944	27660	0.034	SBT	940
7856	7878	7841	12166	0.034	EBL	414
7856	7878	7880	40783	0.034	EBT	1387
7856	7878	7944	5464	0.034	EBR	186
7880	7878	7841	3706	0.034	WBR	126
7880	7878	7856	18350	0.034	WBT	624
7880	7878	7944	35302	0.034	WBL	1200
7944	7878	7841	15902	0.034	NBT	541
7944	7878	7856	1583	0.034	NBL	54
7944	7878	7880	19453	0.034	NBR	661

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FROM	THRU	TO	OTAL PEA	Peak Hour Factor	Movement	Total Peak Hour
Melrose Dr/Alga Rd						
4268	8316	8292	124	0.034	WBR	4
4268	8316	8331	121	0.034	WBT	4
4268	8316	8407	160	0.034	WBL	5
8292	8316	4268	689	0.034	SBL	23
8292	8316	8331	9512	0.034	SBR	323
8292	8316	8407	29923	0.034	SBT	1017
8331	8316	4268	479	0.034	EBT	16
8331	8316	8292	1903	0.034	EBL	65
8331	8316	8407	22017	0.034	EBR	749
8407	8316	4268	673	0.034	NBR	23
8407	8316	8292	15990	0.034	NBT	544
8407	8316	8331	28396	0.034	NBL	965
Melrose Dr/Carillo Way						
808	22233	884	60	0.034	WBT	2
808	22233	8139	281	0.034	WBR	10
808	22233	8220	579	0.034	WBL	20
884	22233	808	72	0.034	EBT	2
884	22233	8139	1117	0.034	EBL	38
884	22233	8220	976	0.034	EBR	33
8139	22233	808	680	0.034	SBL	23
8139	22233	884	4160	0.034	SBR	141
8139	22233	8220	38504	0.034	SBT	1309
8220	22233	808	1379	0.034	NBR	47
8220	22233	884	2089	0.034	NBL	71
8220	22233	8139	14900	0.034	NBT	507
Melrose Dr/Poinsettia Ln						
816	8099	8077	5	0.034	WBR	0
816	8099	8139	369	0.034	WBL	13
816	8099	8174	342	0.034	WBT	12
8077	8099	816	5	0.034	SBL	0
8077	8099	8139	40126	0.034	SBT	1364
8077	8099	8174	25548	0.034	SBR	869
8139	8099	816	515	0.034	NBR	18
8139	8099	8077	14313	0.034	NBT	487
8139	8099	8174	1155	0.034	NBL	39
8174	8099	816	1025	0.034	EBT	35
8174	8099	8077	14638	0.034	EBL	498
8174	8099	8139	2942	0.034	EBR	100
Melrose Dr/Rancho Bravado						
4269	8076	7907	161	0.034	EBL	5
4269	8076	8077	119	0.034	EBR	4
7907	8076	4269	1047	0.034	SBR	36
7907	8076	8077	65560	0.034	SBT	2229
8077	8076	4269	243	0.034	NBL	8
8077	8076	7907	28714	0.034	NBT	976
Melrose Dr/Palomar Airport Rd						
7835	7907	7912	23022	0.034	SBR	783
7835	7907	7942	3173	0.034	SBL	108
7835	7907	8076	42955	0.034	SBT	1460
7912	7907	7835	11281	0.034	EBL	384
7912	7907	7942	41252	0.034	EBT	1403
7912	7907	8076	7413	0.034	EBR	252
7942	7907	7835	2060	0.034	WBR	70
7942	7907	7912	37968	0.034	WBT	1291
7942	7907	8076	16239	0.034	WBL	552
8076	7907	7835	17893	0.034	NBT	608
8076	7907	7912	6261	0.034	NBL	213
8076	7907	7942	4721	0.034	NBR	161

2030 PM

FROM	THRU	TO	'OTAL PEA	Peak Hour Factor	Movement	Total Peak Hour
La Costa Ave/Piraeus St						
8645	8669	8670	17913	0.034	WBT	609
8645	8669	8706	1816	0.034	WBL	62
8670	8669	8645	31369	0.034	EBT	1067
8670	8669	8706	3717	0.034	EBR	126
8706	8669	8645	5139	0.034	NBR	175
8706	8669	8670	1751	0.034	NBL	60
La Costa Ave/Saxony Rd						
8665	8645	8669	19285	0.034	WBT	656
8665	8645	8759	11050	0.034	WBL	376
8669	8645	8665	33793	0.034	EBT	1149
8669	8645	8759	2715	0.034	EBR	92
8759	8645	8665	1948	0.034	NBR	66
8759	8645	8669	444	0.034	NBL	15
La Costa Ave/Viejo Castilla Wy						
1030	8653	8676	0	0.034	SBL	0
1030	8653	22980	1308	0.034	SBR	44
8676	8653	1030	0	0.034	WBR	0
8676	8653	22980	4484	0.034	WBT	152
22980	8653	1030	8565	0.034	EBL	291
22980	8653	8676	9530	0.034	EBT	324
La Costa Ave/Romerla St				0.034		0
1030	8658	8656	979	0.034	SBL	33
1030	8658	8672	0	0.034	SBR	0
1030	8658	22984	144	0.034	SBT	5
8656	8658	1030	3900	0.034	WBR	133
8656	8658	8672	4484	0.034	WBT	152
8656	8658	22984	0	0.034	WBL	0
8672	8658	1030	0	0.034	EBL	0
8672	8658	8656	9530	0.034	EBT	324
8672	8658	22984	0	0.034	EBR	0
22984	8658	1030	198	0.034	NBT	7
22984	8658	8656	510	0.034	NBR	17
22984	8658	8672	0	0.034	NBL	0
La Costa Ave/Cadencia St						
1024	8656	8658	733	0.034	SBR	25
1024	8656	8686	1694	0.034	SBL	58
8658	8656	1024	4725	0.034	EBL	161
8658	8656	8686	6295	0.034	EBT	214
8686	8656	1024	5414	0.034	WBR	184
8686	8656	8658	7651	0.034	WBT	260
La Costa Ave/Calle Timiteo						
1054	8729	1056	2410	0.034	SBT	82
1054	8729	8712	3385	0.034	SBR	115
1054	8729	8723	5766	0.034	SBL	196
1056	8729	1054	1906	0.034	NBT	65
1056	8729	8712	2702	0.034	NBL	92
1056	8729	8723	468	0.034	NBR	16
8712	8729	1054	3554	0.034	EBL	121
8712	8729	1056	3547	0.034	EBR	121
8712	8729	8723	2738	0.034	EBT	93
8723	8729	1054	3382	0.034	WBR	115
8723	8729	1056	468	0.034	WBL	16
8723	8729	8712	2180	0.034	WBT	74
SB I-5 Ramps/Leucadia Blvd						
8812	8853	8852	4749	0.034	SBR	161
8812	8853	8856	9538	0.034	SBL	324
8812	8853	8876	0	0.034	SBT	0
8852	8853	8856	7543	0.034	EBT	256
8852	8853	8876	3250	0.034	EBR	111
8856	8853	8852	15226	0.034	WBT	518
8856	8853	8876	9380	0.034	WBL	319

2030 PM

FROM	THRU	TO	'OTAL PEA	Peak Hour Factor	Movement	Total Peak Hour
El Camino Real/Olivenhain Rd						
8785	8834	8829	2500	0.034	SBL	85
8785	8834	8862	41233	0.034	SBT	1402
8785	8834	22197	8548	0.034	SBL	291
8829	8834	8785	5559	0.034	EBL	189
8829	8834	8862	994	0.034	EBR	34
8829	8834	22197	26202	0.034	EBT	891
8862	8834	8785	28529	0.034	NBT	970
8862	8834	8829	3312	0.034	NBL	113
8862	8834	22197	21161	0.034	NBR	719
22197	8834	8785	1919	0.034	WBR	65
22197	8834	8829	15559	0.034	WBT	529
22197	8834	8862	16150	0.034	WBL	549
El Camino Real/La Costa Ave						
8647	8662	8660	9146	0.034	SBL	311
8647	8662	8665	21362	0.034	SBR	726
8647	8662	8684	59553	0.034	SBT	2025
8660	8662	8647	2214	0.034	WBR	75
8660	8662	8665	3321	0.034	WBT	113
8660	8662	8684	1133	0.034	WBL	39
8665	8662	8647	18557	0.034	EBL	631
8665	8662	8660	9057	0.034	EBT	308
8665	8662	8684	8126	0.034	EBR	276
8684	8662	8647	34204	0.034	NBT	1163
8684	8662	8660	1502	0.034	NBR	51
8684	8662	8665	5651	0.034	NBL	192
El Camino Real/Costa Del Mar Rd						
1023	8625	8570	3714	0.034	WBR	126
1023	8625	8647	6071	0.034	WBL	206
8570	8625	1023	5421	0.034	SBL	184
8570	8625	8647	84504	0.034	SBT	2873
8647	8625	1023	7485	0.034	NBR	254
8647	8625	8570	48447	0.034	NBT	1647
El Camino Real/Alga Rd						
8426	8470	8467	2562	0.034	SBR	87
8426	8470	8472	6916	0.034	SBL	235
8426	8470	8570	65351	0.034	SBT	2222
8467	8470	8426	1671	0.034	EBL	57
8467	8470	8472	14955	0.034	EBT	508
8467	8470	8570	11938	0.034	EBR	406
8472	8470	8426	1786	0.034	WBR	61
8472	8470	8467	9487	0.034	WBT	323
8472	8470	8570	11628	0.034	WBL	395
8570	8470	8426	23137	0.034	NBT	787
8570	8470	8467	9076	0.034	NBL	309
8570	8470	8472	15539	0.034	NBR	528
SB I-5 Ramps/La Costa Ave						
8623	8677	8671	13516	0.034	SBL	460
8623	8677	8680	7328	0.034	SBR	249
8623	8677	8709	0	0.034	SBT	0
8671	8677	8680	12375	0.034	WBT	421
8671	8677	8709	4078	0.034	WBL	139
8680	8677	8671	14870	0.034	EBT	506
8680	8677	8709	2148	0.034	EBR	73
NB I-5 Ramps/La Costa Ave						
8670	8671	8654	6180	0.034	WBR	210
8670	8671	8677	13483	0.034	WBT	458
8677	8671	8654	3018	0.034	EBL	103
8677	8671	8670	25368	0.034	EBT	863
8714	8671	8654	0	0.034	NBT	0
8714	8671	8670	9718	0.034	NBR	330
8714	8671	8677	2970	0.034	NBL	101

2030 PM

FROM	THRU	TO	TOTAL PEA	Peak Hour Factor	Movement	Total Peak Hour
NB I-5 Ramps/Leucadia Blvd						
8855	8857	8848	4957	0.034	WBR	169
8855	8857	8856	16941	0.034	WBT	576
8856	8857	8848	1727	0.034	EBL	59
8856	8857	8855	15354	0.034	EBT	522
8897	8857	8848	5577	0.034	NBT	190
8897	8857	8855	17835	0.034	NBR	606
8897	8857	8856	7665	0.034	NBL	261
Leucadia Blvd/Clark Ave						
1068	8855	1091	16	0.034	SBT	1
1068	8855	8857	394	0.034	SBR	13
1068	8855	8858	0	0.034	SBL	0
1091	8855	1068	18	0.034	NBT	1
1091	8855	8857	541	0.034	NBL	18
1091	8855	8858	0	0.034	NBR	0
8857	8855	1068	1922	0.034	EBL	65
8857	8855	1091	2432	0.034	EBR	83
8857	8855	8858	28834	0.034	EBT	980
8858	8855	1068	1257	0.034	WBR	43
8858	8855	1091	0	0.034	WBL	0
8858	8855	8857	20963	0.034	WBT	713
Leucadia Blvd/Saxony Rd						
8838	8859	8851	224	0.034	SBL	8
8838	8859	8858	535	0.034	SBR	18
8838	8859	8891	8423	0.034	SBT	286
8851	8859	8838	57	0.034	WBR	2
8851	8859	8858	19466	0.034	WBT	662
8851	8859	8891	7054	0.034	WBL	240
8858	8859	8838	2015	0.034	EBL	69
8858	8859	8851	25186	0.034	EBT	856
8858	8859	8891	1633	0.034	EBR	56
8891	8859	8838	2173	0.034	NBT	74
8891	8859	8851	6837	0.034	NBR	232
8891	8859	8858	2219	0.034	NBL	75
Leucadia Blvd/Sidonia St						
1076	8851	1090	16	0.034	SBT	1
1076	8851	8849	576	0.034	SBL	20
1076	8851	8859	475	0.034	SBR	16
1090	8851	1076	12	0.034	NBT	0
1090	8851	8849	307	0.034	NBR	10
1090	8851	8859	64	0.034	NBL	2
8849	8851	1076	1175	0.034	WBR	40
8849	8851	1090	0	0.034	WBL	0
8849	8851	8859	26038	0.034	WBT	885
8859	8851	1076	1093	0.034	EBL	37
8859	8851	1090	0	0.034	EBR	0
8859	8851	8849	31153	0.034	EBT	1059
Leucadia Blvd/Quail Gardens Dr						
8818	8849	8822	2658	0.034	WBR	90
8818	8849	8851	26157	0.034	WBT	889
8818	8849	8871	10060	0.034	WBL	342
8822	8849	8818	709	0.034	SBL	24
8822	8849	8851	106	0.034	SBR	4
8822	8849	8871	392	0.034	SBT	13
8851	8849	8818	30400	0.034	EBT	1034
8851	8849	8822	29	0.034	EBL	1
8851	8849	8871	1608	0.034	EBR	55
8871	8849	8818	5148	0.034	NBR	175
8871	8849	8822	932	0.034	NBT	32
8871	8849	8851	949	0.034	NBL	32

2030 PM

FROM	THRU	TO	'OTAL PEA	Peak Hour Factor	Movement	Total Peak Hour
Leucadia Blvd/Garden View Rd						
8786	8818	8829	1515	0.034	SBL	52
8786	8818	8849	10373	0.034	SBR	353
8786	8818	8905	4564	0.034	SBT	155
8829	8818	8786	563	0.034	WBR	19
8829	8818	8849	24973	0.034	WBT	849
8829	8818	8905	368	0.034	WBL	13
8849	8818	8786	8499	0.034	EBL	289
8849	8818	8829	24633	0.034	EBT	838
8849	8818	8905	3124	0.034	EBR	106
8905	8818	8786	1189	0.034	NBT	40
8905	8818	8829	67	0.034	NBR	2
8905	8818	8849	3528	0.034	NBL	120
Leucadia Blvd/Town Center Pl						
1073	8829	1083	282	0.034	SBT	10
1073	8829	8818	3895	0.034	SBR	132
1073	8829	8834	0	0.034	SBL	0
1083	8829	1073	9578	0.034	NBT	326
1083	8829	8818	301	0.034	NBL	10
1083	8829	8834	4528	0.034	NBR	154
8818	8829	1073	848	0.034	EBL	29
8818	8829	1083	2190	0.034	EBR	74
8818	8829	8834	23177	0.034	EBT	788
8834	8829	1073	0	0.034	WBR	0
8834	8829	1083	3889	0.034	WBL	132
8834	8829	8818	17481	0.034	WBT	594
Olivenhain Rd/Amargosa Dr						
4287	22196	8820	0	0.034	SBL	0
4287	22196	8865	33	0.034	SBT	1
4287	22196	22197	1129	0.034	SBR	38
8820	22196	4287	0	0.034	WBR	0
8820	22196	8865	595	0.034	WBL	20
8820	22196	22197	31824	0.034	WBT	1082
8865	22196	4287	95	0.034	NBT	3
8865	22196	8820	525	0.034	NBR	18
8865	22196	22197	537	0.034	NBL	18
22197	22196	4287	6701	0.034	EBL	228
22197	22196	8820	48900	0.034	EBT	1663
22197	22196	8865	2221	0.034	EBR	76
Camino De Los Coches/La Costa Ave						
1051	8723	8729	2486	0.034	WBT	85
1051	8723	8740	742	0.034	WBL	25
8729	8723	1051	3783	0.034	EBT	129
8729	8723	8740	5189	0.034	EBR	176
8740	8723	1051	585	0.034	NBR	20
8740	8723	8729	3545	0.034	NBL	121
San Elijo Road/Melrose Dr						
8517	8540	8529	2669	0.034	SBR	91
8517	8540	8574	19538	0.034	SBL	664
8529	8540	8517	2375	0.034	EBL	81
8529	8540	8574	28582	0.034	EBT	972
8574	8540	8517	15725	0.034	WBR	535
8574	8540	8529	27909	0.034	WBT	949
San Elijo Road/Fallsview Road						
999	8574	8540	7865	0.034	NBL	267
999	8574	8578	8124	0.034	NBR	276
8540	8574	999	7310	0.034	EBR	249
8540	8574	8578	40810	0.034	EBT	1388
8578	8574	999	7146	0.034	WBL	243
8578	8574	8540	35770	0.034	WBT	1216

Note:
Based on data provided by SANDAG

LA COSTA AVE./LEVANTE ST./RANCHO SANTA FE RD.
SIGNAL PHASING EXAMPLE.

URBAN SYSTEMS ASSOCIATES, INC.
PLANNING & TRAFFIC ENGINEERING, MARKETING & PROJECT SUPPORT
CONSULTANTS TO INDUSTRY AND GOVERNMENT

E-MEMO

ATTN: Brandon Miles – City of Carlsbad

E-Mail: bmile@ci.carlsbad.ca.us

FROM: Andrew J. Gallaeta

TOTAL PAGES (Incl. Cover): 1 + Attachments

DATE: October 26, 2007 TIME: 4:48:14 PM JOB NUMBER: 000704

SUBJECT: *Item 9 – La Costa Town Square Traffic Comments*

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ttached is a phase sequence diagram and a simple feasibility analysis based on Intersection Capacity tilization (ICU) method. The ICU saturation flow rates and levels of service are based upon the latest 2003 litions of Trafficware's Intersection Capacity Utilization evaluation procedures. Relevant tables are also tached.

s shown in the phase sequence diagram, the problem of blockage occurs during the AM peak based on the plit phase option included in our traffic report, see Figure 9-3 on page 9-4 and the volumes from Figure 9-1, e phase sequence is as shown in the table below.

Step	Signal Phases	Critical Volume	ICU
	4 (both signals)	300	0.18
	8 (both signals) with overlays A for phase 1 at Levante	328	0.19
	2 at Levante + 1 & 5 at Rancho Santa Fe	75	0.10 (Min. Cycle)
	2 + 8 at Rancho Santa Fe	573	0.34
		Lost Time	0.10
		TOTAL	0.81 = LOS D

overall the proposed system should work quite will ad provides a fix to the missing dual left east to northbound M peak move that is causing the queuing.

lease let us know if you have any further questions.

C: Clyde Wickham
Pat O'Day
John Tworoger

nclosures (4)

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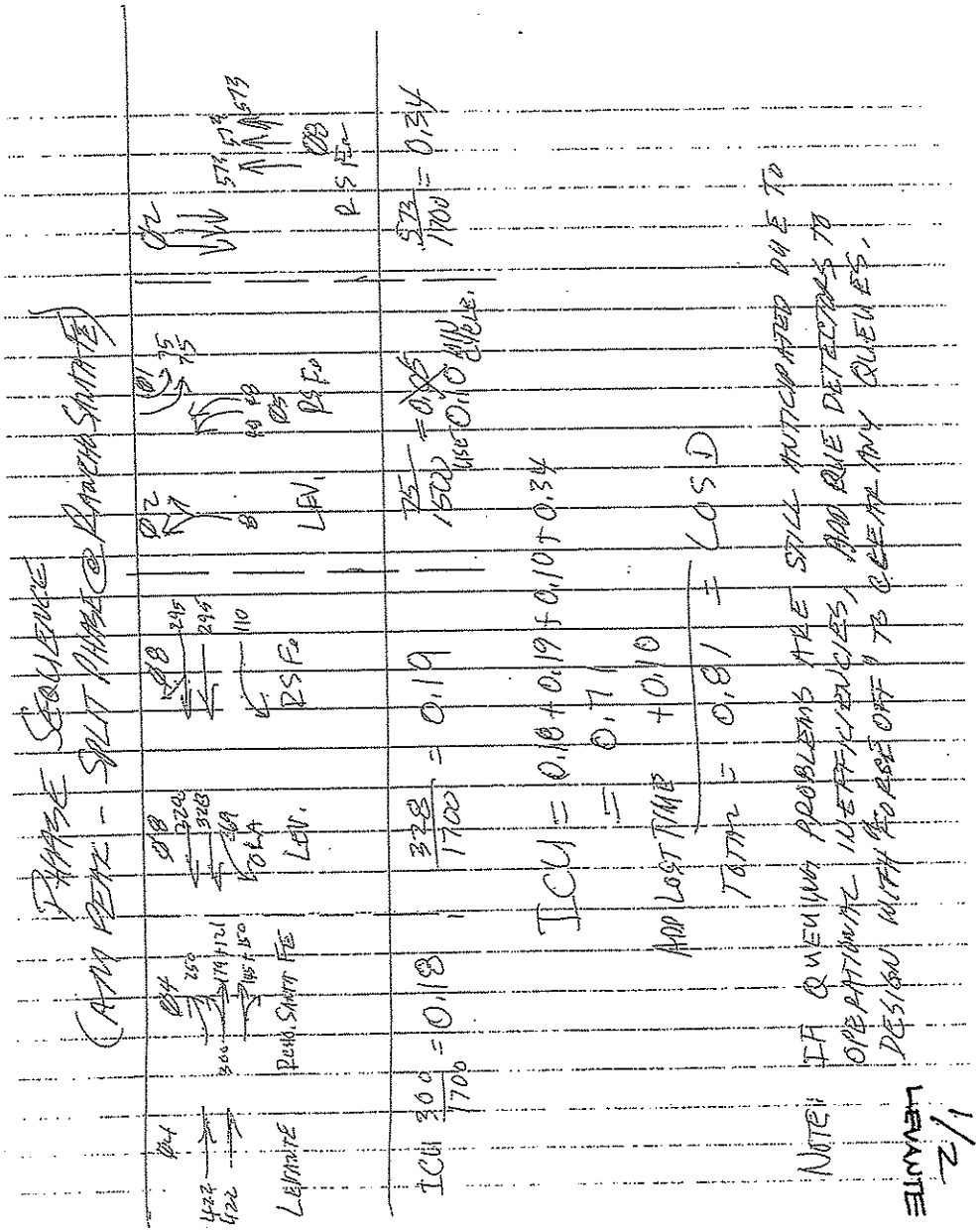

tion Procedures for Intersections and Interchanges

2005 EDITION

David Husch John Albeck

Trafficware®

For an existing intersection, simply record the number of lanes and the allowed movements for each lane.

For a future scenario, it may be necessary to try several alternatives. The ICU spreadsheet allows alternate lane numbers and assignments to be tried while giving instant feedback to their effects on capacity.

Saturated Flow Rates

The Ideal Saturated Flow rates are inputted in the ICU method. By default, the ideal saturated flow rates are 1900 vehicle per hour per lane (vphpl) for intersections and 2000 vphpl for interchanges. These are the default values used in the HCM 2000. Actual measurements of saturated flow rates have found a variation between 1700 and 2200 vphpl.

The ideal saturated flow rates entered will be adjusted for turning factors (0.95 for left turns and 0.85 for right turns), lane utilization, and permitted left turns.

In general, higher speed facilities will have higher saturated flow rates. Here is a guide for saturation flow rates to use:

1700 vphpl	Central Business District with slow speeds, short block spacing, transit, and parking activity
1900 vphpl	Medium density areas with speeds of 25 to 35 mph.
2000 vphpl	Interchanges and other limited access intersections with speeds of 35 to 50 mph
2100 vphpl	High-speed intersections on limited access roadways (a saturated flow rate study should be used to justify)

- Level of Service: Enter a letter A to H based on Table 5-3 and Line 51. Note that the ICU 2005 includes additional levels past F to further differentiate congested operation. The ICU table has been adjusted to account for volumes not being adjusted for PHF.

A complete discussion of LOS can be found in Chapter 2.

ble 5-3 Level of Service

LOS	New ICU
A	≤55.0%*
B	>55% to 64.0%
C	>64% to 73.0%
D	>73% to 82.0%
E	>82% to 91.0%
F	>91% to 100.0%
G	>100% to 109.0%
H	>109%

Note: An ICU value equal to 55.0% would be LOS A, while an ICU of 55.1 % is OS B.

Discussion

he ICU method is designed to give the ICU results comparable to the intersection olume to capacity ratio determined by the HCM 2000 methods. In some cases, the suits may vary due to differences in calculation and the philosophy behind the lculations. The following sections discuss some of these differences.

2/2 LEVANTE

APPENDIX A, B & C

INPUTS AND ASSUMPTIONS FOR INTERSECTION CAPACITY ANALYSIS USING THE HIGHWAY CAPACITY MANUAL (HCM) METHOD

- ☐ Arrival Type = 3-5 (Arrival type 5 used at all locations).
- ☐ Cycle Length (C) = Min. 120-140 seconds (as determined by City Traffic Engineer).
- ☐ Ideal Saturation Flow Rate for HCM software = 1,800 pcphpl left-turns, 2,000 pcphpl through movements.
- ☐ Yellow Interval = 4 sec.
- ☐ All – Red = 1 sec.
- ☐ Minimum Heavy Vehicles = 2%.
- ☐ Peak Hour Factor (PHF) = 0.95.
- ☐ I-Value = 1.00 (If lower than 1.00 additional data provided to quantify the upstream V/C of contributing lane groups).

Note: For major intersections, an extra data page is provided showing the Saturation Flow Rate and I-Value used.

TABLE 7-4

Year 2030 Intersection Levels of Service Summary

	Intersection	Year 2030				Year 2030 + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		∇	S	PM Peak Hour		∇	S
		Delay	LOS	Delay	LOS	Delay	LOS			Delay	LOS		
1	Rancho Santa Fe Rd. / San Marcos Blvd.	52.5	D	158.9	F	52.7	D	0.2	N	160.9	F	2.0	N
2	Rancho Santa Fe Rd. / Lake San Marcos Dr.	25.7	C	16.0	B	27.5	C	1.8	N	18.0	B	2.0	N
3	Rancho Santa Fe Rd. / Camino Del Arroyo Dr.	29.5	C	37.8	D	31.3	C	1.8	N	42.0	D	4.2	N
4	Rancho Santa Fe Rd. / Island Dr.	3.1	A	3.9	A	3.1	A	0.0	N	4.1	A	0.2	N
5	Melrose Dr. / Palomar Airport Rd.	54.0	D	51.9	D	54.9	D	0.6	N	53.8	D	1.9	N
6	Melrose Dr. / Rancho Bravado	36.6	D	13.6	B	38.8	D	2.2	N	14.1	B	0.5	N
7	Melrose Dr. / Poinsettia Ln./Paseo Corto	25.1	C	18.3	B	25.5	C	0.4	N	18.5	B	0.2	N
8	Melrose Dr. / Carillo Wy.	17.2	B	17.0	B	18.1	B	0.9	N	17.7	B	0.7	N
9	Melrose Dr. / Alga Rd.	22.3	C	33.0	D	23.6	C	1.3	N	39.8	D	6.8	N
10	Rancho Santa Fe Rd. / Melrose Dr.	68.4	E	39.4	D	70.5	E	1.7	N	42.6	D	3.2	N
11	Rancho Santa Fe Rd. / San Elijo Rd.	33.7	D	30.2	C	40.0	D	6.3	N	36.7	D	6.4	N
12	Rancho Santa Fe Rd. / Camino Junipero	10.8	B	11.7	B	12.1	B	1.3	N	13.4	B	1.7	N
13	Rancho Santa Fe Rd. / La Costa Ave.	38.7	D	36.0	D	53.3	D	14.9	N	50.9	D	15.0	N
14	Rancho Santa Fe Rd. / Camino De Los Coches	7.8	A	6.8	A	7.6	A	0.0	N	6.2	A	0.0	N
15	Rancho Santa Fe Rd. / Calle Barcelona	21.2	C	13.4	B	22.9	C	1.7	N	14.4	B	1.0	N
16	Rancho Santa Fe Rd. / Olivenhain Rd.	41.3	D	32.7	C	49.1	D	7.8	N	44.9	D	12.2	N
17	Rancho Santa Fe Rd. / El Camino Del Norte ①	76.3	F	45.4	E	88.3	F	12.0	Y	64.5	F	19.1	Y
18	El Camino Real / Aviara Pkwy/AlgaRd.	41.3	D	36.6	D	42.4	D	1.1	N	36.9	D	0.3	N
19	El Camino Real / Costa Del Mar Rd.	21.6	C	6.1	A	22.9	C	1.3	N	6.1	A	0.0	N
20	I-5 SB Ramps / La Costa Ave.	30.4	C	21.3	C	30.7	C	0.3	N	21.7	C	0.4	N
21	I-5 NB Ramps / La Costa Ave.	16.2	B	18.4	B	16.9	B	0.7	N	18.7	B	0.3	N
22	Piraeus St. / La Costa Ave.	8.0	A	5.0	A	8.8	A	0.8	N	4.9	A	0.0	N
23	Saxony Rd. / La Costa Ave.	5.6	A	4.6	A	5.9	A	0.4	N	4.6	A	0.0	N
24	El Camino Real / La Costa Ave.	48.5	D	39.9	D	49.8	D	1.4	N	42.0	D	0.1	N
25	Viejo Castilla Wy. / La Costa Ave.	5.3	A	5.6	A	5.0	A	0.0	N	5.0	A	0.0	N
26	Romeria St. / La Costa Ave.	9.3	B	7.9	A	9.8	B	0.5	N	9.6	A	1.7	N
27	Cadencia St. / La Costa Ave.	14.6	B	13.3	B	16.0	B	1.4	N	16.7	B	3.4	N
28	I-5 SB Ramps / Leucadia Blvd.	24.3	C	24.0	C	25.3	C	1.0	N	24.8	C	0.8	N

TABLE 7-4 (Continued)

	Intersection	Year 2030				Year 2030 + Project							
		AM Peak Hour		PM Peak Hour		AM Peak Hour		∇	S	PM Peak Hour		∇	S
		D	LOS	D	LOS	D	LOS			D	LOS		
29	I-5 NB Ramps / Leucadia Blvd.	42.5	D	15.0	B	43.3	D	0.8	N	15.6	B	0.6	N
30	Clark Ave. / Leucadia Blvd.	29.9	C	13.2	B	32.4	C	2.5	N	14.7	B	1.5	N
31	Saxony Rd. / Leucadia Blvd.	35.6	D	46.0	D	38.5	D	2.9	N	52.1	D	6.1	N
32	Sidonia St. / Leucadia Blvd.	13.5	B	8.2	B	15.3	B	1.8	N	11.6	B	3.4	N
33	Quail Gardens Dr. / Leucadia Blvd.	38.9	D	38.7	D	44.7	D	5.8	N	48.4	D	3.7	N
34	Garden View Rd. / Leucadia Blvd.	27.8	C	35.1	D	27.7	C	0.0	N	35.6	D	0.5	N
35	Town Center Pl. / Leucadia Blvd.	21.6	C	33.5	C	21.5	C	0.0	N	33.6	C	0.1	N
36	El Camino Real / Leucadia Blvd.	47.1	D	42.8	D	49.3	D	2.3	N	47.6	D	4.8	N
37	Amargosa Dr. / Olivenhain Rd.	26.5	C	16.9	B	32.4	C	6.2	N	29.4	C	12.3	N
38	Calle Timiteo (Driveway) #2 / La Costa Ave. ④	14.8	B	12.6	B	16.0	B	1.2	N	16.3	B	3.9	N
39	Camino De Los Coches / La Costa Ave. ⑤	12.8	B	11.8	B	16.3	B	3.5	N	16.5	B	4.7	N
40	San Elijo Rd. / Melrose Dr.	40.7	D	36.2	D	40.9	D	0.2	N	36.4	D	0.2	N
41	San Elijo Rd. / Fallsview Dr. ⑥	12.5	B	16.1	B	12.7	B	0.2	N	16.9	C	0.8	N
42	West Driveway #1/ La Costa Ave. ④	12.2	B	11.9	B	28.7	C	16.5	N	36.0	D	24.0	N
43	East Driveway #3 / La Costa Ave./Paseo Tamarindo ③	NA	NA	NA	NA	9.4	A	0.0	N	8.9	A	0.0	N
44	West Driveway #4/ Rancho Santa Fe Rd.②	NA	NA	NA	NA	NA	NA	NA	N	NA	NA	NA	N
45	East Driveway #5/ Rancho Santa Fe Rd./Paseo Lupino ⑦	4.8	A	5.2	A	23.7	C	18.9	N	29.3	C	24.1	N
46	Rancho Santa Fe Rd./Calle Acervo	46.9	D	22.6	C	52.3	D	5.4	N	29.7	C	7.1	N

Note: A significant impact occurs at LOS "E" or "F" if project increases intersection delay by more than 2.0 seconds.

Stop Signs	
Delay	LOS
0.00 – 10.0	A
10.1 – 15.0	B
15.1 – 25.0	C
25.1 – 35.0	D
35.1 – 50.0	E
Over 50.0	F

Signalized	
Delay	LOS
0.00 – 10.0	A
10.1 – 20.0	B
20.1 – 35.0	C
35.1 – 55.0	D
55.1 – 80.0	E
Over 80.0	F

∇= Change in delay.
D = Delay in seconds.
LOS = Level of Service.
(S) = Significant Impact Due to Project.
① = All-Way-Stop Control within City of Encinitas. Encinitas will not allow intersection improvements.
② = Right-In Only for Northbound Traffic.
③ = Stop Sign facing Southbound Traffic.
④ = Without Project, the stop sign facing northbound traffic remains; project installs traffic signal.
⑤ = Stop sign facing northbound traffic remains with no project; project installs traffic signal.
⑥ = The right-in–out only intersection remains as-is. The LOS relates to the NB right turn only movement.
⑦ = Provide Westbound dual left turn lanes.

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE. RD./SAN MARCOS B
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	2	0	1	2	1
Lane group	L	T	R	L	TR		L	T		L	T	R
Volume (vph)	265	910	60	593	1406	69	125	826		81	683	584
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A		A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0			0	0	130
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 13.0	G = 10.0	G = 35.0	G = 0.0	G = 10.0	G = 37.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	279	958	63	624	1553		132	869		85	719	478
Lane group cap.	326	1005	577	693	1426		250	1062		129	1062	635
v/c ratio	0.86	0.95	0.11	0.90	1.09		0.53	0.82		0.66	0.68	0.75
Green ratio	0.10	0.27	0.38	0.22	0.38		0.08	0.28		0.08	0.28	0.42
Unif. delay d1	57.6	46.7	25.7	49.6	40.0		57.7	43.4		58.3	41.2	31.7
Delay factor k	0.39	0.46	0.11	0.42	0.50		0.13	0.36		0.23	0.25	0.31
Increm. delay d2	19.5	18.2	0.1	14.9	52.0		2.1	5.1		11.7	1.7	5.1
PF factor	0.926	0.754	0.583	0.817	0.583		0.944	0.735		0.944	0.735	0.511
Control delay	72.8	53.4	15.1	55.4	75.3		56.6	37.0		66.8	32.0	21.3
Lane group LOS	E	D	B	E	E		E	D		E	C	C
Apprch. delay	55.7			69.6			39.6			30.3		
Approach LOS	E			E			D			C		
Intersec. delay	52.5			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE. RD./SAN MARCOS B
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	2	0	1	2	1
Lane group	L	T	R	L	TR		L	T		L	T	R
Volume (vph)	414	1387	186	1184	650	135	140	770		150	1010	633
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0			0	0	200
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 32.0	G = 35.0	G = 0.0	G =	G = 13.0	G = 40.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	436	1460	196	1246	826		147	811		158	1063	456
Lane group cap.	744	933	568	771	909		302	1067		157	1067	429
v/c ratio	0.59	1.56	0.35	1.62	0.91		0.49	0.76		1.01	1.00	1.06
Green ratio	0.23	0.25	0.38	0.23	0.25		0.09	0.29		0.09	0.29	0.29
Unif. delay d1	48.1	52.5	31.1	54.0	50.9		60.3	45.6		63.5	49.9	50.0
Delay factor k	0.18	0.50	0.11	0.50	0.43		0.11	0.31		0.50	0.50	0.50
Increm. delay d2	1.2	259.4	0.4	283.2	12.9		1.2	3.2		73.5	26.6	61.1
PF factor	0.802	0.778	0.594	0.802	0.778		0.932	0.733		0.932	0.733	0.733
Control delay	39.8	300.3	18.8	326.6	52.5		57.5	36.7		132.7	63.2	97.8
Lane group LOS	D	F	B	F	D		E	D		F	E	F
Apprch. delay	219.6			217.3			39.9			79.2		
Approach LOS	F			F			D			E		
Intersec. delay	158.9			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./LAKE SAN MARC
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	0	1	0	2	0	1	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				184		145		2097	69	125	1211	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 18.0	G =	G =	G =	G = 15.0	G = 68.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 115.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				194		153		2280		132	1275	
Lane group cap.				262		235		2197		219	2857	
v/c ratio				0.74		0.65		1.04		0.60	0.45	
Green ratio				0.16		0.16		0.59		0.13	0.77	
Unif. delay d1				46.3		45.6		23.5		47.2	4.8	
Delay factor k				0.30		0.23		0.50		0.19	0.11	
Increm. delay d2				10.7		6.3		29.8		4.6	0.1	
PF factor				0.876		0.876		0.207		0.900	0.213	
Control delay				51.2		46.2		34.7		47.1	1.1	
Lane group LOS				D		D		C		D	A	
Apprch. delay				49.0			34.7			5.4		
Approach LOS				D			C			A		
Intersec. delay	25.7			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./LAKE SAN MARC
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	0	1	0	2	0	1	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				110		143		1461	146	275	2140	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 18.0	G =	G =	G =	G = 23.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 105.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				116		151		1692		289	2253	
Lane group cap.				287		257		1753		367	2773	
v/c ratio				0.40		0.59		0.97		0.79	0.81	
Green ratio				0.17		0.17		0.48		0.22	0.74	
Unif. delay d1				38.7		40.1		26.7		38.7	8.8	
Delay factor k				0.11		0.18		0.47		0.33	0.35	
Increm. delay d2				0.9		3.5		14.1		10.9	1.9	
PF factor				0.862		0.862		0.394		0.813	0.194	
Control delay				34.3		38.0		24.7		42.4	3.6	
Lane group LOS				C		D		C		D	A	
Apprch. delay				36.4			24.7			8.0		
Approach LOS				D			C			A		
Intersec. delay	16.0			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CAM DEL ARROY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Lane group		LTR			LTR		L	TR		L	TR	
Volume (vph)	30	10	59	110	10	232	17	1841	52	93	1360	20
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival type		5			5		5	5		5	5	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	130	0	0	0	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 28.0	G =	G =	G =	G = 20.0	G = 67.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		105			234		18	1993		98	1453	
Lane group cap.		333			313		258	1916		258	1920	
v/c ratio		0.32			0.75		0.07	1.04		0.38	0.76	
Green ratio		0.22			0.22		0.15	0.52		0.15	0.52	
Unif. delay d1		42.9			47.7		47.0	31.5		49.4	25.0	
Delay factor k		0.11			0.30		0.11	0.50		0.11	0.31	
Increm. delay d2		0.5			9.5		0.1	31.9		0.9	1.8	
PF factor		0.817			0.817		0.879	0.291		0.879	0.291	
Control delay		35.6			48.5		41.5	41.0		44.4	9.1	
Lane group LOS		D			D		D	D		D	A	
Apprch. delay	35.6			48.5			41.0			11.3		
Approach LOS	D			D			D			B		
Intersec. delay	29.5			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CAM DEL ARROY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/07	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Lane group		LTR			LTR		L	TR		L	TR	
Volume (vph)	35	8	9	113	20	255	28	1552	56	223	1917	30
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival type		5			5		5	5		5	5	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	130	0	0	0	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 28.0	G =	G =	G =	G = 20.0	G = 67.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		54			272		29	1693		235	2050	
Lane group cap.		284			329		258	1914		258	1920	
v/c ratio		0.19			0.83		0.11	0.88		0.91	1.07	
Green ratio		0.22			0.22		0.15	0.52		0.15	0.52	
Unif. delay d1		41.7			48.7		47.4	28.1		54.1	31.5	
Delay factor k		0.11			0.36		0.11	0.41		0.43	0.50	
Increm. delay d2		0.3			15.8		0.2	5.4		33.5	41.4	
PF factor		0.817			0.817		0.879	0.291		0.879	0.291	
Control delay		34.4			55.6		41.8	13.5		81.0	50.5	
Lane group LOS		C			E		D	B		F	D	
Apprch. delay	34.4			55.6			14.0			53.7		
Approach LOS	C			E			B			D		
Intersec. delay	37.8			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./ISLAND DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	1	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	25		40				30	1835			1564	20
% Heavy veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A	A	A				A	A	A		A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0						0	0	0
Lane Width	12.0		12.0				12.0	12.0			12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 8.0	G =	G =	G =	G = 19.0	G = 70.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 110.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	26		42				32	1932			1667	
Lane group cap.	122		109				289	3156			2371	
v/c ratio	0.21		0.39				0.11	0.61			0.70	
Green ratio	0.07		0.07				0.17	0.85			0.64	
Unif. delay d1	48.0		48.7				38.4	2.7			13.2	
Delay factor k	0.11		0.11				0.11	0.20			0.27	
Increm. delay d2	0.9		2.3				0.2	0.4			1.0	
PF factor	0.948		0.948				0.861	0.324			0.138	
Control delay	46.4		48.4				33.2	1.2			2.8	
Lane group LOS	D		D				C	A			A	
Apprch. delay	47.6						1.8			2.8		
Approach LOS	D						A			A		
Intersec. delay	3.1			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./ISLAND DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	1	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	60		30				30	1578			1711	50
% Heavy veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A	A	A				A	A	A		A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0						0	0	0
Lane Width	12.0		12.0				12.0	12.0			12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 8.0	G =	G =	G =	G = 19.0	G = 70.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 110.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	63		32				32	1661			1854	
Lane group cap.	122		109				289	3156			2365	
v/c ratio	0.52		0.29				0.11	0.53			0.78	
Green ratio	0.07		0.07				0.17	0.85			0.64	
Unif. delay d1	49.1		48.3				38.4	2.4			14.5	
Delay factor k	0.12		0.11				0.11	0.13			0.33	
Increm. delay d2	3.8		1.5				0.2	0.2			1.8	
PF factor	0.948		0.948				0.861	0.324			0.138	
Control delay	50.4		47.3				33.2	0.9			3.8	
Lane group LOS	D		D				C	A			A	
Apprch. delay	49.3						1.5			3.8		
Approach LOS	D						A			A		
Intersec. delay	3.9			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ PALOMAR AIRPOR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	10/15/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 NO PROJ./W MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	4	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	725	1030	184	250	1725	335	550	1583	485	325	529	690
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	50	5	0	200
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 19.0	G = 6.0	G = 43.0	G =	G = 15.0	G = 6.0	G = 21.0	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	763	1084	194	263	1816	353	579	1666	458	342	557	516
Lane group cap.	697	2060	789	442	1716	672	605	1628	596	349	801	594
v/c ratio	1.09	0.53	0.25	0.60	1.06	0.53	0.96	1.02	0.77	0.98	0.70	0.87
Green ratio	0.21	0.39	0.53	0.14	0.31	0.45	0.19	0.23	0.40	0.11	0.15	0.40
Unif. delay d1	55.0	33.1	17.9	56.9	48.5	27.7	56.4	54.0	36.4	62.3	56.5	38.6
Delay factor k	0.50	0.13	0.11	0.18	0.50	0.13	0.47	0.50	0.32	0.48	0.26	0.40
Increm. delay d2	53.3	0.1	0.1	1.0	33.0	0.3	15.5	21.3	2.8	27.3	1.2	6.5
PF factor	0.818	0.581	0.253	0.895	0.704	0.455	0.848	0.802	0.556	0.920	0.882	0.556
Control delay	98.3	19.4	4.6	51.9	67.2	13.0	63.3	64.6	23.0	84.7	51.0	27.9
Lane group LOS	F	B	A	D	E	B	E	E	C	F	D	C
Apprch. delay	47.5			57.7			57.3			50.7		
Approach LOS	D			E			E			D		
Intersec. delay	54.0			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ PALOMAR AIRPOR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	10/15/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	4	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	385	1630	235	550	1325	270	201	733	250	310	1430	785
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	100	0	0	0	0	0	0	0	0	150
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	SB Only	Thru & RT	08
Timing	G = 19.0	G = 3.0	G = 42.0	G =	G = 11.0	G = 4.0	G = 31.0	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	405	1716	142	579	1395	284	212	772	263	326	1505	668
Lane group cap.	442	1602	621	628	1908	707	256	1577	675	465	1526	686
v/c ratio	0.92	1.07	0.23	0.92	0.73	0.40	0.83	0.49	0.39	0.70	0.99	0.97
Green ratio	0.14	0.30	0.41	0.19	0.36	0.47	0.08	0.22	0.45	0.14	0.29	0.46
Unif. delay d1	59.7	49.0	26.5	55.5	39.2	24.1	63.6	47.6	25.7	57.2	49.7	37.2
Delay factor k	0.43	0.50	0.11	0.44	0.29	0.11	0.37	0.11	0.11	0.27	0.49	0.48
Increm. delay d2	23.8	44.3	0.2	19.2	1.5	0.4	19.8	0.2	0.4	4.7	19.7	27.8
PF factor	0.895	0.714	0.528	0.841	0.630	0.405	0.943	0.810	0.455	0.889	0.733	0.439
Control delay	77.2	79.3	14.2	65.9	26.1	10.2	79.7	38.8	12.0	55.5	56.2	44.1
Lane group LOS	E	E	B	E	C	B	E	D	B	E	E	D
Apprch. delay	74.8			34.3			40.1			52.9		
Approach LOS	E			C			D			D		
Intersec. delay	51.9			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ RANCHO BRAVADO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	10/15/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	33	10	20	140	10	90	5	2495	160	20	933	10
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 18.0	G =	G =	G = 10.0	G = 65.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	35	32		147	106		5	2794		21	993	
Lane group cap.	219	243		219	221		129	2646		129	2665	
v/c ratio	0.16	0.13		0.67	0.48		0.04	1.06		0.16	0.37	
Green ratio	0.13	0.14		0.13	0.14		0.08	0.50		0.08	0.50	
Unif. delay d1	50.2	49.1		53.8	51.7		55.6	32.5		56.1	20.0	
Delay factor k	0.11	0.11		0.24	0.11		0.11	0.50		0.11	0.11	
Increm. delay d2	0.3	0.2		7.8	1.6		0.1	34.5		0.6	0.1	
PF factor	0.900	0.893		0.900	0.893		0.944	0.333		0.944	0.333	
Control delay	45.5	44.1		56.2	47.8		52.6	45.4		53.6	6.7	
Lane group LOS	D	D		E	D		D	D		D	A	
Apprch. delay	44.8			52.7			45.4			7.7		
Approach LOS	D			D			D			A		
Intersec. delay	36.6			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ RANCHO BRAVADO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	10/15/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	5	10	10	65	10	60	20	1119	135	90	2086	36
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 20.0	G =	G =	G = 10.0	G = 65.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	5	22		68	74		21	1320		95	2234	
Lane group cap.	193	278		193	248		129	2626		129	2663	
v/c ratio	0.03	0.08		0.35	0.30		0.16	0.50		0.74	0.84	
Green ratio	0.12	0.15		0.12	0.15		0.08	0.50		0.08	0.50	
Unif. delay d1	51.0	47.1		53.0	48.8		56.1	21.7		58.7	28.0	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.11		0.29	0.37	
Increm. delay d2	0.1	0.1		1.1	0.7		0.6	0.2		19.7	2.5	
PF factor	0.913	0.879		0.913	0.879		0.944	0.333		0.944	0.333	
Control delay	46.6	41.5		49.5	43.5		53.6	7.4		75.1	11.9	
Lane group LOS	D	D		D	D		D	A		E	B	
Apprch. delay	42.5			46.4			8.1			14.5		
Approach LOS	D			D			A			B		
Intersec. delay	13.6			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ POINSETTIA LANE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	1	1	0	2	3	0	1	3	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	612	9	17	30	26	60	33	1988	15	20	896	177
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 14.0	G =	G =	G = 10.0	G = 56.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	644	9	18	32	90		35	2109		21	943	186
Lane group cap.	751	211	1024	387	178		250	2298		129	2300	1046
v/c ratio	0.86	0.04	0.02	0.08	0.51		0.14	0.92		0.16	0.41	0.18
Green ratio	0.23	0.11	0.69	0.23	0.11		0.08	0.43		0.08	0.43	0.70
Unif. delay d1	48.0	52.0	6.2	39.2	54.7		56.0	34.8		56.1	25.6	6.7
Delay factor k	0.39	0.11	0.11	0.11	0.11		0.11	0.44		0.11	0.11	0.11
Increm. delay d2	9.7	0.1	0.0	0.1	2.3		0.3	6.5		0.6	0.1	0.1
PF factor	0.800	0.920	0.163	0.800	0.920		0.944	0.495		0.944	0.495	0.167
Control delay	48.1	47.9	1.0	31.5	52.7		53.1	23.7		53.6	12.8	1.2
Lane group LOS	D	D	A	C	D		D	C		D	B	A
Apprch. delay	46.8			47.1			24.2			11.7		
Approach LOS	D			D			C			B		
Intersec. delay	25.1			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ POINSETTIA LANE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	1	1	0	2	3	0	1	3	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	498	35	54	15	12	30	39	746	30	60	1235	869
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 14.0	G =	G =	G = 10.0	G = 56.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	524	37	57	16	45		41	817		63	1300	915
Lane group cap.	751	211	1024	387	177		250	2287		129	2300	1046
v/c ratio	0.70	0.18	0.06	0.04	0.25		0.16	0.36		0.49	0.57	0.87
Green ratio	0.23	0.11	0.69	0.23	0.11		0.08	0.43		0.08	0.43	0.70
Unif. delay d1	45.8	52.8	6.4	38.8	53.2		56.1	24.9		57.5	27.8	15.1
Delay factor k	0.26	0.11	0.11	0.11	0.11		0.11	0.11		0.11	0.16	0.40
Increm. delay d2	2.9	0.4	0.0	0.0	0.8		0.3	0.1		2.9	0.3	8.4
PF factor	0.800	0.920	0.163	0.800	0.920		0.944	0.495		0.944	0.495	0.167
Control delay	39.5	48.9	1.1	31.1	49.7		53.3	12.4		57.2	14.1	10.9
Lane group LOS	D	D	A	C	D		D	B		E	B	B
Apprch. delay	36.6			44.8			14.4			14.0		
Approach LOS	D			D			B			B		
Intersec. delay	18.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ CARRILLO WAY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	150	20	54	44	60	11	115	1875	17	6	697	240
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 18.0	G =	G =	G = 12.0	G = 63.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	158	78		46	75		121	1992		6	987	
Lane group cap.	219	240		219	251		155	2585		155	2485	
v/c ratio	0.72	0.32		0.21	0.30		0.78	0.77		0.04	0.40	
Green ratio	0.13	0.14		0.13	0.14		0.09	0.48		0.09	0.48	
Unif. delay d1	54.2	50.5		50.5	50.3		57.7	27.6		53.7	21.4	
Delay factor k	0.28	0.11		0.11	0.11		0.33	0.32		0.11	0.11	
Increm. delay d2	11.1	0.8		0.5	0.7		22.2	1.5		0.1	0.1	
PF factor	0.900	0.893		0.900	0.893		0.932	0.373		0.932	0.373	
Control delay	59.9	45.9		45.9	45.6		76.0	11.8		50.2	8.1	
Lane group LOS	E	D		D	D		E	B		D	A	
Apprch. delay	55.2			45.7			15.4			8.3		
Approach LOS	E			D			B			A		
Intersec. delay	17.2			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ CARRILLO WAY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	155	40	59	19	15	20	32	640	40	30	1139	135
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 18.0	G = 18.0	G =	G =	G = 14.0	G = 60.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	163	104		20	37		34	716		32	1341	
Lane group cap.	232	246		232	235		180	2443		180	2424	
v/c ratio	0.70	0.42		0.09	0.16		0.19	0.29		0.18	0.55	
Green ratio	0.14	0.14		0.14	0.14		0.11	0.46		0.11	0.46	
Unif. delay d1	53.4	51.2		48.8	49.3		52.8	21.8		52.8	25.3	
Delay factor k	0.27	0.11		0.11	0.11		0.11	0.11		0.11	0.15	
Increm. delay d2	9.2	1.2		0.2	0.3		0.5	0.1		0.5	0.3	
PF factor	0.893	0.893		0.893	0.893		0.920	0.429		0.920	0.429	
Control delay	56.9	46.9		43.8	44.4		49.1	9.4		49.0	11.1	
Lane group LOS	E	D		D	D		D	A		D	B	
Apprch. delay	53.0			44.1			11.2			12.0		
Approach LOS	D			D			B			B		
Intersec. delay	17.0			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	2	1	0	2	3	0	2	3	0
Lane group	L	TR	R	L	TR		L	TR		L	TR	
Volume (vph)	357	10	916	21	20	24	476	1626	5	10	670	115
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5		0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 50.0	G =	G =	G =	G = 5.0	G = 25.0	G = 30.0	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	376	387	588	22	46		501	1717		11	826	
Lane group cap.	714	642	690	287	658		877	2464		125	1204	
v/c ratio	0.53	0.60	0.85	0.08	0.07		0.57	0.70		0.09	0.69	
Green ratio	0.38	0.38	0.46	0.38	0.38		0.27	0.46		0.04	0.23	
Unif. delay d1	30.9	32.0	31.1	25.4	25.3		41.0	27.8		60.3	45.7	
Delay factor k	0.13	0.19	0.38	0.11	0.11		0.17	0.26		0.11	0.26	
Increm. delay d2	0.7	1.6	10.1	0.1	0.0		0.9	0.9		0.3	1.6	
PF factor	0.583	0.583	0.429	0.583	0.583		0.754	0.429		0.973	0.800	
Control delay	18.7	20.3	23.4	14.9	14.8		31.8	12.8		59.0	38.2	
Lane group LOS	B	C	C	B	B		C	B		E	D	
Apprch. delay	21.2			14.8			17.1			38.5		
Approach LOS	C			B			B			D		
Intersec. delay	22.3			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	2	1	0	2	3	0	2	3	0
Lane group	L	TR	R	L	TR		L	TR		L	TR	
Volume (vph)	195	25	695	20	15	4	908	513	23	23	789	405
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5		0	5	0	0	5	0	100
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 40.0	G =	G =	G =	G = 5.0	G = 30.0	G = 35.0	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	205	311	447	21	20		956	564		24	1152	
Lane group cap.	602	518	574	246	556		1002	2857		125	1375	
v/c ratio	0.34	0.60	0.78	0.09	0.04		0.95	0.20		0.19	0.84	
Green ratio	0.31	0.31	0.38	0.31	0.31		0.31	0.54		0.04	0.27	
Unif. delay d1	34.8	38.2	35.1	32.0	31.5		44.1	15.5		60.5	44.8	
Delay factor k	0.11	0.19	0.33	0.11	0.11		0.46	0.11		0.11	0.37	
Increm. delay d2	0.3	1.9	6.8	0.2	0.0		18.4	0.0		0.8	4.7	
PF factor	0.704	0.704	0.583	0.704	0.704		0.704	0.222		0.973	0.754	
Control delay	24.8	28.8	27.3	22.7	22.2		49.4	3.5		59.7	38.6	
Lane group LOS	C	C	C	C	C		D	A		E	D	
Apprch. delay	27.3			22.4			32.4			39.0		
Approach LOS	C			C			C			D		
Intersec. delay	33.0			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@RANCHO SANTA FE DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	2	2	2	1	2	3	0	2	3	2
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	852	418	337	39	611	105	886	885	95	210	784	610
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 30.0	G = 24.0	G =	G =	G = 21.0	G = 19.0	G = 21.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	897	440	355	41	643	111	933	1032		221	825	642
Lane group cap.	694	640	1403	698	638	531	1047	1458		488	801	1044
v/c ratio	1.29	0.69	0.25	0.06	1.01	0.21	0.89	0.71		0.45	1.03	0.61
Green ratio	0.21	0.17	0.53	0.21	0.17	0.36	0.32	0.32		0.15	0.15	0.40
Unif. delay d1	55.0	54.5	18.0	43.8	58.0	31.3	45.2	41.7		54.3	59.5	33.4
Delay factor k	0.50	0.26	0.11	0.11	0.50	0.11	0.42	0.27		0.11	0.50	0.20
Increm. delay d2	142.2	3.1	0.1	0.0	37.6	0.2	9.7	1.6		0.7	39.7	1.1
PF factor	0.818	0.862	0.253	0.818	0.862	0.630	0.684	0.684		0.882	0.882	0.556
Control delay	187.2	50.1	4.6	35.8	87.6	19.9	40.6	30.2		48.5	92.2	19.7
Lane group LOS	F	D	A	D	F	B	D	C		D	F	B
Apprch. delay	113.3			75.5			35.1			58.9		
Approach LOS	F			E			D			E		
Intersec. delay	68.4			Intersection LOS						E		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@RANCHO SANTA FE DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	2	2	2	1	2	3	0	2	3	2
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	318	622	564	33	546	152	107	1031	186	155	1613	791
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		50	5	0	0	5	0	0	5	0	100
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 25.0	G = 30.0	G =	G =	G = 10.0	G = 7.0	G = 43.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	335	655	541	35	575	160	113	1281		163	1698	727
Lane group cap.	581	800	1081	581	798	505	512	2049		233	1640	1373
v/c ratio	0.58	0.82	0.50	0.06	0.72	0.32	0.22	0.63		0.70	1.04	0.53
Green ratio	0.18	0.21	0.41	0.18	0.21	0.32	0.16	0.39		0.07	0.31	0.52
Unif. delay d1	52.7	52.4	30.9	47.7	51.1	35.9	51.5	34.2		63.5	48.5	22.1
Delay factor k	0.17	0.36	0.11	0.11	0.28	0.11	0.11	0.21		0.27	0.50	0.13
Increm. delay d2	1.4	6.7	0.4	0.0	3.2	0.4	0.2	0.6		9.0	31.9	0.4
PF factor	0.855	0.818	0.542	0.855	0.818	0.684	0.876	0.569		0.949	0.704	0.274
Control delay	46.4	49.6	17.1	40.9	45.0	24.9	45.3	20.1		69.2	66.1	6.5
Lane group LOS	D	D	B	D	D	C	D	C		E	E	A
Apprch. delay	37.4			40.6			22.1			49.5		
Approach LOS	D			D			C			D		
Intersec. delay	39.4			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	2	1	1	1	3	1	2	3	1
Lane group	L	TR		L	TR	R	L	T	R	L	T	R
Volume (vph)	80	33	108	678	54	150	54	1636	592	150	959	52
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	300	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 32.0	G = 15.0	G =	G =	G = 17.0	G = 46.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	84	149		714	57	158	57	1722	307	158	1009	55
Lane group cap.	413	200		801	215	422	219	1890	529	426	1889	527
v/c ratio	0.20	0.75		0.89	0.27	0.37	0.26	0.91	0.58	0.37	0.53	0.10
Green ratio	0.25	0.12		0.25	0.12	0.28	0.13	0.35	0.35	0.13	0.35	0.35
Unif. delay d1	38.9	55.6		47.3	52.5	37.2	50.8	40.1	34.2	51.6	33.5	28.2
Delay factor k	0.11	0.30		0.42	0.11	0.11	0.11	0.43	0.17	0.11	0.14	0.11
Increm. delay d2	0.2	14.1		12.2	0.7	0.6	0.6	7.1	1.6	0.5	0.3	0.1
PF factor	0.782	0.913		0.782	0.913	0.735	0.900	0.635	0.635	0.900	0.635	0.635
Control delay	30.7	64.9		49.3	48.6	27.9	46.4	32.6	23.3	47.0	21.5	18.0
Lane group LOS	C	E		D	D	C	D	C	C	D	C	B
Apprch. delay	52.6			45.6			31.6			24.7		
Approach LOS	D			D			C			C		
Intersec. delay	33.7			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	2	1	1	1	3	1	2	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	122	64	29	566	27	312	62	891	510	613	1486	112
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	50	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	SB Only	Thru & RT	08
Timing	G = 33.0	G = 14.0	G =	G =	G = 12.0	G = 14.0	G = 32.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	128	98		596	28	276	65	938	537	645	1564	118
Lane group cap.	425	201		827	201	353	155	1315	803	776	2095	585
v/c ratio	0.30	0.49		0.72	0.14	0.78	0.42	0.71	0.67	0.83	0.75	0.20
Green ratio	0.25	0.11		0.25	0.11	0.24	0.09	0.25	0.54	0.24	0.39	0.39
Unif. delay d1	39.2	54.6		44.3	52.5	46.3	55.7	44.8	21.6	47.0	33.9	26.1
Delay factor k	0.11	0.11		0.28	0.11	0.33	0.11	0.28	0.24	0.37	0.30	0.11
Increm. delay d2	0.4	1.9		3.1	0.3	10.9	1.8	1.9	2.2	7.6	1.5	0.2
PF factor	0.773	0.920		0.773	0.920	0.791	0.932	0.782	0.222	0.791	0.570	0.570
Control delay	30.7	52.1		37.3	48.6	47.5	53.8	36.9	7.0	44.8	20.8	15.0
Lane group LOS	C	D		D	D	D	D	D	A	D	C	B
Apprch. delay	40.0			40.8			27.2			27.2		
Approach LOS	D			D			C			C		
Intersec. delay	30.2			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@CAM. JUNIPERO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	3	1	1	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	128	5	55	43	5	70	13	2084	37	24	1675	46
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5		0	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 15.0	G =	G =	G = 12.0	G = 68.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	135	63		45	5	74	14	2194	39	25	1763	48
Lane group cap.	193	195		193	215	365	155	2794	1015	155	2793	781
v/c ratio	0.70	0.32		0.23	0.02	0.20	0.09	0.79	0.04	0.16	0.63	0.06
Green ratio	0.12	0.12		0.12	0.12	0.25	0.09	0.52	0.68	0.09	0.52	0.52
Unif. delay d1	55.3	52.8		52.3	51.0	38.9	54.0	25.1	7.0	54.4	22.1	15.3
Delay factor k	0.27	0.11		0.11	0.11	0.11	0.11	0.33	0.11	0.11	0.21	0.11
Increm. delay d2	10.7	1.0		0.6	0.0	0.3	0.3	1.5	0.0	0.5	0.5	0.0
PF factor	0.913	0.913		0.913	0.913	0.782	0.932	0.269	0.155	0.932	0.269	0.269
Control delay	61.2	49.2		48.3	46.6	30.7	50.6	8.3	1.1	51.2	6.4	4.1
Lane group LOS	E	D		D	D	C	D	A	A	D	A	A
Apprch. delay	57.4			37.7			8.4			7.0		
Approach LOS	E			D			A			A		
Intersec. delay	10.8			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@CAM. JUNIPERO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	3	1	1	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	82	8	30	34	16	100	31	1281	123	125	1814	142
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5		0	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 15.0	G =	G =	G = 12.0	G = 68.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	86	40		36	17	105	33	1348	129	132	1909	149
Lane group cap.	193	199		193	215	365	155	2794	1015	155	2793	781
v/c ratio	0.45	0.20		0.19	0.08	0.29	0.21	0.48	0.13	0.85	0.68	0.19
Green ratio	0.12	0.12		0.12	0.12	0.25	0.09	0.52	0.68	0.09	0.52	0.52
Unif. delay d1	53.6	52.1		52.0	51.3	39.8	54.6	19.8	7.4	58.1	23.0	16.4
Delay factor k	0.11	0.11		0.11	0.11	0.11	0.11	0.11	0.11	0.38	0.25	0.11
Increm. delay d2	1.6	0.5		0.5	0.2	0.4	0.7	0.1	0.1	34.0	0.7	0.1
PF factor	0.913	0.913		0.913	0.913	0.782	0.932	0.269	0.155	0.932	0.269	0.269
Control delay	50.6	48.0		47.9	47.0	31.5	51.6	5.4	1.2	88.1	6.9	4.5
Lane group LOS	D	D		D	D	C	D	A	A	F	A	A
Apprch. delay	49.8			36.9			6.1			11.6		
Approach LOS	D			D			A			B		
Intersec. delay	11.7			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FE RD./LA COSTA A
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	390	195	145	35	272	64	96	1665	65	133	1460	263
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	40	5	0	14	5	0	100
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 14.0	G = 17.0	G = 17.0	G =	G = 11.0	G = 46.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	411	358		37	311		101	1807		140	1709	
Lane group cap.	464	1043		180	481		276	1881		276	1860	
v/c ratio	0.89	0.34		0.21	0.65		0.37	0.96		0.51	0.92	
Green ratio	0.28	0.30		0.11	0.13		0.08	0.35		0.08	0.35	
Unif. delay d1	45.0	35.5		52.9	53.6		56.2	41.1		56.9	40.2	
Delay factor k	0.41	0.11		0.11	0.22		0.11	0.47		0.12	0.44	
Increm. delay d2	18.2	0.2		0.6	3.0		0.8	12.8		1.5	7.9	
PF factor	0.745	0.714		0.920	0.900		0.938	0.635		0.938	0.635	
Control delay	51.8	25.6		49.2	51.3		53.6	38.9		54.9	33.4	
Lane group LOS	D	C		D	D		D	D		D	C	
Apprch. delay	39.6			51.1			39.6			35.0		
Approach LOS	D			D			D			D		
Intersec. delay	38.7			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FE RD./LA COSTA A
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	256	175	140	51	217	50	210	1213	40	152	1416	291
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	200
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 31.0	G = 21.0	G =	G =	G = 15.0	G = 43.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	269	331		54	281		221	1319		160	1587	
Lane group cap.	400	561		400	584		376	1758		376	1749	
v/c ratio	0.67	0.59		0.14	0.48		0.59	0.75		0.43	0.91	
Green ratio	0.24	0.16		0.24	0.16		0.12	0.33		0.12	0.33	
Unif. delay d1	44.9	50.5		39.0	49.5		54.6	38.7		53.5	41.6	
Delay factor k	0.24	0.18		0.11	0.11		0.18	0.31		0.11	0.43	
Increm. delay d2	4.4	1.6		0.2	0.6		2.4	1.8		0.8	7.3	
PF factor	0.791	0.872		0.791	0.872		0.913	0.670		0.913	0.670	
Control delay	39.9	45.7		31.0	43.8		52.2	27.8		49.6	35.2	
Lane group LOS	D	D		C	D		D	C		D	D	
Apprch. delay	43.1			41.7			31.3			36.5		
Approach LOS	D			D			C			D		
Intersec. delay	36.0			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FR DR./CAM. DE LO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				270		309		1517	230	95	1545	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5			5		40	5	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 27.0	G =	G =	G =	G = 15.0	G = 83.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				284		283		1839		100	1626	
Lane group cap.				628		503		3101		180	3928	
v/c ratio				0.45		0.56		0.59		0.56	0.41	
Green ratio				0.19		0.34		0.59		0.11	0.74	
Unif. delay d1				50.0		38.1		17.9		59.3	7.0	
Delay factor k				0.11		0.16		0.18		0.15	0.11	
Increm. delay d2				0.5		1.5		0.3		3.8	0.1	
PF factor				0.841		0.663		0.123		0.920	0.189	
Control delay				42.5		26.7		2.5		58.4	1.4	
Lane group LOS				D		C		A		E	A	
Apprch. delay				34.6			2.5			4.7		
Approach LOS				C			A			A		
Intersec. delay	7.8			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FE DR./CAM. DE LO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				135		130		1333	160	169	1438	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5			5		40	5	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 20.0	G = 85.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				142		95		1571		178	1514	
Lane group cap.				465		482		3189		239	4195	
v/c ratio				0.31		0.20		0.49		0.74	0.36	
Green ratio				0.14		0.32		0.61		0.14	0.79	
Unif. delay d1				53.8		34.4		15.4		57.6	4.5	
Delay factor k				0.11		0.11		0.11		0.30	0.11	
Increm. delay d2				0.4		0.2		0.1		4.5	0.0	
PF factor				0.889		0.684		0.127		0.889	0.233	
Control delay				48.2		23.7		2.1		55.6	1.1	
Lane group LOS				D		C		A		E	A	
Apprch. delay				38.4			2.1			6.8		
Approach LOS				D			A			A		
Intersec. delay	6.8			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CALLE BARCELO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	1	3	0	1	3	0
Lane group	L	T	R	L	LTR		L	TR		L	TR	
Volume (vph)	66	120	69	313	118	111	60	1570	335	29	1608	178
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 14.0	G = 18.0	G =	G =	G = 13.0	G = 55.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	69	126	73	181	389		63	2006		31	1880	
Lane group cap.	196	229	175	251	525		182	2383		182	2411	
v/c ratio	0.35	0.55	0.42	0.72	0.74		0.35	0.84		0.17	0.78	
Green ratio	0.12	0.12	0.12	0.15	0.15		0.11	0.46		0.11	0.46	
Unif. delay d1	48.8	50.0	49.2	48.6	48.8		49.6	28.7		48.6	27.4	
Delay factor k	0.11	0.15	0.11	0.28	0.30		0.11	0.38		0.11	0.33	
Increm. delay d2	1.1	2.8	1.6	9.7	5.6		1.1	2.9		0.4	1.7	
PF factor	0.912	0.912	0.912	0.882	0.882		0.919	0.436		0.919	0.436	
Control delay	45.6	48.5	46.5	52.6	48.6		46.7	15.4		45.1	13.6	
Lane group LOS	D	D	D	D	D		D	B		D	B	
Apprch. delay	47.2			49.9			16.4			14.2		
Approach LOS	D			D			B			B		
Intersec. delay	21.2			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CALLE BARCELO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	1	3	0	1	3	0
Lane group	L	T	R	L	LTR		L	TR		L	TR	
Volume (vph)	24	83	50	105	48	40	55	1429	201	106	1347	120
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 14.0	G = 13.0	G =	G =	G = 13.0	G = 60.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	25	87	53	83	121		58	1716		112	1544	
Lane group cap.	196	229	175	182	379		182	2621		182	2638	
v/c ratio	0.13	0.38	0.30	0.46	0.32		0.32	0.65		0.62	0.59	
Green ratio	0.12	0.12	0.12	0.11	0.11		0.11	0.50		0.11	0.50	
Unif. delay d1	47.5	49.0	48.5	50.2	49.4		49.4	22.3		51.1	21.2	
Delay factor k	0.11	0.11	0.11	0.11	0.11		0.11	0.23		0.20	0.18	
Increm. delay d2	0.3	1.1	1.0	1.8	0.5		1.0	0.6		6.1	0.3	
PF factor	0.912	0.912	0.912	0.919	0.919		0.919	0.333		0.919	0.333	
Control delay	43.6	45.7	45.2	47.9	45.9		46.4	8.0		53.1	7.4	
Lane group LOS	D	D	D	D	D		D	A		D	A	
Apprch. delay	45.3			46.7			9.3			10.5		
Approach LOS	D			D			A			B		
Intersec. delay	13.4			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./RANCHO SANTA FE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	1	1	1	1	2	1	2	2	1
Lane group		LTR		L	LT	R	L	T	R	L	T	R
Volume (vph)	20	23	20	606	7	551	10	1394	250	423	1542	25
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type		5		5	5	5	5	5	5	5	5	5
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0	0	0	0	0	0	0	0
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 8.0	G = 26.0	G =	G =	G = 20.0	G = 56.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		66		319	326	580	11	1467	263	445	1623	26
Lane group cap.		114		335	374	621	258	1608	946	501	1608	796
v/c ratio		0.58		0.95	0.87	0.93	0.04	0.91	0.28	0.89	1.01	0.03
Green ratio		0.06		0.20	0.20	0.39	0.15	0.43	0.63	0.15	0.43	0.53
Unif. delay d1		59.4		51.4	50.4	37.9	46.8	34.7	10.7	53.9	37.0	14.6
Delay factor k		0.17		0.46	0.40	0.45	0.11	0.43	0.11	0.41	0.50	0.11
Increm. delay d2		7.2		36.6	19.5	21.4	0.1	8.3	0.2	17.5	24.7	0.0
PF factor		0.956		0.833	0.833	0.570	0.879	0.495	0.135	0.879	0.495	0.246
Control delay		63.9		79.5	61.5	43.0	41.2	25.5	1.6	64.9	43.1	3.6
Lane group LOS		E		E	E	D	D	C	A	E	D	A
Apprch. delay	63.9			57.4			22.0			47.2		
Approach LOS	E			E			C			D		
Intersec. delay	41.3			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./RANCHO SANTA FE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	1	1	1	1	2	1	2	2	1
Lane group		LTR		L	LT	R	L	T	R	L	T	R
Volume (vph)	20	23	20	415	15	247	10	1418	527	416	1056	30
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type		5		5	5	5	5	5	5	5	5	5
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0	0	0	0	0	0	0	0
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 24.0	G =	G =	G = 22.0	G = 54.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		66		240	213	260	11	1493	555	438	1112	32
Lane group cap.		142		309	346	621	284	1551	623	551	1551	796
v/c ratio		0.46		0.78	0.62	0.42	0.04	0.96	0.89	0.79	0.72	0.04
Green ratio		0.08		0.18	0.18	0.39	0.17	0.42	0.42	0.17	0.42	0.53
Unif. delay d1		57.4		50.4	48.8	28.7	45.2	37.0	35.3	51.8	31.6	14.6
Delay factor k		0.11		0.33	0.20	0.11	0.11	0.47	0.41	0.34	0.28	0.11
Increm. delay d2		2.4		11.8	3.3	0.5	0.1	14.9	15.0	7.9	1.6	0.0
PF factor		0.944		0.849	0.849	0.570	0.864	0.526	0.526	0.864	0.526	0.246
Control delay		56.6		54.6	44.7	16.8	39.1	34.4	33.6	52.7	18.3	3.6
Lane group LOS		E		D	D	B	D	C	C	D	B	A
Apprch. delay	56.6			37.9			34.2			27.5		
Approach LOS	E			D			C			C		
Intersec. delay	32.7			Intersection LOS						C		

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	USAI
Agency/Co.	USAI
Date Performed	09/24/08
Analysis Time Period	AM PEAK

Site Information

Intersection	RSF/CAM DEL NORTE
Jurisdiction	ENCINITAS
Analysis Year	YEAR 2030 NO PROJECT

Project ID LA COSTA TOWN SQ.

East/West Street: ECDN

North/South Street: RSF

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	10	0	10	150	5	370
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	10	392	90	233	583	10
%Thrus Left Lane	50			63		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		L	TR	LT	R	L	TR
PHF	0.95		0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate	20		157	394	422	94	245	623
% Heavy Vehicles	2		2	2	2	3	2	2
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.5		1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns	0.5		0.0	1.0	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	9.10		9.10	9.10	9.10	9.10	9.10	9.10

Departure Headway and Service Time

hd, initial value	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.02		0.14	0.35	0.38	0.08	0.22	0.55
hd, final value	9.10		9.10	9.10	9.10	9.10	9.10	9.10
x, final value	0.05		0.37	0.79	0.92	0.19	0.55	1.30
Move-up time, m	2.3		2.3		2.3		2.3	
Service Time	6.8		6.8		6.8		6.8	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	270		407	498	460	344	445	623
Delay	12.28		15.84	31.37	51.34	11.41	19.92	170.94
LOS	B		C	D	F	B	C	F
Approach: Delay	12.28		26.95		44.06		128.32	
LOS	B		D		E		F	
Intersection Delay	76.32							
Intersection LOS	F							

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ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	USAI	Intersection	RSF/CAM DEL NORTE
Agency/Co.	USAI	Jurisdiction	ENCINITAS
Date Performed	09/24/08	Analysis Year	YEAR 2030 NO PROJECT
Analysis Time Period	PM PEAK		

Project ID LA COSTA TOWN SQ.

East/West Street: ECDN | North/South Street: RSF

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	10	7	10	150	10	174
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	20	530	140	139	375	10
%Thrus Left Lane	50			63		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		L	TR	LT	R	L	TR
PHF	0.95		0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate	27		157	193	578	147	146	404
% Heavy Vehicles	2		2	2	2	3	2	2
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.4		1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns	0.4		0.0	0.9	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	8.42		8.42	8.42	8.42	8.42	8.42	8.42

Departure Headway and Service Time

hd, initial value	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.02		0.14	0.17	0.51	0.13	0.13	0.36
hd, final value	8.42		8.42	8.42	8.42	8.42	8.42	8.42
x, final value	0.06		0.36	0.38	1.10	0.25	0.30	0.78
Move-up time, m	2.3		2.3		2.3		2.3	
Service Time	6.1		6.1		6.1		6.1	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	277		407	443	578	397	396	516
Delay	11.69		15.44	13.95	93.13	10.84	13.38	29.95
LOS	B		C	B	F	B	B	D
Approach: Delay	11.69		14.62		76.45		25.55	
LOS	B		B		F		D	
Intersection Delay	45.35							
Intersection LOS	E							

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	3	0	2	3	0
Lane group	L	T	R	L	TR		L	T		L	TR	
Volume (vph)	69	223	200	446	284	307	379	2558		129	890	341
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A		A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	0	0	10	0	130	10			10		60
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 5.0	G = 19.0	G = 13.0	G =	G = 8.0	G = 30.0	G = 35.0	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	73	235	211	469	485		399	2693		136	1233	
Lane group cap.	116	347	270	674	926		1000	2671		186	1287	
v/c ratio	0.63	0.68	0.78	0.70	0.52		0.40	1.01		0.73	0.96	
Green ratio	0.04	0.09	0.19	0.21	0.26		0.31	0.50		0.06	0.25	
Unif. delay d1	66.6	61.5	54.3	51.4	44.0		38.3	35.0		64.9	51.8	
Delay factor k	0.21	0.25	0.33	0.26	0.13		0.11	0.50		0.29	0.47	
Increm. delay d2	10.5	5.2	13.8	3.1	0.5		0.3	19.4		13.7	16.1	
PF factor	0.975	0.932	0.848	0.826	0.761		0.704	0.333		0.960	0.778	
Control delay	75.4	62.5	59.8	45.6	34.0		27.2	31.1		76.0	56.4	
Lane group LOS	E	E	E	D	C		C	C		E	E	
Apprch. delay	63.2			39.7			30.6			58.3		
Approach LOS	E			D			C			E		
Intersec. delay	41.3			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	3	0	2	3	0
Lane group	L	T	R	L	TR		L	T		L	TR	
Volume (vph)	121	465	413	365	274	61	383	910		233	1317	130
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A		A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	0	100	10	0	0	10			10		60
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 20.0	G =	G =	G = 24.0	G = 54.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	127	489	329	384	352		403	958		245	1460	
Lane group cap.	512	533	514	512	517		558	2060		558	2045	
v/c ratio	0.25	0.92	0.64	0.75	0.68		0.72	0.47		0.44	0.71	
Green ratio	0.16	0.14	0.35	0.16	0.14		0.17	0.39		0.17	0.39	
Unif. delay d1	51.7	59.2	38.1	56.4	57.0		54.8	32.2		52.0	36.5	
Delay factor k	0.11	0.44	0.22	0.31	0.25		0.28	0.11		0.11	0.28	
Increm. delay d2	0.3	20.9	2.7	6.1	3.6		4.6	0.2		0.6	1.2	
PF factor	0.876	0.889	0.641	0.876	0.889		0.862	0.581		0.862	0.581	
Control delay	45.6	73.5	27.1	55.5	54.3		51.9	18.9		45.4	22.4	
Lane group LOS	D	E	C	E	D		D	B		D	C	
Apprch. delay	53.6			54.9			28.6			25.7		
Approach LOS	D			D			C			C		
Intersec. delay	36.6			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ COSTA DEL MAR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				164		123		3397	82	58	1603	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		60	10	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 15.0	G =	G =	G =	G = 10.0	G = 80.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				173		66		3662		61	1687	
Lane group cap.				407		188		3547		140	4228	
v/c ratio				0.43		0.35		1.03		0.44	0.40	
Green ratio				0.13		0.13		0.67		0.08	0.79	
Unif. delay d1				48.5		48.0		20.0		52.3	3.8	
Delay factor k				0.11		0.11		0.50		0.11	0.11	
Increm. delay d2				0.7		1.1		24.3		2.2	0.1	
PF factor				0.905		0.905		0.239		0.939	0.240	
Control delay				44.6		44.6		29.1		51.3	1.0	
Lane group LOS				D		D		C		D	A	
Apprch. delay				44.6			29.1			2.7		
Approach LOS				D			C			A		
Intersec. delay	21.6			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ COSTA DEL MAR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				206		126		1590	254	184	2811	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		60	10	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 15.0	G =	G =	G =	G = 20.0	G = 70.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				217		69		1941		194	2959	
Lane group cap.				407		188		3048		279	4228	
v/c ratio				0.53		0.37		0.64		0.70	0.70	
Green ratio				0.13		0.13		0.58		0.17	0.79	
Unif. delay d1				49.2		48.1		16.6		47.1	5.8	
Delay factor k				0.14		0.11		0.22		0.26	0.27	
Increm. delay d2				1.4		1.2		0.4		7.3	0.5	
PF factor				0.905		0.905		0.120		0.867	0.240	
Control delay				45.9		44.8		2.4		48.2	1.9	
Lane group LOS				D		D		A		D	A	
Apprch. delay				45.6			2.4			4.8		
Approach LOS				D			A			A		
Intersec. delay	6.1			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	2	2	0	0	0	0	1	1	1
Lane group		TR		L	T					L	LT	R
Volume (vph)		644	117	499	303					767	10	395
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0		2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0					2.0	2.0	2.0
Arrival type		5		5	5					5	5	5
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0		12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0					0	0	0
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 30.0	G = 35.0	G =	G =	G = 40.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		801		525	319					404	414	416
Lane group cap.		912		950	2178					559	561	500
v/c ratio		0.88		0.55	0.15					0.72	0.74	0.83
Green ratio		0.25		0.29	0.58					0.33	0.33	0.33
Unif. delay d1		43.2		35.9	11.4					35.1	35.4	36.9
Delay factor k		0.41		0.15	0.11					0.28	0.30	0.37
Increm. delay d2		9.8		0.7	0.0					4.6	5.1	11.4
PF factor		0.778		0.725	0.120					0.667	0.667	0.667
Control delay		43.4		26.7	1.4					28.0	28.7	36.0
Lane group LOS		D		C	A					C	C	D
Apprch. delay	43.4			17.2						30.9		
Approach LOS	D			B						C		
Intersec. delay	30.4			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	2	2	0	0	0	0	1	1	1
Lane group		TR		L	T					L	LT	R
Volume (vph)		605	73	498	779					391	15	249
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0		2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0					2.0	2.0	2.0
Arrival type		5		5	5					5	5	5
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0		12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0					0	0	0
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 30.0	G = 40.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		714		524	820					313	115	262
Lane group cap.		918		1085	2333					489	493	437
v/c ratio		0.78		0.48	0.35					0.64	0.23	0.60
Green ratio		0.25		0.33	0.63					0.29	0.29	0.29
Unif. delay d1		41.9		31.8	10.8					37.0	32.3	36.5
Delay factor k		0.33		0.11	0.11					0.22	0.11	0.19
Increm. delay d2		4.3		0.3	0.1					2.8	0.2	2.3
PF factor		0.778		0.667	0.133					0.725	0.725	0.725
Control delay		36.9		21.5	1.5					29.7	23.7	28.8
Lane group LOS		D		C	A					C	C	C
Apprch. delay	36.9			9.3						28.3		
Approach LOS	D			A						C		
Intersec. delay	21.3			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	1	0	1	2	0	0	0
Lane group	L	T			T	R		LT	R			
Volume (vph)	220	1191			717	586	85	1	739			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				0	0	141	0		0	0		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 25.0	G = 40.0	G =	G =	G = 40.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	232	1254			755	468		90	778			
Lane group cap.	349	2178			1780	1062		561	885			
v/c ratio	0.66	0.58			0.42	0.44		0.16	0.88			
Green ratio	0.21	0.58			0.33	0.71		0.33	0.33			
Unif. delay d1	43.6	15.7			31.1	7.4		28.2	37.7			
Delay factor k	0.24	0.17			0.11	0.11		0.11	0.41			
Increm. delay d2	4.7	0.4			0.2	0.3		0.1	10.1			
PF factor	0.825	0.120			0.667	0.171		0.667	0.667			
Control delay	40.7	2.3			20.9	1.6		18.9	35.3			
Lane group LOS	D	A			C	A		B	D			
Apprch. delay	8.3			13.5			33.6					
Approach LOS	A			B			C					
Intersec. delay	16.2			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	1	0	1	2	0	0	0
Lane group	L	T			T	R		LT	R			
Volume (vph)	130	866			1067	262	210	1	561			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				0	0	100	0		0	0		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 30.0	G = 35.0	G =	G =	G = 40.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	137	912			1123	171		222	591			
Lane group cap.	419	2178			1558	1000		560	885			
v/c ratio	0.33	0.42			0.72	0.17		0.40	0.67			
Green ratio	0.25	0.58			0.29	0.67		0.33	0.33			
Unif. delay d1	36.8	13.8			38.1	7.5		30.7	34.3			
Delay factor k	0.11	0.11			0.28	0.11		0.11	0.24			
Increm. delay d2	0.5	0.1			1.7	0.1		0.5	1.9			
PF factor	0.778	0.120			0.725	0.150		0.667	0.667			
Control delay	29.0	1.8			29.3	1.2		20.9	24.8			
Lane group LOS	C	A			C	A		C	C			
Apprch. delay	5.3			25.6			23.8					
Approach LOS	A			C			C					
Intersec. delay	18.4			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./PIREAUS ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	4	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1730	200	100	1193		110		75			
% Heavy veh		2	2	2	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		2032		105	1256		116		79			
Lane group cap.		2246		186	5539		186		167			
v/c ratio		0.90		0.56	0.23		0.62		0.47			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		15.2		37.9	2.7		38.2		37.5			
Delay factor k		0.43		0.16	0.11		0.21		0.11			
Increm. delay d2		5.7		3.9	0.0		6.4		2.1			
PF factor		0.129		0.917	0.225		1.000		1.000			
Control delay		7.7		38.7	0.6		44.6		39.6			
Lane group LOS		A		D	A		D		D			
Apprch. delay	7.7			3.6			42.6					
Approach LOS	A			A			D					
Intersec. delay	8.0			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	ST.LA COSTA AVE./PIRAEUS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	4	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1377	50	110	1224		105		50			
% Heavy veh		2	2	2	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		5		5			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1502		116	1288		111		53			
Lane group cap.		2270		186	5539		186		167			
v/c ratio		0.66		0.62	0.23		0.60		0.32			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		11.4		38.2	2.7		38.1		36.9			
Delay factor k		0.24		0.21	0.11		0.19		0.11			
Increm. delay d2		0.7		6.4	0.0		5.2		1.1			
PF factor		0.129		0.917	0.225		0.917		0.917			
Control delay		2.2		41.4	0.6		40.1		34.9			
Lane group LOS		A		D	A		D		C			
Apprch. delay	2.2			4.0			38.4					
Approach LOS	A			A			D					
Intersec. delay	5.0			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	2	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1725	80	110	1233		60		60			
% Heavy veh		2	2	2	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		5		5			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1900		116	1298		63		63			
Lane group cap.		2267		186	2903		186		167			
v/c ratio		0.84		0.62	0.45		0.34		0.38			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		14.0		38.2	3.4		36.9		37.1			
Delay factor k		0.37		0.21	0.11		0.11		0.11			
Increm. delay d2		3.0		6.4	0.1		1.1		1.4			
PF factor		0.129		0.917	0.225		0.917		0.917			
Control delay		4.7		41.4	0.9		35.0		35.4			
Lane group LOS		A		D	A		C		D			
Apprch. delay	4.7			4.2			35.2					
Approach LOS	A			A			D					
Intersec. delay	5.6			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	2	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1409	95	75	1348		65		100			
% Heavy veh		2	2	2	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		5		5			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1583		79	1419		68		105			
Lane group cap.		2260		186	2903		186		167			
v/c ratio		0.70		0.42	0.49		0.37		0.63			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		11.9		37.3	3.6		37.1		38.2			
Delay factor k		0.27		0.11	0.11		0.11		0.21			
Increm. delay d2		1.0		1.6	0.1		1.2		7.4			
PF factor		0.129		0.917	0.225		0.917		0.917			
Control delay		2.5		35.8	0.9		35.2		42.4			
Lane group LOS		A		D	A		D		D			
Apprch. delay	2.5			2.8			39.6					
Approach LOS	A			A			D					
Intersec. delay	4.6			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Lane group	L	LT	R	L	T	R	L	TR		L	T	R
Volume (vph)	1127	334	324	189	441	383	284	1945	55	79	1041	618
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	0	0	10	0	50	10	0	30	10		0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 33.0	G = 23.0	G =	G =	G = 7.0	G = 8.0	G = 34.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	747	791	341	199	464	351	299	2073		83	1096	651
Lane group cap.	827	922	456	576	660	397	501	1926		175	1397	831
v/c ratio	0.90	0.86	0.75	0.35	0.70	0.88	0.60	1.08		0.47	0.78	0.78
Green ratio	0.25	0.25	0.31	0.18	0.18	0.27	0.15	0.36		0.05	0.26	0.55
Unif. delay d1	47.0	46.3	40.5	46.9	50.3	45.6	51.2	41.5		59.7	44.6	22.9
Delay factor k	0.42	0.39	0.30	0.11	0.27	0.41	0.19	0.50		0.11	0.33	0.33
Increm. delay d2	13.2	8.1	6.7	0.4	3.4	20.4	2.0	44.5		2.0	3.0	4.9
PF factor	0.773	0.773	0.704	0.857	0.857	0.754	0.879	0.622		0.962	0.764	0.172
Control delay	49.5	43.9	35.2	40.5	46.5	54.7	47.0	70.3		59.5	37.1	8.9
Lane group LOS	D	D	D	D	D	D	D	E		E	D	A
Apprch. delay	44.6			48.2			67.4			28.1		
Approach LOS	D			D			E			C		
Intersec. delay	48.5			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Lane group	L	LT	R	L	T	R	L	TR		L	T	R
Volume (vph)	631	524	277	167	321	179	279	1163	110	249	2025	726
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	0	0	10		0	10	0	0	10	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 29.0	G = 16.0	G =	G =	G = 15.0	G = 50.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	664	552	292	176	338	188	294	1340		262	2132	764
Lane group cap.	726	833	501	401	459	415	376	2026		376	2054	961
v/c ratio	0.91	0.66	0.58	0.44	0.74	0.45	0.78	0.66		0.70	1.04	0.80
Green ratio	0.22	0.22	0.34	0.12	0.12	0.28	0.12	0.38		0.12	0.38	0.65
Unif. delay d1	49.3	46.0	35.4	52.8	55.0	38.9	55.9	33.0		55.3	40.0	16.7
Delay factor k	0.43	0.24	0.17	0.11	0.29	0.11	0.33	0.24		0.26	0.50	0.34
Increm. delay d2	16.2	2.0	1.7	0.8	6.1	0.8	10.3	0.8		5.6	30.5	4.7
PF factor	0.809	0.809	0.659	0.906	0.906	0.745	0.913	0.583		0.913	0.583	0.141
Control delay	56.0	39.2	25.1	48.7	56.0	29.7	61.3	20.1		56.1	53.8	7.1
Lane group LOS	E	D	C	D	E	C	E	C		E	D	A
Apprch. delay	43.9			47.1			27.5			42.7		
Approach LOS	D			D			C			D		
Intersec. delay	39.9			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./VIEJO CASTILLA W
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	0	1	0
Lane group	L	T			TR						LTR	
Volume (vph)	30	442			792	10				35	1	120
% Heavy veh	2	2			2	2				0	2	0
PHF	0.95	0.95			0.95	0.95				0.95	0.95	0.95
Actuated (P/A)	A	A			A	A				A	A	A
Startup lost time	2.0	2.0			2.0						2.0	
Ext. eff. green	2.0	2.0			2.0						2.0	
Arrival type	5	5			5						5	
Unit Extension	3.0	3.0			3.0						3.0	
Ped/Bike/RTOR Volume				0	0	0	0			0	0	30
Lane Width	12.0	12.0			12.0						12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0						0	
Unit Extension	3.0	3.0			3.0						3.0	

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 40.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 75.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	32	465			845						133	
Lane group cap.	223	2737			1974						214	
v/c ratio	0.14	0.17			0.43						0.62	
Green ratio	0.13	0.73			0.53						0.13	
Unif. delay d1	28.7	3.0			10.6						30.7	
Delay factor k	0.11	0.11			0.11						0.20	
Increm. delay d2	0.3	0.0			0.2						5.5	
PF factor	0.897	0.188			0.238						0.897	
Control delay	26.1	0.6			2.7						33.0	
Lane group LOS	C	A			A						C	
Apprch. delay	2.2			2.7						33.0		
Approach LOS	A			A						C		
Intersec. delay	5.3			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./VIEJO CASTILLA W
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	0	1	0
Lane group	L	T			TR						LTR	
Volume (vph)	135	721			463	25				20	1	60
% Heavy veh	2	2			2	2				0	2	0
PHF	0.95	0.95			0.95	0.95				0.95	0.95	0.95
Actuated (P/A)	A	A			A	A				A	A	A
Startup lost time	2.0	2.0			2.0						2.0	
Ext. eff. green	2.0	2.0			2.0						2.0	
Arrival type	5	5			5						5	
Unit Extension	3.0	3.0			3.0						3.0	
Ped/Bike/RTOR Volume				0	0	0	0			0	0	30
Lane Width	12.0	12.0			12.0						12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0						0	
Unit Extension	3.0	3.0			3.0						3.0	

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 45.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 80.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	142	759			513						54	
Lane group cap.	210	2799			2082						203	
v/c ratio	0.68	0.27			0.25						0.27	
Green ratio	0.13	0.75			0.56						0.13	
Unif. delay d1	33.5	3.1			8.9						31.7	
Delay factor k	0.25	0.11			0.11						0.11	
Increm. delay d2	8.4	0.1			0.1						0.7	
PF factor	0.905	0.200			0.143						0.905	
Control delay	38.6	0.7			1.3						29.4	
Lane group LOS	D	A			A						C	
Apprch. delay	6.7			1.3						29.4		
Approach LOS	A			A						C		
Intersec. delay	5.6			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./ROMERIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	.YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	0	1	0	0	1	0
Lane group	L	T	R	L	TR			LTR			LTR	
Volume (vph)	15	422	40	30	687	28	105	10	17	120	7	10
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Arrival type	5	5	5	5	5			5			5	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0			0	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 5.0	G = 34.0	G =	G =	G = 21.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 75.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	16	444	42	32	752			140			144	
Lane group cap.	112	889	756	112	1683			335			327	
v/c ratio	0.14	0.50	0.06	0.29	0.45			0.42			0.44	
Green ratio	0.07	0.45	0.45	0.07	0.45			0.28			0.28	
Unif. delay d1	33.0	14.5	11.5	33.3	14.1			22.0			22.2	
Delay factor k	0.11	0.11	0.11	0.11	0.11			0.11			0.11	
Increm. delay d2	0.6	0.4	0.0	1.4	0.2			0.8			0.9	
PF factor	0.952	0.447	0.447	0.952	0.447			0.741			0.741	
Control delay	32.0	6.9	5.2	33.1	6.5			17.2			17.4	
Lane group LOS	C	A	A	C	A			B			B	
Apprch. delay	7.6			7.6			17.2			17.4		
Approach LOS	A			A			B			B		
Intersec. delay	9.3			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./ROMERIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	.YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	0	1	0	0	1	0
Lane group	L	T	R	L	TR			LTR			LTR	
Volume (vph)	10	686	45	50	463	133	35	5	40	33	5	10
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Arrival type	5	5	5	5	5			5			5	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0			0	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 8.0	G = 47.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	722	47	53	627			84			51	
Lane group cap.	149	1024	871	149	1884			316			303	
v/c ratio	0.07	0.71	0.05	0.36	0.33			0.27			0.17	
Green ratio	0.09	0.52	0.52	0.09	0.52			0.22			0.22	
Unif. delay d1	37.6	16.3	10.6	38.6	12.4			28.9			28.3	
Delay factor k	0.11	0.27	0.11	0.11	0.11			0.11			0.11	
Increm. delay d2	0.2	2.2	0.0	1.5	0.1			0.5			0.3	
PF factor	0.935	0.271	0.271	0.935	0.271			0.810			0.810	
Control delay	35.4	6.6	2.9	37.5	3.5			23.9			23.2	
Lane group LOS	D	A	A	D	A			C			C	
Apprch. delay	6.8			6.1			23.9			23.2		
Approach LOS	A			A			C			C		
Intersec. delay	7.9			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CADENCIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	21	533	5	15	595	21	5	10	32	164	20	145
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			4			4	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 5.0	G = 41.0	G =	G =	G = 29.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	22	566		16	648			50			347	
Lane group cap.	100	892		100	1692			527			470	
v/c ratio	0.22	0.63		0.16	0.38			0.09			0.74	
Green ratio	0.06	0.46		0.06	0.46			0.32			0.32	
Unif. delay d1	40.6	18.8		40.5	16.2			21.3			27.1	
Delay factor k	0.11	0.21		0.11	0.11			0.11			0.30	
Increm. delay d2	1.1	1.5		0.8	0.1			0.1			6.1	
PF factor	0.961	0.442		0.961	0.442			0.968			0.968	
Control delay	40.2	9.8		39.7	7.3			20.7			32.3	
Lane group LOS	D	A		D	A			C			C	
Apprch. delay	10.9			8.1			20.7			32.3		
Approach LOS	B			A			C			C		
Intersec. delay	14.6			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CADENCIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	161	521	15	29	535	156	10	10	23	27	5	25
% Heavy veh	2	2	0	2	2	2	2	2	2	0	2	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 15.0	G = 40.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	169	564		31	727			46			59	
Lane group cap.	279	868		279	1603			344			327	
v/c ratio	0.61	0.65		0.11	0.45			0.13			0.18	
Green ratio	0.17	0.44		0.17	0.44			0.22			0.22	
Unif. delay d1	34.8	19.5		31.8	17.4			28.1			28.4	
Delay factor k	0.19	0.23		0.11	0.11			0.11			0.11	
Increm. delay d2	3.7	1.7		0.2	0.2			0.2			0.3	
PF factor	0.867	0.467		0.867	0.467			0.810			0.810	
Control delay	33.9	10.8		27.8	8.3			22.9			23.2	
Lane group LOS	C	B		C	A			C			C	
Apprch. delay	16.1			9.1			22.9			23.2		
Approach LOS	B			A			C			C		
Intersec. delay	13.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LT	R
Volume (vph)		1180	245	424	199					431	1	51
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 50.0	G = 25.0	G =	G =	G = 30.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1242	258	446	209					345	110	54
Lane group cap.		1555	695	678	2489					419	420	375
v/c ratio		0.80	0.37	0.66	0.08					0.82	0.26	0.14
Green ratio		0.42	0.42	0.21	0.67					0.25	0.25	0.25
Unif. delay d1		30.6	24.2	43.6	7.1					42.5	36.1	35.0
Delay factor k		0.34	0.11	0.23	0.11					0.36	0.11	0.11
Increm. delay d2		3.0	0.3	2.3	0.0					12.5	0.3	0.2
PF factor		0.524	0.524	0.825	0.150					0.778	0.778	0.778
Control delay		19.1	13.0	38.3	1.1					45.6	28.4	27.4
Lane group LOS		B	B	D	A					D	C	C
Apprch. delay	18.0			26.4						39.9		
Approach LOS	B			C						D		
Intersec. delay	24.3			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LT	R
Volume (vph)		688	111	288	518					454	1	161
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 30.0	G = 40.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		724	117	303	545					363	116	169
Lane group cap.		933	417	1085	2333					489	491	437
v/c ratio		0.78	0.28	0.28	0.23					0.74	0.24	0.39
Green ratio		0.25	0.25	0.33	0.63					0.29	0.29	0.29
Unif. delay d1		41.9	36.3	29.4	9.9					38.4	32.3	33.9
Delay factor k		0.33	0.11	0.11	0.11					0.30	0.11	0.11
Increm. delay d2		4.2	0.4	0.1	0.1					6.0	0.2	0.6
PF factor		0.778	0.778	0.667	0.133					0.725	0.725	0.725
Control delay		36.7	28.6	19.7	1.4					33.9	23.7	25.2
Lane group LOS		D	C	B	A					C	C	C
Apprch. delay	35.6			7.9						29.8		
Approach LOS	D			A						C		
Intersec. delay	24.0			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/07	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	0	1	1	2	0	0	0
Lane group	L	T			TR		L	LT	R			
Volume (vph)	880	731			674	405	95	175	276			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0		2.0	2.0	2.0			
Ext. eff. green	2.0	2.0			2.0		2.0	2.0	2.0			
Arrival type	5	5			5		5	5	5			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			
Ped/Bike/RTOR Volume				0		200	0		0	0		
Lane Width	12.0	12.0			12.0		12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0		0	0	0			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 60.0	G = 25.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	926	769			925		100	184	291			
Lane group cap.	838	2800			1074		279	294	443			
v/c ratio	1.11	0.27			0.86		0.36	0.63	0.66			
Green ratio	0.50	0.75			0.21		0.17	0.17	0.17			
Unif. delay d1	30.0	4.7			45.8		44.3	46.5	46.8			
Delay factor k	0.50	0.11			0.39		0.11	0.21	0.23			
Increm. delay d2	64.0	0.1			7.3		0.8	4.2	3.5			
PF factor	0.333	0.200			0.825		0.867	0.867	0.867			
Control delay	74.0	1.0			45.1		39.2	44.5	44.1			
Lane group LOS	E	A			D		D	D	D			
Apprch. delay	40.9			45.1			43.4					
Approach LOS	D			D			D					
Intersec. delay	42.5			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	0	1	1	2	0	0	0
Lane group	L	T			TR		L	LT	R			
Volume (vph)	203	939			675	387	261	190	564			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0		2.0	2.0	2.0			
Ext. eff. green	2.0	2.0			2.0		2.0	2.0	2.0			
Arrival type	5	5			5		5	5	5			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			
Ped/Bike/RTOR Volume				0		200	0		0	0		
Lane Width	12.0	12.0			12.0		12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0		0	0	0			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 20.0	G = 30.0	G =	G =	G = 30.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 95.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	214	988			908		275	200	594			
Lane group cap.	353	2161			1632		529	557	838			
v/c ratio	0.61	0.46			0.56		0.52	0.36	0.71			
Green ratio	0.21	0.58			0.32		0.32	0.32	0.32			
Unif. delay d1	33.9	11.5			27.0		26.6	25.1	28.6			
Delay factor k	0.19	0.11			0.15		0.13	0.11	0.27			
Increm. delay d2	3.0	0.2			0.4		0.9	0.4	2.8			
PF factor	0.822	0.119			0.692		0.692	0.692	0.692			
Control delay	30.9	1.5			19.1		19.3	17.8	22.6			
Lane group LOS	C	A			B		B	B	C			
Apprch. delay	6.7			19.1			20.9					
Approach LOS	A			B			C					
Intersec. delay	15.0			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/URANIA /CLARK AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	35	942	15	25	689	25	95	10	31	235	10	75
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 30.0	G = 0.0	G =	G = 20.0	G = 20.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 100.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	37	1008		26	751		100	44		247	90	
Lane group cap.	168	1117		168	1594		335	348		335	341	
v/c ratio	0.22	0.90		0.15	0.47		0.30	0.13		0.74	0.26	
Green ratio	0.10	0.30		0.10	0.30		0.20	0.20		0.20	0.20	
Unif. delay d1	41.4	33.6		41.1	28.5		34.0	32.8		37.5	33.8	
Delay factor k	0.11	0.42		0.11	0.11		0.11	0.11		0.30	0.11	
Increm. delay d2	0.7	10.2		0.4	0.2		0.5	0.2		8.3	0.4	
PF factor	0.926	0.714		0.926	0.714		0.833	0.833		0.833	0.833	
Control delay	39.0	34.2		38.5	20.6		28.9	27.5		39.6	28.6	
Lane group LOS	D	C		D	C		C	C		D	C	
Apprch. delay	34.4			21.2			28.5			36.7		
Approach LOS	C			C			C			D		
Intersec. delay	29.9			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/URANIA/CLARK AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	65	1557	83	95	1470	50	45	10	20	120	10	50
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 55.0	G = 0.0	G =	G = 10.0	G = 10.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 105.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	68	1726		100	1600		47	32		126	64	
Lane group cap.	160	1941		160	2784		160	168		160	164	
v/c ratio	0.43	0.89		0.63	0.57		0.29	0.19		0.79	0.39	
Green ratio	0.10	0.52		0.10	0.52		0.10	0.10		0.10	0.10	
Unif. delay d1	44.8	22.3		45.7	17.0		44.2	43.8		46.5	44.6	
Delay factor k	0.11	0.41		0.21	0.17		0.11	0.11		0.33	0.11	
Increm. delay d2	1.8	5.5		7.5	0.3		1.0	0.6		22.6	1.5	
PF factor	0.930	0.267		0.930	0.267		0.930	0.930		0.930	0.930	
Control delay	43.5	11.5		49.9	4.8		42.1	41.3		65.8	43.0	
Lane group LOS	D	B		D	A		D	D		E	D	
Apprch. delay	12.7			7.5			41.8			58.1		
Approach LOS	B			A			D			E		
Intersec. delay	13.2			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	25	897	290	346	999	20	100	165	93	37	180	59
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	80	0	0	0	0	0	54	0		30
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 18.0	G = 7.0	G = 41.0	G =	G = 12.0	G = 18.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 121.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	26	1165		364	1073		105	215		39	220	
Lane group cap.	249	1229		416	1630		166	283		166	285	
v/c ratio	0.10	0.95		0.88	0.66		0.63	0.76		0.23	0.77	
Green ratio	0.15	0.34		0.25	0.44		0.10	0.15		0.10	0.15	
Unif. delay d1	44.5	39.0		43.7	26.8		52.4	49.4		50.3	49.5	
Delay factor k	0.11	0.46		0.40	0.23		0.21	0.31		0.11	0.32	
Increm. delay d2	0.2	15.0		18.4	1.0		7.6	11.4		0.7	12.3	
PF factor	0.883	0.658		0.780	0.480		0.927	0.883		0.927	0.883	
Control delay	39.5	40.6		52.5	13.9		56.2	55.0		47.3	56.1	
Lane group LOS	D	D		D	B		E	E		D	E	
Apprch. delay	40.6			23.7			55.4			54.7		
Approach LOS	D			C			E			D		
Intersec. delay	35.6			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	69	1377	172	240	1150	11	175	105	232	39	280	30
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	80	0	0	0	0	0	100	0		30
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 7.0	G = 7.0	G = 50.5	G =	G = 14.5	G = 20.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 124.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	73	1546		253	1223		184	250		41	295	
Lane group cap.	95	1506		257	1879		196	290		196	316	
v/c ratio	0.77	1.03		0.98	0.65		0.94	0.86		0.21	0.93	
Green ratio	0.06	0.41		0.15	0.50		0.12	0.16		0.12	0.16	
Unif. delay d1	57.7	36.8		52.4	22.7		54.3	50.7		49.6	51.3	
Delay factor k	0.32	0.50		0.49	0.23		0.45	0.39		0.11	0.45	
Increm. delay d2	31.0	30.2		51.6	0.8		47.0	22.4		0.5	33.7	
PF factor	0.960	0.542		0.879	0.322		0.912	0.872		0.912	0.872	
Control delay	86.4	50.1		97.7	8.1		96.6	66.5		45.7	78.5	
Lane group LOS	F	D		F	A		F	E		D	E	
Apprch. delay	51.8			23.5			79.3			74.5		
Approach LOS	D			C			E			E		
Intersec. delay	46.0			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SIDONIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	35	1034			1329	15				40		32
% Heavy veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					5		5
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 35.0	G = 0.0	G =	G = 10.0	G = 0.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 85.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	37	1088			1415					42		34
Lane group cap.	493	2855			1535					197		176
v/c ratio	0.08	0.38			0.92					0.21		0.19
Green ratio	0.29	0.76			0.41					0.12		0.12
Unif. delay d1	21.7	3.3			23.7					33.9		33.9
Delay factor k	0.11	0.11			0.44					0.11		0.11
Increm. delay d2	0.1	0.1			9.5					0.5		0.5
PF factor	0.722	0.213			0.533					0.911		0.911
Control delay	15.7	0.8			22.2					31.5		31.4
Lane group LOS	B	A			C					C		C
Apprch. delay	1.3			22.2						31.4		
Approach LOS	A			C						C		
Intersec. delay	13.5			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SIDONIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	45	1611			1291	40				25		20
% Heavy veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					5		5
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 35.0	G = 0.0	G =	G = 10.0	G = 0.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 85.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	47	1696			1401					26		21
Lane group cap.	493	2855			1531					197		176
v/c ratio	0.10	0.59			0.92					0.13		0.12
Green ratio	0.29	0.76			0.41					0.12		0.12
Unif. delay d1	21.8	4.3			23.6					33.6		33.6
Delay factor k	0.11	0.18			0.43					0.11		0.11
Increm. delay d2	0.0	0.1			3.3					0.3		0.3
PF factor	0.722	0.213			0.533					0.911		0.911
Control delay	15.8	1.0			15.9					30.9		30.9
Lane group LOS	B	A			B					C		C
Apprch. delay	1.4			15.9						30.9		
Approach LOS	A			B						C		
Intersec. delay	8.2			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/QUAIL GARDENS DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Lane group	L	TR		L	TR		L	T	R	L	T	R
Volume (vph)	35	1424	120	350	1374	20	125	30	280	63	85	15
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5		5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	175	0	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 12.0	G = 50.0	G =	G = 12.0	G = 11.0	G = 0.0	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	37	1625		368	1467		132	32	111	66	89	16
Lane group cap.	140	1537		377	2080		168	180	325	168	180	325
v/c ratio	0.26	1.06		0.98	0.71		0.79	0.18	0.34	0.39	0.49	0.05
Green ratio	0.08	0.42		0.22	0.56		0.10	0.09	0.22	0.10	0.09	0.22
Unif. delay d1	51.6	35.0		46.2	19.3		52.7	50.3	39.8	50.6	51.9	37.2
Delay factor k	0.11	0.50		0.48	0.27		0.33	0.11	0.11	0.11	0.11	0.11
Increm. delay d2	1.0	39.8		39.9	1.1		21.4	0.5	0.6	1.5	2.1	0.1
PF factor	0.939	0.524		0.806	0.157		0.926	0.933	0.816	0.926	0.933	0.816
Control delay	49.4	58.1		77.1	4.1		70.2	47.4	33.1	48.4	50.5	30.4
Lane group LOS	D	E		E	A		E	D	C	D	D	C
Apprch. delay	57.9			18.8			52.6			47.8		
Approach LOS	E			B			D			D		
Intersec. delay	38.9			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/QUAIL GARDENS DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Lane group	L	TR		L	TR		L	T	R	L	T	R
Volume (vph)	15	1806	100	350	1591	90	95	32	175	95	30	45
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5		5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	175	0	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 9.0	G = 61.0	G =	G = 9.1	G = 6.0	G = 0.0	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 120.1

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	16	2006		368	1770		100	34	0	100	32	47
Lane group cap.	140	1881		335	2312		127	98	262	127	98	262
v/c ratio	0.11	1.07		1.10	0.77		0.79	0.35	0.00	0.79	0.33	0.18
Green ratio	0.08	0.51		0.20	0.62		0.08	0.05	0.17	0.08	0.05	0.17
Unif. delay d1	51.0	29.5		48.0	16.2		54.5	55.2	40.9	54.5	55.1	42.2
Delay factor k	0.11	0.50		0.50	0.32		0.33	0.11	0.11	0.33	0.11	0.11
Increm. delay d2	0.4	41.1		78.3	1.6		27.3	2.1	0.0	27.3	1.9	0.3
PF factor	0.939	0.312		0.834	0.133		0.945	0.965	1.000	0.945	0.965	0.859
Control delay	48.2	50.3		118.3	3.7		78.9	55.4	40.9	78.9	55.1	36.6
Lane group LOS	D	D		F	A		E	E	D	E	E	D
Apprch. delay	50.3			23.5			72.9			63.5		
Approach LOS	D			C			E			E		
Intersec. delay	38.7			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/GARDEN VIEW RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	262	639	300	250	914	27	220	145	40	10	265	290
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		65	0	0	0	0	0	0	0	0	150
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 51.0	G = 0.0	G =	G = 13.0	G = 21.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	276	920		263	990		232	195		11	426	
Lane group cap.	407	1523		407	1580		353	632		353	619	
v/c ratio	0.68	0.60		0.65	0.63		0.66	0.31		0.03	0.69	
Green ratio	0.13	0.43		0.13	0.43		0.11	0.17		0.11	0.17	
Unif. delay d1	50.2	26.7		50.0	27.0		51.4	43.2		47.9	46.4	
Delay factor k	0.25	0.19		0.22	0.21		0.23	0.11		0.11	0.26	
Increm. delay d2	4.5	0.7		3.5	0.8		4.4	0.3		0.0	3.2	
PF factor	0.905	0.507		0.905	0.507		0.919	0.859		0.919	0.859	
Control delay	49.9	14.2		48.8	14.5		51.6	37.3		44.0	43.1	
Lane group LOS	D	B		D	B		D	D		D	D	
Apprch. delay	22.5			21.7			45.1			43.1		
Approach LOS	C			C			D			D		
Intersec. delay	27.8			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/GARDEN VIEW RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	320	1021	330	120	836	95	305	155	65	105	370	353
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		65	0	0	0	0	0	0	0	0	150
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 51.0	G = 0.0	G =	G = 13.0	G = 21.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	337	1354		126	980		321	231		111	603	
Lane group cap.	407	1538		407	1562		353	624		353	619	
v/c ratio	0.83	0.88		0.31	0.63		0.91	0.37		0.31	0.97	
Green ratio	0.13	0.43		0.13	0.43		0.11	0.17		0.11	0.17	
Unif. delay d1	51.2	31.7		47.8	27.1		52.9	43.7		49.4	49.2	
Delay factor k	0.37	0.41		0.11	0.21		0.43	0.11		0.11	0.48	
Increm. delay d2	4.8	2.2		0.1	0.3		26.6	0.4		0.5	29.6	
PF factor	0.905	0.507		0.905	0.507		0.919	0.859		0.919	0.859	
Control delay	51.2	18.3		43.4	14.0		75.2	37.9		45.9	71.9	
Lane group LOS	D	B		D	B		E	D		D	E	
Apprch. delay	24.9			17.3			59.6			67.9		
Approach LOS	C			B			E			E		
Intersec. delay	35.1			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/TOWN CENTER PL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	1	2	0	1	1	1
Lane group	L	T	R	L	T	R	L	LTR		L	LT	R
Volume (vph)	135	559	150	215	994	125	85	20	70	80	20	95
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 15.0	G = 52.0	G = 0.0	G =	G = 14.0	G = 19.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	142	588	158	226	1046	132	89	95		59	46	100
Lane group cap.	407	1634	650	407	1634	650	265	522		196	223	175
v/c ratio	0.35	0.36	0.24	0.56	0.64	0.20	0.34	0.18		0.30	0.21	0.57
Green ratio	0.13	0.43	0.43	0.13	0.43	0.43	0.16	0.16		0.12	0.12	0.12
Unif. delay d1	48.0	22.8	21.5	49.4	26.7	21.1	44.9	43.8		48.5	48.0	50.2
Delay factor k	0.11	0.11	0.11	0.15	0.22	0.11	0.11	0.11		0.11	0.11	0.17
Increm. delay d2	0.5	0.1	0.2	1.7	0.9	0.2	0.8	0.2		0.9	0.5	4.4
PF factor	0.905	0.490	0.490	0.905	0.490	0.490	0.875	0.875		0.912	0.912	0.912
Control delay	44.0	11.3	10.8	46.3	13.9	10.5	40.0	38.4		45.1	44.2	50.2
Lane group LOS	D	B	B	D	B	B	D	D		D	D	D
Apprch. delay	16.4			18.8			39.2			47.4		
Approach LOS	B			B			D			D		
Intersec. delay	21.6			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/TOWN CENTER PL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	1	2	0	1	1	1
Lane group	L	T	R	L	T	R	L	LTR		L	LT	R
Volume (vph)	165	776	225	250	591	145	265	326	295	145	60	245
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	100	0	0	100
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 15.0	G = 48.0	G = 0.0	G =	G = 15.0	G = 22.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	174	817	237	263	622	153	279	548		107	109	153
Lane group cap.	407	1493	600	407	1493	600	307	646		210	240	188
v/c ratio	0.43	0.55	0.40	0.65	0.42	0.25	0.91	0.85		0.51	0.45	0.81
Green ratio	0.13	0.40	0.40	0.13	0.40	0.40	0.18	0.18		0.13	0.13	0.13
Unif. delay d1	48.5	27.7	25.7	50.0	25.9	24.1	48.0	47.4		49.1	48.7	51.1
Delay factor k	0.11	0.15	0.11	0.22	0.11	0.11	0.43	0.38		0.12	0.11	0.35
Increm. delay d2	0.7	0.4	0.4	3.5	0.2	0.2	29.3	10.3		2.1	1.4	23.2
PF factor	0.905	0.556	0.556	0.905	0.556	0.556	0.850	0.850		0.905	0.905	0.905
Control delay	44.6	15.8	14.7	48.8	14.6	13.6	70.1	50.6		46.5	45.4	69.5
Lane group LOS	D	B	B	D	B	B	E	D		D	D	E
Apprch. delay	19.7			23.1			57.2			55.7		
Approach LOS	B			C			E			E		
Intersec. delay	33.5			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	ECR/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Lane group	L	T	R	L	TR		L	T	R	L	TR	
Volume (vph)	135	514	210	1114	1089	210	105	1870	1032	135	1505	145
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5		5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	100	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 8.9	G = 30.2	G = 15.2	G = 0.0	G = 7.2	G = 43.5	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	142	541	221	1173	1367		111	1968	981	142	1737	
Lane group cap.	223	624	316	1105	2021		180	1787	1068	180	2351	
v/c ratio	0.64	0.87	0.70	1.06	0.68		0.62	1.10	0.92	0.79	0.74	
Green ratio	0.07	0.12	0.21	0.34	0.39		0.06	0.33	0.71	0.06	0.33	
Unif. delay d1	59.0	56.4	47.5	43.0	33.0		60.1	43.3	15.6	60.6	38.2	
Delay factor k	0.22	0.40	0.27	0.50	0.25		0.20	0.50	0.44	0.34	0.30	
Increm. delay d2	4.8	10.2	5.4	45.0	0.9		3.2	50.5	7.0	20.6	1.3	
PF factor	0.951	0.912	0.822	0.658	0.578		0.961	0.665	0.174	0.961	0.665	
Control delay	60.9	61.6	44.4	73.2	20.0		60.9	79.3	9.7	78.9	26.7	
Lane group LOS	E	E	D	E	C		E	E	A	E	C	
Apprch. delay	57.3			44.6			56.3			30.6		
Approach LOS	E			D			E			C		
Intersec. delay	47.1			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	ECR/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Lane group	L	T	R	L	TR		L	T	R	L	TR	
Volume (vph)	250	741	275	626	665	250	303	1459	1213	291	1507	85
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5		5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	5	0	150	5	0	0	5	0	350	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 12.0	G = 15.0	G = 25.0	G = 0.0	G = 14.0	G = 39.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	263	780	132	659	963		319	1536	908	306	1675	
Lane group cap.	301	1027	504	801	1769		351	1602	873	351	2119	
v/c ratio	0.87	0.76	0.26	0.82	0.54		0.91	0.96	1.04	0.87	0.79	
Green ratio	0.09	0.19	0.34	0.25	0.35		0.11	0.30	0.58	0.11	0.30	
Unif. delay d1	58.3	49.7	31.2	46.3	34.2		57.4	44.7	27.0	57.1	41.8	
Delay factor k	0.40	0.31	0.11	0.36	0.14		0.43	0.47	0.50	0.40	0.34	
Increm. delay d2	23.5	3.4	0.3	6.9	0.4		26.6	14.0	41.4	20.6	2.1	
PF factor	0.932	0.841	0.659	0.782	0.647		0.920	0.714	0.209	0.920	0.714	
Control delay	77.8	45.1	20.8	43.2	22.5		79.4	45.9	47.0	73.1	31.9	
Lane group LOS	E	D	C	D	C		E	D	D	E	C	
Apprch. delay	49.7			30.9			50.1			38.3		
Approach LOS	D			C			D			D		
Intersec. delay	42.8			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./AMARGOSA DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	65	1566	50	75	2073	20	140	10	68	20	10	200
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	50	0	0	0	0	0	20	0	0	50
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 9.0	G = 68.0	G =	G =	G = 28.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	68	1648		79	2203			209			190	
Lane group cap.	128	2115		128	2113			243			354	
v/c ratio	0.53	0.78		0.62	1.04			0.86			0.54	
Green ratio	0.08	0.57		0.08	0.57			0.23			0.23	
Unif. delay d1	53.5	20.2		53.8	26.0			44.1			40.3	
Delay factor k	0.13	0.33		0.20	0.50			0.39			0.14	
Increm. delay d2	4.2	1.9		8.7	31.8			25.4			1.6	
PF factor	0.946	0.128		0.946	0.206			0.797			0.797	
Control delay	54.8	4.5		59.6	37.1			60.5			33.8	
Lane group LOS	D	A		E	D			E			C	
Apprch. delay	6.5			37.9			60.5			33.8		
Approach LOS	A			D			E			C		
Intersec. delay	26.5			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./AMARGOSA DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	230	1905	110	75	1396	20	80	10	40	10	15	65
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	50	0	0	0	0	0	20	0	0	50
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 21.2	G = 68.0	G =	G =	G = 15.8	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	242	2068		79	1490			116			43	
Lane group cap.	302	2107		302	2111			172			207	
v/c ratio	0.80	0.98		0.26	0.71			0.67			0.21	
Green ratio	0.18	0.57		0.18	0.57			0.13			0.13	
Unif. delay d1	47.4	25.4		42.6	18.8			49.6			46.5	
Delay factor k	0.35	0.49		0.11	0.27			0.25			0.11	
Increm. delay d2	14.3	15.4		0.5	1.1			10.0			0.5	
PF factor	0.857	0.128		0.857	0.128			0.899			0.899	
Control delay	54.9	18.7		37.0	3.5			54.6			42.3	
Lane group LOS	D	B		D	A			D			D	
Apprch. delay	22.5			5.2			54.6			42.3		
Approach LOS	C			A			D			D		
Intersec. delay	16.9			Intersection LOS						B		

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TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: AM PEAK HOUR
Intersection: LA COSTA AVE./CAL. TIMITEO
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2030 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: CALLE TIMITEO
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		360	28	8	299	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		378	29	8	314	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		2	0	1	2	
Configuration		T	TR	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	102	0	24			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	107	0	25			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No /			/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		8		132				
C(m) (vph)		1163		498				
v/c		0.01		0.27				
95% queue length		0.02		1.06				
Control Delay		8.1		14.8				
LOS		A		B				
Approach Delay				14.8				
Approach LOS				B				

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TWO-WAY STOP CONTROL SUMMARY

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Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: PM PEAK HOUR
Intersection: LA COSTA AVE./CAL. TIMITEO
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2030 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: CALLE TIMITEO
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		227	130	9	243	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		238	136	9	255	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes		2	0	1	2	
Configuration		T	TR	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	70	0	7			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	73	0	7			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		9		80				
C(m) (vph)		1196		555				
v/c		0.01		0.14				
95% queue length		0.02		0.50				
Control Delay		8.0		12.6				
LOS		A		B				
Approach Delay				12.6				
Approach LOS				B				

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TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: AM PEAK HOUR
Intersection: LA COSTA AVE./CAM. DE LOS COCH
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2030 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: CAMINO DE LOS COCHES
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		72	312	52	107	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		75	328	54	112	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	200	0	18			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	210	0	18			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		54		228				
C(m) (vph)		1167		686				
v/c		0.05		0.33				
95% queue length		0.15		1.46				
Control Delay		8.2		12.8				
LOS		A		B				
Approach Delay				12.8				
Approach LOS				B				

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TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: PM PEAK HOUR
Intersection: LA COSTA AVE./CAM. DE LOS COCH
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2030 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: CAMINO DE LOS COCHES
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		118	116	24	41	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		124	122	25	43	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		1	1	1	1	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	211	0	26			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	222	0	27			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		25		249				
C(m) (vph)		1332		776				
v/c		0.02		0.32				
95% queue length		0.06		1.39				
Control Delay		7.8		11.8				
LOS		A		B				
Approach Delay				11.8				
Approach LOS				B				

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR./SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	1	1	1	0	1	1	1
Lane group	L	T	R	L	T	R	L	TR		L	LT	R
Volume (vph)	50	641	85	110	684	600	281	200	140	200	100	31
% Heavy veh	2	2	0	0	2	2	0	0	0	2	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	10
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 13.0	G = 52.0	G =	G =	G = 15.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	53	675	89	116	720	632	296	358		137	179	22
Lane group cap.	168	1493	612	171	1493	600	395	433		193	224	177
v/c ratio	0.32	0.45	0.15	0.68	0.48	1.05	0.75	0.83		0.71	0.80	0.12
Green ratio	0.10	0.40	0.40	0.10	0.40	0.40	0.23	0.23		0.12	0.12	0.12
Unif. delay d1	54.4	28.6	24.8	56.5	29.0	39.0	46.5	47.5		55.4	56.0	51.6
Delay factor k	0.11	0.11	0.11	0.25	0.11	0.50	0.30	0.36		0.27	0.34	0.11
Increm. delay d2	1.1	0.2	0.1	10.3	0.2	51.6	7.8	12.5		11.5	18.3	0.3
PF factor	0.926	0.556	0.556	0.926	0.556	0.556	0.800	0.800		0.913	0.913	0.913
Control delay	51.4	16.1	13.9	62.6	16.4	73.2	45.0	50.5		62.1	69.4	47.4
Lane group LOS	D	B	B	E	B	E	D	D		E	E	D
Apprch. delay	18.1			44.5			48.0			65.0		
Approach LOS	B			D			D			E		
Intersec. delay	40.7			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR./SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	1	1	1	0	1	1	1
Lane group	L	T	R	L	T	R	L	TR		L	LT	R
Volume (vph)	37	993	157	125	870	550	54	100	70	500	200	44
% Heavy veh	2	2	0	0	2	2	0	0	0	2	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	10
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 13.0	G = 52.0	G =	G =	G = 30.0	G = 15.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	39	1045	165	132	916	579	57	179		321	416	36
Lane group cap.	168	1493	612	171	1493	600	197	216		387	446	353
v/c ratio	0.23	0.70	0.27	0.77	0.61	0.96	0.29	0.83		0.83	0.93	0.10
Green ratio	0.10	0.40	0.40	0.10	0.40	0.40	0.12	0.12		0.23	0.23	0.23
Unif. delay d1	53.9	32.5	26.2	57.1	31.0	38.1	52.6	56.2		47.6	49.0	39.4
Delay factor k	0.11	0.27	0.11	0.32	0.20	0.47	0.11	0.37		0.37	0.45	0.11
Increm. delay d2	0.7	1.5	0.2	19.3	0.8	28.1	0.8	22.8		14.0	26.6	0.1
PF factor	0.926	0.556	0.556	0.926	0.556	0.556	0.913	0.913		0.800	0.800	0.800
Control delay	50.6	19.5	14.8	72.1	18.0	49.3	48.9	74.2		52.1	65.9	31.6
Lane group LOS	D	B	B	E	B	D	D	E		D	E	C
Apprch. delay	19.9			33.5			68.0			58.5		
Approach LOS	B			C			E			E		
Intersec. delay	36.2			Intersection LOS						D		

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TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: AM PEAK HOUR
Intersection: FALLSVIEW RD./SAN ELIJO RD.
Jurisdiction: SAN MARCOS
Units: U. S. Customary
Analysis Year: YEAR 2030 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: SAN ELIJO RD.
North/South Street: FALLSVIEW RD.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		946	35			
Peak-Hour Factor, PHF		0.95	0.95			
Hourly Flow Rate, HFR		995	36			
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes		2	0			
Configuration		T	TR			
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume			79			
Peak Hour Factor, PHF			0.95			
Hourly Flow Rate, HFR			83			
Percent Heavy Vehicles			0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes			1			
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config					R			
v (vph)					83			
C(m) (vph)					563			
v/c					0.15			
95% queue length					0.51			
Control Delay					12.5			
LOS					B			
Approach Delay				12.5				
Approach LOS				B				

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TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: PM PEAK HOUR
Intersection: FALLSVIEW RD./SAN ELIJO RD.
Jurisdiction: SAN MARCOS
Units: U. S. Customary
Analysis Year: YEAR 2030 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: SAN ELIJO RD.
North/South Street: FALLSVIEW RD.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1507	56			
Peak-Hour Factor, PHF		0.95	0.95			
Hourly Flow Rate, HFR		1586	58			
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes		2	0			
Configuration		T	TR			
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume			50			
Peak Hour Factor, PHF			0.95			
Hourly Flow Rate, HFR			52			
Percent Heavy Vehicles			0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes			1			
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config					R			
v (vph)					52			
C(m) (vph)					377			
v/c					0.14			
95% queue length					0.47			
Control Delay					16.1			
LOS					C			
Approach Delay				16.1				
Approach LOS				C				

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TWO-WAY STOP CONTROL SUMMARY

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Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: AM PEAK HOUR
Intersection: LA COSTA AVE./WEST DRIVEWAY
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2030 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: WEST DWY. # 1
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		378	15	40	361	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		397	15	42	380	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		2	1	1	2	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	10	0	10			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	10	0	10			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		42		20				
C(m) (vph)		1158		519				
v/c		0.04		0.04				
95% queue length		0.11		0.12				
Control Delay		8.2		12.2				
LOS		A		B				
Approach Delay				12.2				
Approach LOS				B				

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TWO-WAY STOP CONTROL SUMMARY

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Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: PM PEAK HOUR
Intersection: LA COSTA AVE./WEST DRIVEWAY
Jurisdiction: CARLSBAD
Units: U. S. Customary
Analysis Year: YEAR 2030 NO PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: LA COSTA AVENUE
North/South Street: WEST DWY. # 1
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		332	35	25	288	
Peak-Hour Factor, PHF		0.95	0.95	0.95	0.95	
Hourly Flow Rate, HFR		349	36	26	303	
Percent Heavy Vehicles		--	--	0	--	--
Median Type/Storage	Undivided			/		
RT Channelized?			No			
Lanes		2	1	1	2	
Configuration		T	R	L	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	30	0	25			
Peak Hour Factor, PHF	0.95	0.95	0.95			
Hourly Flow Rate, HFR	31	0	26			
Percent Heavy Vehicles	0	0	0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			No	/		/
Lanes	0	1	0			
Configuration		LTR				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		L		LTR				
v (vph)		26		57				
C(m) (vph)		1185		580				
v/c		0.02		0.10				
95% queue length		0.07		0.33				
Control Delay		8.1		11.9				
LOS		A		B				
Approach Delay				11.9				
Approach LOS				B				

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INTERSECTION #43

LA COSTA AVENUE / EASST DRIVEWAY #3 / PASEO TAMARINDO

There is no intersection at this location under existing condition. This intersection will be added with the easterly single-family portion of the project. The intersection will be stop sign controlled, facing southbound traffic.

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INTERSECTION #44

RANCHO SANTA FE / PROJECT DRIVEWAY #4

This will be a right-in-only driveway with no conflicting movements, so LOS does not apply.

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO STA. FE/EAST DWY. / PASEO LUPINO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	0	3	1	0	0	0	0	1	0
Lane group	L	T			T	R					LTR	
Volume (vph)	33	2086			1755	18				48	0	101
% Heavy veh	0	2			2	0				0	0	0
PHF	0.95	0.95			0.95	0.95				0.95	0.95	0.95
Actuated (P/A)	A	A			A	A				A	P	A
Startup lost time	2.0	2.0			2.0	2.0					2.0	
Ext. eff. green	2.0	2.0			2.0	2.0					2.0	
Arrival type	5	5			5	5					5	
Unit Extension	3.0	3.0			3.0	3.0					3.0	
Ped/Bike/RTOR Volume				0		0	0			0		25
Lane Width	12.0	12.0			12.0	12.0					12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0	0					0	
Unit Extension	3.0	3.0			3.0	3.0					3.0	

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 13.0	G = 45.0	G =	G =	G = 17.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	35	2196			1847	19					131	
Lane group cap.	247	3739			2671	808					306	
v/c ratio	0.14	0.59			0.69	0.02					0.43	
Green ratio	0.14	0.70			0.50	0.50					0.19	
Unif. delay d1	33.6	6.9			17.2	11.4					32.2	
Delay factor k	0.11	0.18			0.26	0.11					0.50	
Increm. delay d2	0.3	0.2			0.8	0.0					4.3	
PF factor	0.887	0.167			0.333	0.333					0.845	
Control delay	30.1	1.4			6.5	3.8					31.5	
Lane group LOS	C	A			A	A					C	
Apprch. delay	1.8			6.5						31.5		
Approach LOS	A			A						C		
Intersec. delay	4.8			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO STA. FE/EAST DWY. / PASEO LUPINO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	0	0	3	1	0	0	0	0	1	0
Lane group	L	T			T	R					LTR	
Volume (vph)	96	1423			1832	46				12	0	27
% Heavy veh	0	2			2	0				0	0	0
PHF	0.95	0.95			0.95	0.95				0.95	0.95	0.95
Actuated (P/A)	A	A			A	A				A	P	A
Startup lost time	2.0	2.0			2.0	2.0					2.0	
Ext. eff. green	2.0	2.0			2.0	2.0					2.0	
Arrival type	5	5			5	5					5	
Unit Extension	3.0	3.0			3.0	3.0					3.0	
Ped/Bike/RTOR Volume				0		0	0			0		25
Lane Width	12.0	12.0			12.0	12.0					12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0	0					0	
Unit Extension	3.0	3.0			3.0	3.0					3.0	

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 13.0	G = 45.0	G =	G =	G = 17.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	101	1498			1928	48					15	
Lane group cap.	247	3739			2671	808					320	
v/c ratio	0.41	0.40			0.72	0.06					0.05	
Green ratio	0.14	0.70			0.50	0.50					0.19	
Unif. delay d1	35.0	5.6			17.6	11.6					29.9	
Delay factor k	0.11	0.11			0.28	0.11					0.50	
Increm. delay d2	1.1	0.1			1.0	0.0					0.3	
PF factor	0.887	0.167			0.333	0.333					0.845	
Control delay	32.2	1.0			6.8	3.9					25.5	
Lane group LOS	C	A			A	A					C	
Apprch. delay	3.0			6.8						25.5		
Approach LOS	A			A						C		
Intersec. delay	5.2			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE RD../CALLE ACERVO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	1	0	1	1	1
Lane group		LTR			LTR		L	TR		L	T	R
Volume (vph)	160	200	40	170	260	50	45	462	290	40	789	255
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Arrival type		5			5		5	5		5	5	5
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	85	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	0
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 47.0	G =	G =	G =	G = 8.0	G = 50.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		421			506		47	702		42	831	268
Lane group cap.		445			488		112	779		112	817	625
v/c ratio		0.95			1.04		0.42	0.90		0.38	1.02	0.43
Green ratio		0.39			0.39		0.07	0.42		0.07	0.42	0.42
Unif. delay d1		35.3			36.5		53.8	32.7		53.6	35.0	24.9
Delay factor k		0.46			0.50		0.11	0.42		0.11	0.50	0.11
Increm. delay d2		29.4			50.6		2.5	13.6		2.1	35.8	0.5
PF factor		0.571			0.571		0.952	0.524		0.952	0.524	0.524
Control delay		49.5			71.4		53.7	30.8		53.2	54.2	13.5
Lane group LOS		D			E		D	C		D	D	B
Apprch. delay	49.5			71.4			32.2			44.6		
Approach LOS	D			E			C			D		
Intersec. delay	46.9			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE RD./CALLE ACERVO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 NO PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	1	0	1	1	1
Lane group		LTR			LTR		L	TR		L	T	R
Volume (vph)	50	20	20	140	65	65	40	707	90	60	465	405
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Arrival type		5			5		5	5		5	5	5
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	85	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	0
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 44.0	G =	G =	G =	G = 10.0	G = 51.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		95			283		42	749		63	489	426
Lane group cap.		462			492		140	833		140	833	638
v/c ratio		0.21			0.58		0.30	0.90		0.45	0.59	0.67
Green ratio		0.37			0.37		0.08	0.43		0.08	0.43	0.43
Unif. delay d1		26.0			30.5		51.7	32.1		52.4	26.4	27.7
Delay factor k		0.11			0.17		0.11	0.42		0.11	0.18	0.24
Increm. delay d2		0.2			1.7		1.2	12.7		2.3	1.1	2.7
PF factor		0.614			0.614		0.939	0.507		0.939	0.507	0.507
Control delay		16.2			20.4		49.8	29.0		51.5	14.5	16.7
Lane group LOS		B			C		D	C		D	B	B
Apprch. delay	16.2			20.4			30.1			17.9		
Approach LOS	B			C			C			B		
Intersec. delay	22.6			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE. RD./SAN MARCOS B
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	2	0	1	2	1
Lane group	L	T	R	L	TR		L	T		L	T	R
Volume (vph)	265	910	60	600	1406	69	125	831		81	690	584
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A		A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0			0	0	130
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 13.0	G = 10.0	G = 35.0	G = 0.0	G = 10.0	G = 37.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	279	958	63	632	1553		132	875		85	726	478
Lane group cap.	326	1005	577	693	1426		250	1062		129	1062	635
v/c ratio	0.86	0.95	0.11	0.91	1.09		0.53	0.82		0.66	0.68	0.75
Green ratio	0.10	0.27	0.38	0.22	0.38		0.08	0.28		0.08	0.28	0.42
Unif. delay d1	57.6	46.7	25.7	49.8	40.0		57.7	43.5		58.3	41.3	31.7
Delay factor k	0.39	0.46	0.11	0.43	0.50		0.13	0.36		0.23	0.25	0.31
Increm. delay d2	19.5	18.2	0.1	16.4	52.0		2.1	5.4		11.7	1.8	5.1
PF factor	0.926	0.754	0.583	0.817	0.583		0.944	0.735		0.944	0.735	0.511
Control delay	72.8	53.4	15.1	57.1	75.3		56.6	37.3		66.8	32.2	21.3
Lane group LOS	E	D	B	E	E		E	D		E	C	C
Apprch. delay	55.7			70.0			39.8			30.4		
Approach LOS	E			E			D			C		
Intersec. delay	52.7			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE. RD./SAN MARCOS B
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	2	0	1	2	1
Lane group	L	T	R	L	TR		L	T		L	T	R
Volume (vph)	414	1387	186	1197	650	135	140	783		150	1023	633
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0			0	0	200
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 32.0	G = 35.0	G = 0.0	G =	G = 13.0	G = 40.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	436	1460	196	1260	826		147	824		158	1077	456
Lane group cap.	744	933	568	771	909		302	1067		157	1067	429
v/c ratio	0.59	1.56	0.35	1.63	0.91		0.49	0.77		1.01	1.01	1.06
Green ratio	0.23	0.25	0.38	0.23	0.25		0.09	0.29		0.09	0.29	0.29
Unif. delay d1	48.1	52.5	31.1	54.0	50.9		60.3	45.8		63.5	50.0	50.0
Delay factor k	0.18	0.50	0.11	0.50	0.43		0.11	0.32		0.50	0.50	0.50
Increm. delay d2	1.2	259.4	0.4	291.3	12.9		1.2	3.6		73.5	29.9	61.1
PF factor	0.802	0.778	0.594	0.802	0.778		0.932	0.733		0.932	0.733	0.733
Control delay	39.8	300.3	18.8	334.6	52.5		57.5	37.2		132.7	66.5	97.8
Lane group LOS	D	F	B	F	D		E	D		F	E	F
Apprch. delay	219.6			222.9			40.2			81.1		
Approach LOS	F			F			D			F		
Intersec. delay	160.9			Intersection LOS						F		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./LAKE SAN MARC
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	0	1	0	2	0	1	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				191		145		2107	74	125	1225	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 18.0	G =	G =	G =	G = 15.0	G = 68.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 115.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				201		153		2296		132	1289	
Lane group cap.				262		235		2196		219	2857	
v/c ratio				0.77		0.65		1.05		0.60	0.45	
Green ratio				0.16		0.16		0.59		0.13	0.77	
Unif. delay d1				46.5		45.6		23.5		47.2	4.8	
Delay factor k				0.32		0.23		0.50		0.19	0.11	
Increm. delay d2				12.8		6.3		32.4		4.6	0.1	
PF factor				0.876		0.876		0.223		0.900	0.213	
Control delay				53.6		46.2		37.6		47.1	1.1	
Lane group LOS				D		D		D		D	A	
Apprch. delay				50.4			37.6			5.4		
Approach LOS				D			D			A		
Intersec. delay	27.5			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./LAKE SAN MARC
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	1	0	1	0	2	0	1	2	0
Lane group				L		R		TR		L	T	
Volume (vph)				123		143		1488	159	275	2163	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0			0		0	0	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 18.0	G =	G =	G =	G = 23.0	G = 50.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 105.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				129		151		1733		289	2277	
Lane group cap.				287		257		1752		367	2773	
v/c ratio				0.45		0.59		0.99		0.79	0.82	
Green ratio				0.17		0.17		0.48		0.22	0.74	
Unif. delay d1				39.1		40.1		27.2		38.7	8.9	
Delay factor k				0.11		0.18		0.49		0.33	0.36	
Increm. delay d2				1.1		3.5		18.9		10.9	2.1	
PF factor				0.862		0.862		0.394		0.813	0.194	
Control delay				34.8		38.0		29.6		42.4	3.8	
Lane group LOS				C		D		C		D	A	
Apprch. delay				36.5			29.6			8.2		
Approach LOS				D			C			A		
Intersec. delay	18.0			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CAM DEL ARROY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Lane group		LTR			LTR		L	TR		L	TR	
Volume (vph)	30	10	61	114	10	232	19	1856	54	93	1380	20
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival type		5			5		5	5		5	5	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	130	0	0	0	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 28.0	G =	G =	G =	G = 20.0	G = 67.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		107			238		20	2011		98	1474	
Lane group cap.		333			311		258	1916		258	1920	
v/c ratio		0.32			0.77		0.08	1.05		0.38	0.77	
Green ratio		0.22			0.22		0.15	0.52		0.15	0.52	
Unif. delay d1		43.0			47.9		47.1	31.5		49.4	25.3	
Delay factor k		0.11			0.32		0.11	0.50		0.11	0.32	
Increm. delay d2		0.6			10.8		0.1	35.0		0.9	1.9	
PF factor		0.817			0.817		0.879	0.291		0.879	0.291	
Control delay		35.7			50.0		41.5	44.2		44.4	9.3	
Lane group LOS		D			D		D	D		D	A	
Apprch. delay	35.7			50.0			44.1			11.5		
Approach LOS	D			D			D			B		
Intersec. delay	31.3			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CAM DEL ARROY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/07	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Lane group		LTR			LTR		L	TR		L	TR	
Volume (vph)	35	8	15	119	20	255	34	1592	62	223	1953	30
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	
Arrival type		5			5		5	5		5	5	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	130	0	0	0	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 28.0	G =	G =	G =	G = 20.0	G = 67.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		61			278		36	1741		235	2088	
Lane group cap.		289			328		258	1913		258	1920	
v/c ratio		0.21			0.85		0.14	0.91		0.91	1.09	
Green ratio		0.22			0.22		0.15	0.52		0.15	0.52	
Unif. delay d1		41.9			49.0		47.6	28.8		54.1	31.5	
Delay factor k		0.11			0.38		0.11	0.43		0.43	0.50	
Increm. delay d2		0.4			18.3		0.2	7.0		33.5	48.8	
PF factor		0.817			0.817		0.879	0.291		0.879	0.291	
Control delay		34.6			58.3		42.0	15.3		81.0	57.9	
Lane group LOS		C			E		D	B		F	E	
Apprch. delay	34.6			58.3			15.9			60.3		
Approach LOS	C			E			B			E		
Intersec. delay	42.0			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./ISLAND DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	1	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	25		40				30	1854			1592	20
% Heavy veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A	A	A				A	A	A		A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0						0	0	0
Lane Width	12.0		12.0				12.0	12.0			12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 8.0	G =	G =	G =	G = 19.0	G = 70.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 110.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	26		42				32	1952			1697	
Lane group cap.	122		109				289	3156			2371	
v/c ratio	0.21		0.39				0.11	0.62			0.72	
Green ratio	0.07		0.07				0.17	0.85			0.64	
Unif. delay d1	48.0		48.7				38.4	2.8			13.4	
Delay factor k	0.11		0.11				0.11	0.20			0.28	
Increm. delay d2	0.9		2.3				0.2	0.4			1.1	
PF factor	0.948		0.948				0.861	0.324			0.138	
Control delay	46.4		48.4				33.2	1.3			2.9	
Lane group LOS	D		D				C	A			A	
Apprch. delay	47.6						1.8			2.9		
Approach LOS	D						A			A		
Intersec. delay	3.1			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./ISLAND DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	0	1	0	0	0	1	2	0	0	2	0
Lane group	L		R				L	T			TR	
Volume (vph)	60		30				30	1630			1759	50
% Heavy veh	2		2				2	2			2	2
PHF	0.95		0.95				0.95	0.95			0.95	0.95
Actuated (P/A)	A	A	A				A	A	A		A	A
Startup lost time	2.0		2.0				2.0	2.0			2.0	
Ext. eff. green	2.0		2.0				2.0	2.0			2.0	
Arrival type	5		5				5	5			5	
Unit Extension	3.0		3.0				3.0	3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0						0	0	0
Lane Width	12.0		12.0				12.0	12.0			12.0	
Parking/Grade/Parking	N	0	N	N		N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0		0				0	0			0	
Unit Extension	3.0		3.0				3.0	3.0			3.0	

Phasing	EB Only	02	03	04	NB Only	Thru & RT	07	08
Timing	G = 8.0	G =	G =	G =	G = 19.0	G = 70.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y = 4	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 110.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	63		32				32	1716			1905	
Lane group cap.	122		109				289	3156			2366	
v/c ratio	0.52		0.29				0.11	0.54			0.81	
Green ratio	0.07		0.07				0.17	0.85			0.64	
Unif. delay d1	49.1		48.3				38.4	2.4			14.9	
Delay factor k	0.12		0.11				0.11	0.14			0.35	
Increm. delay d2	3.8		1.5				0.2	0.2			2.1	
PF factor	0.948		0.948				0.861	0.324			0.138	
Control delay	50.4		47.3				33.2	1.0			4.2	
Lane group LOS	D		D				C	A			A	
Apprch. delay	49.3						1.6			4.2		
Approach LOS	D						A			A		
Intersec. delay	4.1			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ PALOMAR AIRPOR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	10/15/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 WITH PROJ./W MIT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	4	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	725	1030	191	250	1725	335	555	1602	485	325	557	690
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	50	5	0	200
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 19.0	G = 6.0	G = 43.0	G =	G = 15.0	G = 6.0	G = 21.0	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	763	1084	201	263	1816	353	584	1686	458	342	586	516
Lane group cap.	697	2060	789	442	1716	672	605	1628	596	349	801	594
v/c ratio	1.09	0.53	0.25	0.60	1.06	0.53	0.97	1.04	0.77	0.98	0.73	0.87
Green ratio	0.21	0.39	0.53	0.14	0.31	0.45	0.19	0.23	0.40	0.11	0.15	0.40
Unif. delay d1	55.0	33.1	18.0	56.9	48.5	27.7	56.6	54.0	36.4	62.3	56.8	38.6
Delay factor k	0.50	0.13	0.11	0.18	0.50	0.13	0.47	0.50	0.32	0.48	0.29	0.40
Increm. delay d2	53.3	0.1	0.1	1.0	33.0	0.3	16.9	25.2	2.8	27.3	1.6	6.5
PF factor	0.818	0.581	0.253	0.895	0.704	0.455	0.848	0.802	0.556	0.920	0.882	0.556
Control delay	98.3	19.4	4.6	51.9	67.2	13.0	64.9	68.6	23.0	84.7	51.7	27.9
Lane group LOS	F	B	A	D	E	B	E	E	C	F	D	C
Apprch. delay	47.4			57.7			60.1			51.0		
Approach LOS	D			E			E			D		
Intersec. delay	54.9			Intersection LOS						D		

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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 10/15/08
Analysis Time Period: 2030 AM PEAK
Intersection: MELROSE DR.@ PALOMAR AIRPOR
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJ./W MIT
Project ID: LA COSTA TOWN SQUARE
E/W St: PALOMAR AIRPORT ROAD N/S St: MELROSE DRIVE

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	725	1030	191	250	1725	335	555	1602	485	325	557	690
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	191	271	50	66	454	88	146	422	128	86	147	182
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000	1800	1800	2000	1800	1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	3	1	2	3	1	2	4	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			50			200
Adj Flow	763	1084	201	263	1816	353	584	1686	458	342	586	516
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	5		0	5		0	5		0	5		0
Buses	0	0	0	0	0	0	0	0	0	0	0	0
%InProtPhase			0.0			0.0			0.0			0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		0.450			0.450			0.450			0.450	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		33.3			33.3			33.3			33.3	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ PALOMAR AIRPOR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	10/15/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

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Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	1	2	4	1	2	3	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	385	1630	248	550	1325	270	214	785	250	310	1481	785
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	100	0	0	0	0	0	0	0	0	150
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	SB Only	Thru & RT	08
Timing	G = 19.0	G = 3.0	G = 42.0	G =	G = 11.0	G = 4.0	G = 31.0	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	405	1716	156	579	1395	284	225	826	263	326	1559	668
Lane group cap.	442	1602	621	628	1908	707	256	1577	675	465	1526	686
v/c ratio	0.92	1.07	0.25	0.92	0.73	0.40	0.88	0.52	0.39	0.70	1.02	0.97
Green ratio	0.14	0.30	0.41	0.19	0.36	0.47	0.08	0.22	0.45	0.14	0.29	0.46
Unif. delay d1	59.7	49.0	26.8	55.5	39.2	24.1	63.8	48.0	25.7	57.2	50.0	37.2
Delay factor k	0.43	0.50	0.11	0.44	0.29	0.11	0.41	0.13	0.11	0.27	0.50	0.48
Increm. delay d2	23.8	44.3	0.2	19.2	1.5	0.4	27.5	0.3	0.4	4.7	28.7	27.8
PF factor	0.895	0.714	0.528	0.841	0.630	0.405	0.943	0.810	0.455	0.889	0.733	0.439
Control delay	77.2	79.3	14.4	65.9	26.1	10.2	87.7	39.2	12.0	55.5	65.3	44.1
Lane group LOS	E	E	B	E	C	B	F	D	B	E	E	D
Apprch. delay	74.5			34.3			42.1			58.5		
Approach LOS	E			C			D			E		
Intersec. delay	53.8			Intersection LOS						D		

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OPERATIONAL ANALYSIS

A/A

Analyst: USAI
Agency/Co.: USAI
Date Performed: 10/15/08
Analysis Time Period: 2030 PM PEAK
Intersection: MELROSE DR.@ PALOMAR AIRPOR
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN SQUARE
E/W St: PALOMAR AIRPORT ROAD N/S St: MELROSE DRIVE

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	385	1630	248	550	1325	270	214	785	250	310	1481	785
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	101	429	65	145	349	71	56	207	66	82	390	207
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000	1800	1800	2000	1800	1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	3	1	2	3	1	2	4	1	2	3	1
LGConfig	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			100			0			0			150
Adj Flow	405	1716	156	579	1395	284	225	826	263	326	1559	668
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	0		0	0		0	0		0	0		0
Buses	0	0	0	0	0	0	0	0	0	0	0	0
%InProtPhase			0.0			0.0			0.0			0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	5	5	5	5	5	5	5	5	5	5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		33.2			33.2			33.2			33.2	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ RANCHO BRAVADO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	10/15/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	33	10	20	140	10	90	5	2519	160	20	968	10
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 18.0	G =	G =	G = 10.0	G = 65.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	35	32		147	106		5	2820		21	1030	
Lane group cap.	219	243		219	221		129	2646		129	2665	
v/c ratio	0.16	0.13		0.67	0.48		0.04	1.07		0.16	0.39	
Green ratio	0.13	0.14		0.13	0.14		0.08	0.50		0.08	0.50	
Unif. delay d1	50.2	49.1		53.8	51.7		55.6	32.5		56.1	20.1	
Delay factor k	0.11	0.11		0.24	0.11		0.11	0.50		0.11	0.11	
Increm. delay d2	0.3	0.2		7.8	1.6		0.1	38.1		0.6	0.1	
PF factor	0.900	0.893		0.900	0.893		0.944	0.333		0.944	0.333	
Control delay	45.5	44.1		56.2	47.8		52.6	49.0		53.6	6.8	
Lane group LOS	D	D		E	D		D	D		D	A	
Apprch. delay	44.8			52.7			49.0			7.7		
Approach LOS	D			D			D			A		
Intersec. delay	38.8			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ RANCHO BRAVADO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	10/15/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	5	10	10	65	10	60	20	1184	135	90	2150	36
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 20.0	G =	G =	G = 10.0	G = 65.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	5	22		68	74		21	1388		95	2301	
Lane group cap.	193	278		193	248		129	2629		129	2663	
v/c ratio	0.03	0.08		0.35	0.30		0.16	0.53		0.74	0.86	
Green ratio	0.12	0.15		0.12	0.15		0.08	0.50		0.08	0.50	
Unif. delay d1	51.0	47.1		53.0	48.8		56.1	22.1		58.7	28.6	
Delay factor k	0.11	0.11		0.11	0.11		0.11	0.13		0.29	0.39	
Increm. delay d2	0.1	0.1		1.1	0.7		0.6	0.2		19.7	3.2	
PF factor	0.913	0.879		0.913	0.879		0.944	0.333		0.944	0.333	
Control delay	46.6	41.5		49.5	43.5		53.6	7.6		75.1	12.8	
Lane group LOS	D	D		D	D		D	A		E	B	
Apprch. delay	42.5			46.4			8.2			15.2		
Approach LOS	D			D			A			B		
Intersec. delay	14.1			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ POINSETTIA LANE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	1	1	0	2	3	0	1	3	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	612	9	17	30	26	60	33	2012	15	20	931	177
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 14.0	G =	G =	G = 10.0	G = 56.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	644	9	18	32	90		35	2134		21	980	186
Lane group cap.	751	211	1024	387	178		250	2298		129	2300	1046
v/c ratio	0.86	0.04	0.02	0.08	0.51		0.14	0.93		0.16	0.43	0.18
Green ratio	0.23	0.11	0.69	0.23	0.11		0.08	0.43		0.08	0.43	0.70
Unif. delay d1	48.0	52.0	6.2	39.2	54.7		56.0	35.1		56.1	25.8	6.7
Delay factor k	0.39	0.11	0.11	0.11	0.11		0.11	0.44		0.11	0.11	0.11
Increm. delay d2	9.7	0.1	0.0	0.1	2.3		0.3	7.4		0.6	0.1	0.1
PF factor	0.800	0.920	0.163	0.800	0.920		0.944	0.495		0.944	0.495	0.167
Control delay	48.1	47.9	1.0	31.5	52.7		53.1	24.8		53.6	12.9	1.2
Lane group LOS	D	D	A	C	D		D	C		D	B	A
Apprch. delay	46.8			47.1			25.2			11.8		
Approach LOS	D			D			C			B		
Intersec. delay	25.5			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ POINSETTIA LANE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	1	1	0	2	3	0	1	3	1
Lane group	L	T	R	L	TR		L	TR		L	T	R
Volume (vph)	498	35	92	28	12	30	78	811	43	60	1299	869
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5		5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 30.0	G = 14.0	G =	G =	G = 10.0	G = 56.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	524	37	97	29	45		82	899		63	1367	915
Lane group cap.	751	211	1024	387	177		250	2283		129	2300	1046
v/c ratio	0.70	0.18	0.09	0.07	0.25		0.33	0.39		0.49	0.59	0.87
Green ratio	0.23	0.11	0.69	0.23	0.11		0.08	0.43		0.08	0.43	0.70
Unif. delay d1	45.8	52.8	6.6	39.1	53.2		56.8	25.4		57.5	28.3	15.1
Delay factor k	0.26	0.11	0.11	0.11	0.11		0.11	0.11		0.11	0.18	0.40
Increm. delay d2	2.9	0.4	0.0	0.1	0.8		0.8	0.1		2.9	0.4	8.4
PF factor	0.800	0.920	0.163	0.800	0.920		0.944	0.495		0.944	0.495	0.167
Control delay	39.5	48.9	1.1	31.4	49.7		54.4	12.7		57.2	14.4	10.9
Lane group LOS	D	D	A	C	D		D	B		E	B	B
Apprch. delay	34.4			42.5			16.2			14.2		
Approach LOS	C			D			B			B		
Intersec. delay	18.5			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ CARRILLO WAY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	150	20	68	58	60	11	125	1918	27	6	761	240
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 17.0	G = 18.0	G =	G =	G = 12.0	G = 63.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	158	93		61	75		132	2047		6	1054	
Lane group cap.	219	238		219	251		155	2583		155	2491	
v/c ratio	0.72	0.39		0.28	0.30		0.85	0.79		0.04	0.42	
Green ratio	0.13	0.14		0.13	0.14		0.09	0.48		0.09	0.48	
Unif. delay d1	54.2	51.0		51.0	50.3		58.1	28.0		53.7	21.7	
Delay factor k	0.28	0.11		0.11	0.11		0.38	0.34		0.11	0.11	
Increm. delay d2	11.1	1.1		0.7	0.7		34.0	1.8		0.1	0.1	
PF factor	0.900	0.893		0.900	0.893		0.932	0.373		0.932	0.373	
Control delay	59.9	46.6		46.6	45.6		88.1	12.2		50.2	8.2	
Lane group LOS	E	D		D	D		F	B		D	A	
Apprch. delay	54.9			46.0			16.8			8.5		
Approach LOS	D			D			B			A		
Intersec. delay	18.1			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ CARRILLO WAY
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	1	3	0	1	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	155	40	85	45	15	20	58	757	66	30	1254	135
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 18.0	G = 18.0	G =	G =	G = 14.0	G = 60.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	163	131		47	37		61	866		32	1462	
Lane group cap.	232	242		232	235		180	2435		180	2427	
v/c ratio	0.70	0.54		0.20	0.16		0.34	0.36		0.18	0.60	
Green ratio	0.14	0.14		0.14	0.14		0.11	0.46		0.11	0.46	
Unif. delay d1	53.4	52.2		49.6	49.3		53.7	22.5		52.8	26.1	
Delay factor k	0.27	0.14		0.11	0.11		0.11	0.11		0.11	0.19	
Increm. delay d2	9.2	2.5		0.4	0.3		1.1	0.1		0.5	0.4	
PF factor	0.893	0.893		0.893	0.893		0.920	0.429		0.920	0.429	
Control delay	56.9	49.0		44.8	44.4		50.5	9.8		49.0	11.6	
Lane group LOS	E	D		D	D		D	A		D	B	
Apprch. delay	53.4			44.6			12.4			12.4		
Approach LOS	D			D			B			B		
Intersec. delay	17.7			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	2	1	0	2	3	0	2	3	0
Lane group	L	TR	R	L	TR		L	TR		L	TR	
Volume (vph)	357	10	945	21	20	24	495	1689	5	10	762	115
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5		0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 50.0	G =	G =	G =	G = 5.0	G = 25.0	G = 30.0	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	376	399	607	22	46		521	1783		11	923	
Lane group cap.	714	642	690	273	658		877	2464		125	1207	
v/c ratio	0.53	0.62	0.88	0.08	0.07		0.59	0.72		0.09	0.76	
Green ratio	0.38	0.38	0.46	0.38	0.38		0.27	0.46		0.04	0.23	
Unif. delay d1	30.9	32.3	31.7	25.4	25.3		41.3	28.3		60.3	46.7	
Delay factor k	0.13	0.20	0.41	0.11	0.11		0.18	0.28		0.11	0.32	
Increm. delay d2	0.7	1.9	12.6	0.1	0.0		1.1	1.1		0.3	3.0	
PF factor	0.583	0.583	0.429	0.583	0.583		0.754	0.429		0.973	0.800	
Control delay	18.7	20.7	26.2	14.9	14.8		32.3	13.2		59.0	40.3	
Lane group LOS	B	C	C	B	B		C	B		E	D	
Apprch. delay	22.6			14.8			17.5			40.6		
Approach LOS	C			B			B			D		
Intersec. delay	23.6			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/19/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	1	1	2	1	0	2	3	0	2	3	0
Lane group	L	TR	R	L	TR		L	TR		L	TR	
Volume (vph)	195	25	747	20	15	4	960	682	23	23	956	405
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5		0	5	0	0	5	0	100
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EW Perm	02	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 40.0	G =	G =	G =	G = 5.0	G = 30.0	G = 35.0	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	205	333	479	21	20		1011	742		24	1327	
Lane group cap.	602	518	574	219	556		1002	2862		125	1384	
v/c ratio	0.34	0.64	0.83	0.10	0.04		1.01	0.26		0.19	0.96	
Green ratio	0.31	0.31	0.38	0.31	0.31		0.31	0.54		0.04	0.27	
Unif. delay d1	34.8	38.8	36.3	32.1	31.5		45.0	16.1		60.5	46.8	
Delay factor k	0.11	0.22	0.37	0.11	0.11		0.50	0.11		0.11	0.47	
Increm. delay d2	0.3	2.7	10.3	0.2	0.0		30.7	0.0		0.8	15.5	
PF factor	0.704	0.704	0.583	0.704	0.704		0.704	0.222		0.973	0.754	
Control delay	24.8	30.1	31.4	22.8	22.2		62.3	3.6		59.7	50.7	
Lane group LOS	C	C	C	C	C		E	A		E	D	
Apprch. delay	29.7			22.5			37.5			50.9		
Approach LOS	C			C			D			D		
Intersec. delay	39.8			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@RANCHO SANTA FE DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	2	2	2	1	2	3	0	2	3	2
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	852	418	459	46	611	105	968	904	100	210	813	610
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	0	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 30.0	G = 24.0	G =	G =	G = 21.0	G = 19.0	G = 21.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	897	440	483	48	643	111	1019	1057		221	856	642
Lane group cap.	694	640	1403	698	638	531	1047	1458		488	801	1044
v/c ratio	1.29	0.69	0.34	0.07	1.01	0.21	0.97	0.72		0.45	1.07	0.61
Green ratio	0.21	0.17	0.53	0.21	0.17	0.36	0.32	0.32		0.15	0.15	0.40
Unif. delay d1	55.0	54.5	19.0	43.9	58.0	31.3	46.9	42.0		54.3	59.5	33.4
Delay factor k	0.50	0.26	0.11	0.11	0.50	0.11	0.48	0.29		0.11	0.50	0.20
Increm. delay d2	142.2	3.1	0.1	0.0	37.6	0.2	21.5	1.8		0.7	51.8	1.1
PF factor	0.818	0.862	0.253	0.818	0.862	0.630	0.684	0.684		0.882	0.882	0.556
Control delay	187.2	50.1	5.0	35.9	87.6	19.9	53.6	30.6		48.5	104.3	19.7
Lane group LOS	F	D	A	D	F	B	D	C		D	F	B
Apprch. delay	105.7			75.1			41.9			65.5		
Approach LOS	F			E			D			E		
Intersec. delay	70.5			Intersection LOS						E		

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WP

OPERATIONAL ANALYSIS

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Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/22/08
Analysis Time Period: 2030 AM PEAK
Intersection: MELROSE DR.@RANCHO SANTA FE DR
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: MELROSE DR. N/S St: RANCHO SANTA FE DR.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	852	418	459	46	611	105	968	904	100	210	813	610
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	224	110	121	12	161	28	255	238	26	55	214	161
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000	1800	1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	2	2	2	1	2	3	0	2	3	2
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow	897	440	483	48	643	111	1019	1057		221	856	642
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.099			0.000	1.000
Peds Bikes	5			5		0	5		0	5		0
Buses	0	0	0	0	0	0	0	0		0	0	0
%InProtPhase						0.0						0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5	5	5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ped Min g		33.3			33.3			33.3			33.3	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR.@RANCHO SANTA FE DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	2	2	2	1	2	3	0	2	3	2
Lane group	L	T	R	L	T	R	L	TR		L	T	R
Volume (vph)	318	622	783	46	546	152	328	1083	199	155	1664	791
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		50	5	0	0	5	0	0	5	0	100
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 25.0	G = 30.0	G =	G =	G = 10.0	G = 7.0	G = 43.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	335	655	772	48	575	160	345	1349		163	1752	727
Lane group cap.	581	800	1081	581	798	505	512	2048		233	1640	1373
v/c ratio	0.58	0.82	0.71	0.08	0.72	0.32	0.67	0.66		0.70	1.07	0.53
Green ratio	0.18	0.21	0.41	0.18	0.21	0.32	0.16	0.39		0.07	0.31	0.52
Unif. delay d1	52.7	52.4	34.7	47.9	51.1	35.9	55.6	34.8		63.5	48.5	22.1
Delay factor k	0.17	0.36	0.28	0.11	0.28	0.11	0.25	0.23		0.27	0.50	0.13
Increm. delay d2	1.4	6.7	2.3	0.1	3.2	0.4	3.5	0.8		9.0	43.0	0.4
PF factor	0.855	0.818	0.542	0.855	0.818	0.684	0.876	0.569		0.949	0.704	0.274
Control delay	46.4	49.6	21.1	41.1	45.0	24.9	52.2	20.6		69.2	77.2	6.5
Lane group LOS	D	D	C	D	D	C	D	C		E	E	A
Apprch. delay	36.5			40.7			27.0			57.2		
Approach LOS	D			D			C			E		
Intersec. delay	42.6			Intersection LOS						D		

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10-P
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WP

OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/22/08
Analysis Time Period: 2030 PM PEAK
Intersection: MELROSE DR.@RANCHO SANTA FE DR
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: MELROSE DR. N/S St: RANCHO SANTA FE DR.

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VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	318	622	783	46	546	152	328	1083	199	155	1664	791
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	84	164	206	12	144	40	86	285	52	41	438	208
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000	1900	1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	2	2	2	1	2	3	0	2	3	2
LGConfig	L	T	R	L	T	R	L	TR		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			50			0			0			100
Adj Flow	335	655	772	48	575	160	345	1349		163	1752	727
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.155			0.000	1.000
Peds Bikes	5			5		0	5		0	5		0
Buses	0	0	0	0	0	0	0	0		0	0	0
%InProtPhase						0.0						0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5	5	5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ped Min g		33.3			33.3			33.3			33.3	

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WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	2	1	1	1	3	1	2	3	1
Lane group	L	TR		L	TR	R	L	T	R	L	T	R
Volume (vph)	80	33	122	750	54	150	64	1742	640	150	1116	52
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5	0	300	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 32.0	G = 15.0	G =	G =	G = 17.0	G = 46.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	84	163		789	57	158	67	1834	358	158	1175	55
Lane group cap.	413	200		801	215	422	219	1890	529	426	1889	527
v/c ratio	0.20	0.81		0.99	0.27	0.37	0.31	0.97	0.68	0.37	0.62	0.10
Green ratio	0.25	0.12		0.25	0.12	0.28	0.13	0.35	0.35	0.13	0.35	0.35
Unif. delay d1	38.9	56.1		48.8	52.5	37.2	51.2	41.3	35.7	51.6	34.8	28.2
Delay factor k	0.11	0.36		0.49	0.11	0.11	0.11	0.48	0.25	0.11	0.21	0.11
Increm. delay d2	0.2	22.3		28.0	0.7	0.6	0.8	14.3	3.4	0.5	0.6	0.1
PF factor	0.782	0.913		0.782	0.913	0.735	0.900	0.635	0.635	0.900	0.635	0.635
Control delay	30.7	73.5		66.1	48.6	27.9	46.8	40.6	26.1	47.0	22.7	18.0
Lane group LOS	C	E		E	D	C	D	D	C	D	C	B
Apprch. delay	58.9			59.1			38.5			25.3		
Approach LOS	E			E			D			C		
Intersec. delay	40.0			Intersection LOS						D		

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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/22/08
Analysis Time Period: AM PEAK
Intersection: RANCHO SAN. FE@SAN ELIJO RD.
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: SAN ELIJO RD. N/S St: RANCHO SANTA FE DR.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	80	33	122	750	54	150	64	1742	640	150	1116	52
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	21	9	32	197	14	39	17	458	168	39	294	14
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000		1800	2000	1800	1800	2000	1800	1800	2000	1800
ParkExist												
NumPark												
No. Lanes	1	1	0	2	1	1	1	3	1	2	3	1
LGConfig	L	TR		L	TR	R	L	T	R	L	T	R
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			300			0
Adj Flow	84	163		789	57	158	67	1834	358	158	1175	55
%InSharedLn						0						
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.785			0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	5			5		0	5		0	5		0
Buses	0	0		0	0	0	0	0	0	0	0	0
%InProtPhase						0.0						

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	5	5		5	5	5	5	5	5	5	5	5
Unit Ext.	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		33.2			33.2			33.2			33.2	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	2	1	1	1	3	1	2	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	122	64	55	694	27	312	88	1176	640	613	1768	112
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	50	5	0	0	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	SB Only	Thru & RT	08
Timing	G = 33.0	G = 14.0	G =	G =	G = 12.0	G = 14.0	G = 32.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	128	125		731	28	276	93	1238	674	645	1861	118
Lane group cap.	425	196		827	201	353	155	1315	803	776	2095	585
v/c ratio	0.30	0.64		0.88	0.14	0.78	0.60	0.94	0.84	0.83	0.89	0.20
Green ratio	0.25	0.11		0.25	0.11	0.24	0.09	0.25	0.54	0.24	0.39	0.39
Unif. delay d1	39.2	55.6		46.7	52.5	46.3	56.7	48.1	25.3	47.0	36.8	26.1
Delay factor k	0.11	0.22		0.41	0.11	0.33	0.19	0.45	0.37	0.37	0.41	0.11
Increm. delay d2	0.4	6.8		11.2	0.3	10.9	6.3	13.3	7.9	7.6	5.1	0.2
PF factor	0.773	0.920		0.773	0.920	0.791	0.932	0.782	0.222	0.791	0.570	0.570
Control delay	30.7	57.9		47.3	48.6	47.5	59.2	50.9	13.5	44.8	26.1	15.0
Lane group LOS	C	E		D	D	D	E	D	B	D	C	B
Apprch. delay	44.1			47.4			38.7			30.2		
Approach LOS	D			D			D			C		
Intersec. delay	36.7			Intersection LOS						D		

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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/22/08
Analysis Time Period: PM PEAK
Intersection: RANCHO SAN. FE@SAN ELIJO RD.
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: SAN ELIJO RD. N/S St: RANCHO SANTA FE DR.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	122	64	55	694	27	312	88	1176	640	613	1768	112
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	32	17	14	183	7	82	23	309	168	161	465	29
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000		1800	2000	1800	1800	2000	1800	1800	2000	1800
ParkExist												
NumPark												
No. Lanes	1	1	0	2	1	1	1	3	1	2	3	1
LGConfig	L	TR		L	T	R	L	T	R	L	T	R
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			50			0			0
Adj Flow	128	125		731	28	276	93	1238	674	645	1861	118
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.464			0.000	1.000		0.000	1.000		0.000	1.000
Peds Bikes	5			5	0		5	0		5	0	
Buses	0	0		0	0	0	0	0	0	0	0	0
%InProtPhase						0.0			0.0			

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type	5	5		5	5	5	5	5	5	5	5	5
Unit Ext.	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		33.2			33.2			33.2			33.2	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@CAM. JUNIPERO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	3	1	1	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	128	5	77	65	5	70	27	2248	51	24	1918	46
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5		0	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 15.0	G =	G =	G = 12.0	G = 68.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	135	86		68	5	74	28	2366	54	25	2019	48
Lane group cap.	193	194		193	215	365	155	2794	1015	155	2793	781
v/c ratio	0.70	0.44		0.35	0.02	0.20	0.18	0.85	0.05	0.16	0.72	0.06
Green ratio	0.12	0.12		0.12	0.12	0.25	0.09	0.52	0.68	0.09	0.52	0.52
Unif. delay d1	55.3	53.6		53.0	51.0	38.9	54.5	26.5	7.0	54.4	23.8	15.3
Delay factor k	0.27	0.11		0.11	0.11	0.11	0.11	0.38	0.11	0.11	0.28	0.11
Increm. delay d2	10.7	1.6		1.1	0.0	0.3	0.6	2.6	0.0	0.5	0.9	0.0
PF factor	0.913	0.913		0.913	0.913	0.782	0.932	0.269	0.155	0.932	0.269	0.269
Control delay	61.2	50.6		49.5	46.6	30.7	51.3	9.7	1.1	51.2	7.3	4.1
Lane group LOS	E	D		D	D	C	D	A	A	D	A	A
Apprch. delay	57.1			39.9			10.0			7.8		
Approach LOS	E			D			B			A		
Intersec. delay	12.1			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SAN. FE@CAM. JUNIPERO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	1	1	3	1	1	3	1
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Volume (vph)	82	8	68	72	16	100	70	1722	162	126	2249	142
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5	5	5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	5		0	5	0	0	5		0	5	0	0
Lane Width	12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 15.0	G =	G =	G = 12.0	G = 68.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 130.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	86	80		76	17	105	74	1813	171	133	2367	149
Lane group cap.	193	196		193	215	365	155	2794	1015	155	2793	781
v/c ratio	0.45	0.41		0.39	0.08	0.29	0.48	0.65	0.17	0.86	0.85	0.19
Green ratio	0.12	0.12		0.12	0.12	0.25	0.09	0.52	0.68	0.09	0.52	0.52
Unif. delay d1	53.6	53.4		53.3	51.3	39.8	56.0	22.4	7.7	58.2	26.6	16.4
Delay factor k	0.11	0.11		0.11	0.11	0.11	0.11	0.23	0.11	0.39	0.38	0.11
Increm. delay d2	1.6	1.4		1.3	0.2	0.4	2.3	0.5	0.1	35.2	2.6	0.1
PF factor	0.913	0.913		0.913	0.913	0.782	0.932	0.269	0.155	0.932	0.269	0.269
Control delay	50.6	50.1		50.0	47.0	31.5	54.5	6.6	1.3	89.4	9.8	4.5
Lane group LOS	D	D		D	D	C	D	A	A	F	A	A
Apprch. delay	50.4			39.9			7.8			13.5		
Approach LOS	D			D			A			B		
Intersec. delay	13.4			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FE RD./LA COSTA A
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	428	286	145	105	328	84	96	1712	195	203	1513	296
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	40	5	0	14	5	0	100
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	EB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 14.0	G = 17.0	G = 17.0	G =	G = 11.0	G = 46.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	451	454		111	391		101	1993		214	1799	
Lane group cap.	464	1059		180	478		276	1862		276	1856	
v/c ratio	0.97	0.43		0.62	0.82		0.37	1.07		0.78	0.97	
Green ratio	0.28	0.30		0.11	0.13		0.08	0.35		0.08	0.35	
Unif. delay d1	46.5	36.6		55.4	55.0		56.2	42.0		58.3	41.3	
Delay factor k	0.48	0.11		0.20	0.36		0.11	0.50		0.32	0.48	
Increm. delay d2	34.5	0.3		6.2	10.7		0.6	40.3		10.0	11.8	
PF factor	0.745	0.714		0.920	0.900		0.938	0.635		0.938	0.635	
Control delay	69.1	26.4		57.2	60.2		53.4	67.0		64.7	38.0	
Lane group LOS	E	C		E	E		D	E		E	D	
Apprch. delay	47.7			59.5			66.3			40.9		
Approach LOS	D			E			E			D		
Intersec. delay	53.3			Intersection LOS						D		

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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/22/08
Analysis Time Period: 2030 AM PEAK
Intersection: RANCHO SANTA FE RD./LA COSTA A
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: LA COSTA AVENUE N/S St: RANCHO SANTA FE RD.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	428	286	145	105	328	84	96	1712	195	203	1513	296
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	113	75	38	28	86	22	25	451	51	53	398	78
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000		1800	2000		1800	2000		1800	2000	
ParkExist												
NumPark												
No. Lanes	1	2	0	1	2	0	2	3	0	2	3	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			40			14			100
Adj Flow	451	454		111	391		101	1993		214	1799	
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.337			0.118			0.096			0.115	
Peds Bikes	5		0	5		0	5		0	5		0
Buses	0	0		0	0		0	0		0	0	
%InProtPhase			0.0									
Duration	0.25			Area Type: All other areas								

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	5	5		5	5		5	5		5	5	
Unit Ext.	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
I Factor		1.000			1.000			0.750			0.750	
Lost Time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ped Min g		33.2			33.2			33.2			33.2	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FE RD./LA COSTA A
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	2	3	0	2	3	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	336	322	140	264	379	118	210	1320	238	188	1513	364
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5	0	0	5	0	0	5	0	0	5	0	200
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 31.0	G = 21.0	G =	G =	G = 15.0	G = 43.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	354	486		278	523		221	1640		198	1766	
Lane group cap.	400	574		400	579		376	1725		376	1739	
v/c ratio	0.88	0.85		0.69	0.90		0.59	0.95		0.53	1.02	
Green ratio	0.24	0.16		0.24	0.16		0.12	0.33		0.12	0.33	
Unif. delay d1	47.8	52.9		45.2	53.5		54.6	42.5		54.2	43.5	
Delay factor k	0.41	0.38		0.26	0.42		0.18	0.46		0.13	0.50	
Increm. delay d2	20.4	11.3		5.2	17.6		2.4	12.0		1.4	25.5	
PF factor	0.791	0.872		0.791	0.872		0.913	0.670		0.913	0.670	
Control delay	58.2	57.5		40.9	64.2		52.2	40.5		50.8	54.7	
Lane group LOS	E	E		D	E		D	D		D	D	
Apprch. delay	57.8			56.1			41.9			54.3		
Approach LOS	E			E			D			D		
Intersec. delay	50.9			Intersection LOS						D		

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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/22/08
Analysis Time Period: 2030 PM PEAK
Intersection: RANCHO SANTA FE RD./LA COSTA A
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: LA COSTA AVENUE N/S St: RANCHO SANTA FE RD.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	336	322	140	264	379	118	210	1320	238	188	1513	364
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	88	85	37	69	100	31	55	347	63	49	398	96
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000		1800	2000		1800	2000		1800	2000	
ParkExist												
NumPark												
No. Lanes	1	2	0	1	2	0	2	3	0	2	3	0
LGConfig	L	TR		L	TR		L	TR		L	TR	
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
RTOR Vol			0			0			0			200
Adj Flow	354	486		278	523		221	1640		198	1766	
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.302			0.237			0.153			0.098	
Peds Bikes	5		0	5		0	5		0	5		0
Buses	0	0		0	0		0	0		0	0	
%InProtPhase												

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Arriv. Type	5	5		5	5		5	5		5	5	
Unit Ext.	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext of g	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ped Min g		33.2			33.2			33.2			33.2	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FR DR./CAM. DE LO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				270		309		1693	230	95	1668	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5			5		40	5	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 27.0	G =	G =	G =	G = 15.0	G = 83.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				284		283		2024		100	1756	
Lane group cap.				628		503		3107		180	3928	
v/c ratio				0.45		0.56		0.65		0.56	0.45	
Green ratio				0.19		0.34		0.59		0.11	0.74	
Unif. delay d1				50.0		38.1		18.9		59.3	7.3	
Delay factor k				0.11		0.16		0.23		0.15	0.11	
Increm. delay d2				0.5		1.5		0.5		3.8	0.1	
PF factor				0.841		0.663		0.123		0.920	0.189	
Control delay				42.5		26.7		2.8		58.4	1.5	
Lane group LOS				D		C		A		E	A	
Apprch. delay				34.6			2.8			4.5		
Approach LOS				C			A			A		
Intersec. delay	7.6			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO SANTA FE DR./CAM. DE LO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				135		130		1638	160	169	1748	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	5			5		40	5	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 20.0	G =	G =	G =	G = 20.0	G = 85.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 140.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				142		95		1892		178	1840	
Lane group cap.				465		482		3198		239	4195	
v/c ratio				0.31		0.20		0.59		0.74	0.44	
Green ratio				0.14		0.32		0.61		0.14	0.79	
Unif. delay d1				53.8		34.4		16.9		57.6	4.9	
Delay factor k				0.11		0.11		0.18		0.30	0.11	
Increm. delay d2				0.4		0.2		0.3		4.5	0.0	
PF factor				0.889		0.684		0.127		0.889	0.233	
Control delay				48.2		23.7		2.4		55.6	1.2	
Lane group LOS				D		C		A		E	A	
Apprch. delay				38.4			2.4			6.0		
Approach LOS				D			A			A		
Intersec. delay	6.2			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CALLE BARCELO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	1	3	0	1	3	0
Lane group	L	T	R	L	LTR		L	TR		L	TR	
Volume (vph)	111	120	69	313	118	111	60	1701	335	29	1700	209
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 14.0	G = 18.0	G =	G =	G = 13.0	G = 55.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	117	126	73	181	389		63	2144		31	2009	
Lane group cap.	196	229	175	251	525		182	2387		182	2408	
v/c ratio	0.60	0.55	0.42	0.72	0.74		0.35	0.90		0.17	0.83	
Green ratio	0.12	0.12	0.12	0.15	0.15		0.11	0.46		0.11	0.46	
Unif. delay d1	50.3	50.0	49.2	48.6	48.8		49.6	29.9		48.6	28.5	
Delay factor k	0.19	0.15	0.11	0.28	0.30		0.11	0.42		0.11	0.37	
Increm. delay d2	4.9	2.8	1.6	9.7	5.6		1.1	5.0		0.4	2.7	
PF factor	0.912	0.912	0.912	0.882	0.882		0.919	0.436		0.919	0.436	
Control delay	50.8	48.5	46.5	52.6	48.6		46.7	18.1		45.1	15.1	
Lane group LOS	D	D	D	D	D		D	B		D	B	
Apprch. delay	48.9			49.9			18.9			15.6		
Approach LOS	D			D			B			B		
Intersec. delay	22.9			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE DR./CALLE BARCELO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	1	3	0	1	3	0
Lane group	L	T	R	L	LTR		L	TR		L	TR	
Volume (vph)	101	83	50	105	48	40	55	1657	201	106	1581	196
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 14.0	G = 13.0	G =	G =	G = 13.0	G = 60.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	106	87	53	83	121		58	1956		112	1870	
Lane group cap.	196	229	175	182	379		182	2627		182	2627	
v/c ratio	0.54	0.38	0.30	0.46	0.32		0.32	0.74		0.62	0.71	
Green ratio	0.12	0.12	0.12	0.11	0.11		0.11	0.50		0.11	0.50	
Unif. delay d1	50.0	49.0	48.5	50.2	49.4		49.4	23.9		51.1	23.3	
Delay factor k	0.14	0.11	0.11	0.11	0.11		0.11	0.30		0.20	0.28	
Increm. delay d2	3.0	1.1	1.0	1.8	0.5		1.0	1.2		6.1	0.9	
PF factor	0.912	0.912	0.912	0.919	0.919		0.919	0.333		0.919	0.333	
Control delay	48.6	45.7	45.2	47.9	45.9		46.4	9.2		53.1	8.7	
Lane group LOS	D	D	D	D	D		D	A		D	A	
Apprch. delay	46.9			46.7			10.2			11.2		
Approach LOS	D			D			B			B		
Intersec. delay	14.4			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./RANCHO SANTA FE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	1	1	1	1	2	1	2	2	1
Lane group		LTR		L	LT	R	L	T	R	L	T	R
Volume (vph)	20	23	20	606	7	596	10	1480	250	454	1603	25
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type		5		5	5	5	5	5	5	5	5	5
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0	0	0	0	0	0	0	0
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 8.0	G = 26.0	G =	G =	G = 20.0	G = 56.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		66		319	326	627	11	1558	263	478	1687	26
Lane group cap.		114		335	374	588	258	1608	946	501	1608	796
v/c ratio		0.58		0.95	0.87	1.07	0.04	0.97	0.28	0.95	1.05	0.03
Green ratio		0.06		0.20	0.20	0.39	0.15	0.43	0.63	0.15	0.43	0.53
Unif. delay d1		59.4		51.4	50.4	39.5	46.8	36.1	10.7	54.5	37.0	14.6
Delay factor k		0.17		0.46	0.40	0.50	0.11	0.48	0.11	0.46	0.50	0.11
Increm. delay d2		7.2		36.6	19.5	56.1	0.1	15.7	0.2	28.9	36.6	0.0
PF factor		0.956		0.833	0.833	0.570	0.879	0.495	0.135	0.879	0.495	0.246
Control delay		63.9		79.5	61.5	78.6	41.2	33.6	1.6	76.8	54.9	3.6
Lane group LOS		E		E	E	E	D	C	A	E	D	A
Apprch. delay	63.9			74.4			29.0			59.1		
Approach LOS	E			E			C			E		
Intersec. delay	52.5			Intersection LOS						D		

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Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/22/08
Analysis Time Period: AM PEAK HOUR
Intersection: OLIVENHAIN RD./RANCHO SANTA FE
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: OLIVENHAIN RD. N/S St: RANCHO SANTA FE RD.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	20	23	20	606	7	596	10	1480	250	454	1603	25
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	5	6	5	159	2	157	3	389	66	119	422	7
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat		2000		1800	2000	1800	1800	2000	1800	1800	2000	1800
ParkExist												
NumPark												
No. Lanes	0	1	0	1	1	1	1	2	1	2	2	1
LGConfig		LTR		L	LT	R	L	T	R	L	T	R
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow		66		319	326	627	11	1558	263	478	1687	26
%InSharedLn				50								
Prop LTs		0.318			0.979			0.000			0.000	
Prop RTs	0.318			0.000		1.000	0.000		1.000	0.000		1.000
Peds Bikes	0		0	0		0	0		0	0		0
Buses		0		0	0	0	0	0	0	0	0	0
%InProtPhase						0.0			0.0			0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type		5		5	5	5	5	5	5	5	5	5
Unit Ext.		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		33.2			3.2			33.2			33.2	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./RANCHO SANTA FE
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	1	1	1	1	2	1	2	2	1
Lane group		LTR		L	LT	R	L	T	R	L	T	R
Volume (vph)	20	23	20	415	15	323	10	1570	527	494	1212	30
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type		5		5	5	5	5	5	5	5	5	5
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0	0	0	0	0	0	0	0
Unit Extension		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 24.0	G =	G =	G = 22.0	G = 54.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		66		240	213	340	11	1653	555	520	1276	32
Lane group cap.		142		309	346	588	284	1551	623	551	1551	796
v/c ratio		0.46		0.78	0.62	0.58	0.04	1.07	0.89	0.94	0.82	0.04
Green ratio		0.08		0.18	0.18	0.39	0.17	0.42	0.42	0.17	0.42	0.53
Unif. delay d1		57.4		50.4	48.8	31.0	45.2	38.0	35.3	53.4	33.7	14.6
Delay factor k		0.11		0.33	0.20	0.17	0.11	0.50	0.41	0.46	0.36	0.11
Increm. delay d2		2.4		11.8	3.3	1.4	0.1	42.6	15.0	25.1	3.7	0.0
PF factor		0.944		0.849	0.849	0.570	0.864	0.526	0.526	0.864	0.526	0.246
Control delay		56.6		54.6	44.7	19.1	39.1	62.6	33.6	71.2	21.5	3.6
Lane group LOS		E		D	D	B	D	E	C	E	C	A
Apprch. delay		56.6		36.7			55.3			35.3		
Approach LOS		E		D			E			D		
Intersec. delay		44.9		Intersection LOS						D		

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Phone: Fax:
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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/22/08
Analysis Time Period: PM PEAK HOUR
Intersection: OLIVENHAIN RD./RANCHO SANTA FE
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: OLIVENHAIN RD. N/S St: RANCHO SANTA FE RD.

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	20	23	20	415	15	323	10	1570	527	494	1212	30
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	5	6	5	109	4	85	3	413	139	130	319	8
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat		2000		1800	2000	1800	1800	2000	1800	1800	2000	1800
ParkExist												
NumPark												
No. Lanes	0	1	0	1	1	1	1	2	1	2	2	1
LGConfig		LTR		L	LT	R	L	T	R	L	T	R
Lane Width		12.0		12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow		66		240	213	340	11	1653	555	520	1276	32
%InSharedLn				45								
Prop LTs		0.318			0.923			0.000			0.000	
Prop RTs	0.318			0.000		1.000	0.000		1.000	0.000		1.000
Peds Bikes	0		0	0		0	0		0	0		0
Buses		0		0	0	0	0	0	0	0	0	0
%InProtPhase						0.0						0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Arriv. Type		5		5	5	5	5	5	5	5	5	5
Unit Ext.		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext of g		2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ped Min g		33.2			3.2			33.2			33.2	

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	USAI
Agency/Co.	USAI
Date Performed	09/24/08
Analysis Time Period	AM PEAK

Site Information

Intersection	RSF/CAM DEL NORTE
Jurisdiction	ENCINITAS
Analysis Year	YEAR 2030 WITH PROJECT

Project ID LA COSTA TOWN SQ.

East/West Street: ECDN

North/South Street: RSF

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	10	0	10	150	5	392
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	10	414	90	247	597	10
%Thrus Left Lane	50			63		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		L	TR	LT	R	L	TR
PHF	0.95		0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate	20		157	417	445	94	260	638
% Heavy Vehicles	2		2	2	2	3	2	2
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.5		1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns	0.5		0.0	1.0	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	9.29		9.29	9.29	9.29	9.29	9.29	9.29

Departure Headway and Service Time

hd, initial value	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.02		0.14	0.37	0.40	0.08	0.23	0.57
hd, final value	9.29		9.29	9.29	9.29	9.29	9.29	9.29
x, final value	0.05		0.37	0.84	0.98	0.19	0.59	1.36
Move-up time, m	2.3		2.3		2.3		2.3	
Service Time	7.0		7.0		7.0		7.0	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	270		407	494	454	344	437	638
Delay	12.50		16.04	37.61	65.47	11.59	21.99	195.82
LOS	B		C	E	F	B	C	F
Approach: Delay	12.50		31.71		56.07		145.49	
LOS	B		D		F		F	
Intersection Delay	88.29							
Intersection LOS	F							

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ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	USAI
Agency/Co.	USAI
Date Performed	09/24/08
Analysis Time Period	PM PEAK

Site Information

Intersection	RSF/CAM DEL NORTE
Jurisdiction	ENCINITAS
Analysis Year	YEAR 2030 WITH PROJECT

Project ID LA COSTA TOWN SQ.

East/West Street: ECDN

North/South Street: RSF

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	10	7	10	150	10	212
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	20	568	140	178	414	10
%Thrus Left Lane	50			63		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		L	TR	LT	R	L	TR
PHF	0.95		0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate	27		157	233	618	147	187	445
% Heavy Vehicles	2		2	2	2	3	2	2
No. Lanes	1		2		2		2	
Geometry Group	4b		5		5		5	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.4		1.0	0.0	0.0	0.0	1.0	0.0
Prop. Right-Turns	0.4		0.0	1.0	0.0	1.0	0.0	0.0
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5
hRT-adj	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	8.70		8.70	8.70	8.70	8.70	8.70	8.70

Departure Headway and Service Time

hd, initial value	3.20		3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.02		0.14	0.21	0.55	0.13	0.17	0.40
hd, final value	8.70		8.70	8.70	8.70	8.70	8.70	8.70
x, final value	0.07		0.37	0.47	1.23	0.26	0.40	0.88
Move-up time, m	2.3		2.3		2.3		2.3	
Service Time	6.4		6.4		6.4		6.4	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	277		407	483	618	397	437	505
Delay	12.01		15.82	15.99	141.08	11.39	15.27	42.25
LOS	B		C	C	F	B	C	E
Approach: Delay	12.01		15.92		116.16		34.26	
LOS	B		C		F		D	
Intersection Delay	64.53							
Intersection LOS	F							

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	3	0	2	3	0
Lane group	L	T	R	L	TR		L	T		L	TR	
Volume (vph)	69	223	208	454	284	307	384	2568		129	904	341
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A		A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	0	0	10	0	130	10			10		60
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 5.0	G = 19.0	G = 13.0	G =	G = 8.0	G = 30.0	G = 35.0	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 140.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	73	235	219	478	485		404	2703		136	1248	
Lane group cap.	116	347	270	674	926		1000	2671		186	1288	
v/c ratio	0.63	0.68	0.81	0.71	0.52		0.40	1.01		0.73	0.97	
Green ratio	0.04	0.09	0.19	0.21	0.26		0.31	0.50		0.06	0.25	
Unif. delay d1	66.6	61.5	54.6	51.6	44.0		38.4	35.0		64.9	52.0	
Delay factor k	0.21	0.25	0.35	0.27	0.13		0.11	0.50		0.29	0.48	
Increm. delay d2	10.5	5.2	16.9	3.5	0.5		0.3	20.4		13.7	18.1	
PF factor	0.975	0.932	0.848	0.826	0.761		0.704	0.333		0.960	0.778	
Control delay	75.4	62.5	63.2	46.1	34.0		27.3	32.1		76.0	58.5	
Lane group LOS	E	E	E	D	C		C	C		E	E	
Apprch. delay	64.6			40.0			31.5			60.2		
Approach LOS	E			D			C			E		
Intersec. delay	42.4			Intersection LOS						D		

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WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ ALGA RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	0	2	3	0	2	3	0
Lane group	L	T	R	L	TR		L	T		L	TR	
Volume (vph)	121	465	426	378	274	61	396	937		233	1343	130
% Heavy veh	2	2	2	2	2	2	2	2		2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A		A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5	5	5	5		5	5		5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10	0	100	10	0	0	10			10		60
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0		0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 22.0	G = 20.0	G =	G =	G = 24.0	G = 54.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 140.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	127	489	343	398	352		417	986		245	1488	
Lane group cap.	512	533	514	512	517		558	2060		558	2045	
v/c ratio	0.25	0.92	0.67	0.78	0.68		0.75	0.48		0.44	0.73	
Green ratio	0.16	0.14	0.35	0.16	0.14		0.17	0.39		0.17	0.39	
Unif. delay d1	51.7	59.2	38.6	56.6	57.0		55.1	32.4		52.0	36.7	
Delay factor k	0.11	0.44	0.24	0.33	0.25		0.30	0.11		0.11	0.29	
Increm. delay d2	0.3	20.9	3.3	7.5	3.6		5.5	0.2		0.6	1.3	
PF factor	0.876	0.889	0.641	0.876	0.889		0.862	0.581		0.862	0.581	
Control delay	45.6	73.5	28.0	57.1	54.3		53.0	19.0		45.4	22.7	
Lane group LOS	D	E	C	E	D		D	B		D	C	
Apprch. delay	53.6			55.8			29.1			25.9		
Approach LOS	D			E			C			C		
Intersec. delay	36.9			Intersection LOS						D		

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WB

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ COSTA DEL MAR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				164		123		3417	82	58	1634	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		60	10	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 15.0	G =	G =	G =	G = 10.0	G = 80.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				173		66		3683		61	1720	
Lane group cap.				407		188		3548		140	4228	
v/c ratio				0.43		0.35		1.04		0.44	0.41	
Green ratio				0.13		0.13		0.67		0.08	0.79	
Unif. delay d1				48.5		48.0		20.0		52.3	3.8	
Delay factor k				0.11		0.11		0.50		0.11	0.11	
Increm. delay d2				0.7		1.1		26.2		2.2	0.1	
PF factor				0.905		0.905		0.255		0.939	0.240	
Control delay				44.6		44.6		31.3		51.3	1.0	
Lane group LOS				D		D		C		D	A	
Apprch. delay				44.6			31.3			2.7		
Approach LOS				D			C			A		
Intersec. delay	22.9			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ COSTA DEL MAR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	2030 PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	0	0	2	0	1	0	3	0	1	3	0
Lane group				L		R		TR		L	T	
Volume (vph)				206		126		1643	254	184	2862	
% Heavy veh				2		2		2	2	2	2	
PHF				0.95		0.95		0.95	0.95	0.95	0.95	
Actuated (P/A)				A		A		A	A	A	A	
Startup lost time				2.0		2.0		2.0		2.0	2.0	
Ext. eff. green				2.0		2.0		2.0		2.0	2.0	
Arrival type				5		5		5		5	5	
Unit Extension				3.0		3.0		3.0		3.0	3.0	
Ped/Bike/RTOR Volume	10			10		60	10	0	0			
Lane Width				12.0		12.0		12.0		12.0	12.0	
Parking/Grade/Parking	N		N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr				0		0		0		0	0	
Unit Extension				3.0		3.0		3.0		3.0	3.0	

Phasing	WB Only	02	03	04	SB Only	Thru & RT	07	08
Timing	G = 15.0	G =	G =	G =	G = 20.0	G = 70.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate				217		69		1996		194	3013	
Lane group cap.				407		188		3050		279	4228	
v/c ratio				0.53		0.37		0.65		0.70	0.71	
Green ratio				0.13		0.13		0.58		0.17	0.79	
Unif. delay d1				49.2		48.1		16.8		47.1	6.0	
Delay factor k				0.14		0.11		0.23		0.26	0.28	
Increm. delay d2				1.4		1.2		0.5		7.3	0.6	
PF factor				0.905		0.905		0.120		0.867	0.240	
Control delay				45.9		44.8		2.5		48.2	2.0	
Lane group LOS				D		D		A		D	A	
Apprch. delay				45.6			2.5			4.8		
Approach LOS				D			A			A		
Intersec. delay	6.1			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	2	2	0	0	0	0	1	1	1
Lane group		TR		L	T					L	LT	R
Volume (vph)		644	117	514	303					790	10	395
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0		2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0					2.0	2.0	2.0
Arrival type		5		5	5					5	5	5
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0		12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0					0	0	0
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 30.0	G = 35.0	G =	G =	G = 40.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		801		541	319					416	427	416
Lane group cap.		912		950	2178					559	561	500
v/c ratio		0.88		0.57	0.15					0.74	0.76	0.83
Green ratio		0.25		0.29	0.58					0.33	0.33	0.33
Unif. delay d1		43.2		36.1	11.4					35.5	35.7	36.9
Delay factor k		0.41		0.16	0.11					0.30	0.31	0.37
Increm. delay d2		9.8		0.8	0.0					5.4	6.1	11.4
PF factor		0.778		0.725	0.120					0.667	0.667	0.667
Control delay		43.4		27.0	1.4					29.0	29.9	36.0
Lane group LOS		D		C	A					C	C	D
Apprch. delay	43.4			17.5						31.6		
Approach LOS	D			B						C		
Intersec. delay	30.7			Intersection LOS						C		

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WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	2	2	0	0	0	0	1	1	1
Lane group		TR		L	T					L	LT	R
Volume (vph)		605	73	538	779					430	15	249
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0		2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0		2.0	2.0					2.0	2.0	2.0
Arrival type		5		5	5					5	5	5
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0		12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0		0	0					0	0	0
Unit Extension		3.0		3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 30.0	G = 40.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		714		566	820					344	125	262
Lane group cap.		918		1085	2333					489	493	437
v/c ratio		0.78		0.52	0.35					0.70	0.25	0.60
Green ratio		0.25		0.33	0.63					0.29	0.29	0.29
Unif. delay d1		41.9		32.3	10.8					37.9	32.5	36.5
Delay factor k		0.33		0.13	0.11					0.27	0.11	0.19
Increm. delay d2		4.3		0.5	0.1					4.5	0.3	2.3
PF factor		0.778		0.667	0.133					0.725	0.725	0.725
Control delay		36.9		22.0	1.5					32.0	23.9	28.8
Lane group LOS		D		C	A					C	C	C
Apprch. delay	36.9			9.9						29.5		
Approach LOS	D			A						C		
Intersec. delay	21.7			Intersection LOS						C		

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UP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	1	0	1	2	0	0	0
Lane group	L	T			T	R		LT	R			
Volume (vph)	220	1213			732	601	85	1	761			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				0	0	141	0		0	0		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 25.0	G = 40.0	G =	G =	G = 40.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	232	1277			771	484		90	801			
Lane group cap.	349	2178			1780	1062		561	885			
v/c ratio	0.66	0.59			0.43	0.46		0.16	0.91			
Green ratio	0.21	0.58			0.33	0.71		0.33	0.33			
Unif. delay d1	43.6	15.8			31.2	7.5		28.2	38.2			
Delay factor k	0.24	0.18			0.11	0.11		0.11	0.43			
Increm. delay d2	4.7	0.4			0.2	0.3		0.1	12.7			
PF factor	0.825	0.120			0.667	0.171		0.667	0.667			
Control delay	40.7	2.3			20.9	1.6		18.9	38.2			
Lane group LOS	D	A			C	A		B	D			
Apprch. delay	8.2			13.5			36.2					
Approach LOS	A			B			D					
Intersec. delay	16.9			Intersection LOS						B		

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3.0
WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	1	0	1	2	0	0	0
Lane group	L	T			T	R		LT	R			
Volume (vph)	130	905			1107	301	210	1	598			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0	2.0		2.0	2.0			
Ext. eff. green	2.0	2.0			2.0	2.0		2.0	2.0			
Arrival type	5	5			5	5		5	5			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			
Ped/Bike/RTOR Volume				0	0	100	0		0	0		
Lane Width	12.0	12.0			12.0	12.0		12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0	0		0	0			
Unit Extension	3.0	3.0			3.0	3.0		3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 30.0	G = 35.0	G =	G =	G = 40.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	137	953			1165	212		222	629			
Lane group cap.	419	2178			1558	1000		560	885			
v/c ratio	0.33	0.44			0.75	0.21		0.40	0.71			
Green ratio	0.25	0.58			0.29	0.67		0.33	0.33			
Unif. delay d1	36.8	14.0			38.5	7.8		30.7	34.9			
Delay factor k	0.11	0.11			0.30	0.11		0.11	0.27			
Increm. delay d2	0.5	0.1			2.0	0.1		0.5	2.7			
PF factor	0.778	0.120			0.725	0.150		0.667	0.667			
Control delay	29.0	1.8			30.0	1.3		20.9	26.0			
Lane group LOS	C	A			C	A		C	C			
Apprch. delay	5.2			25.6			24.7					
Approach LOS	A			C			C					
Intersec. delay	18.7			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./PIREAUS ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	4	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1774	200	100	1223		110		75			
% Heavy veh		2	2	2	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		3		3			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		2078		105	1287		116		79			
Lane group cap.		2246		186	5539		186		167			
v/c ratio		0.93		0.56	0.23		0.62		0.47			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		15.7		37.9	2.7		38.2		37.5			
Delay factor k		0.44		0.16	0.11		0.21		0.11			
Increm. delay d2		7.2		3.9	0.0		6.4		2.1			
PF factor		0.129		0.917	0.225		1.000		1.000			
Control delay		9.2		38.7	0.6		44.6		39.6			
Lane group LOS		A		D	A		D		D			
Apprch. delay	9.2			3.5			42.6					
Approach LOS	A			A			D					
Intersec. delay	8.8			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	ST.LA COSTA AVE./PIRAEUS
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	4	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1455	50	110	1303		105		50			
% Heavy veh		2	2	2	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		5		5			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1585		116	1372		111		53			
Lane group cap.		2270		186	5539		186		167			
v/c ratio		0.70		0.62	0.25		0.60		0.32			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		11.9		38.2	2.8		38.1		36.9			
Delay factor k		0.26		0.21	0.11		0.19		0.11			
Increm. delay d2		1.0		6.4	0.0		5.2		1.1			
PF factor		0.129		0.917	0.225		0.917		0.917			
Control delay		2.5		41.4	0.6		40.1		34.9			
Lane group LOS		A		D	A		D		C			
Apprch. delay	2.5			3.8			38.4					
Approach LOS	A			A			D					
Intersec. delay	4.9			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	2	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1769	80	110	1263		60		60			
% Heavy veh		2	2	2	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		5		5			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1946		116	1329		63		63			
Lane group cap.		2267		186	2903		186		167			
v/c ratio		0.86		0.62	0.46		0.34		0.38			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		14.3		38.2	3.5		36.9		37.1			
Delay factor k		0.39		0.21	0.11		0.11		0.11			
Increm. delay d2		3.6		6.4	0.1		1.1		1.4			
PF factor		0.129		0.917	0.225		0.917		0.917			
Control delay		5.4		41.4	0.9		35.0		35.4			
Lane group LOS		A		D	A		C		D			
Apprch. delay	5.4			4.1			35.2					
Approach LOS	A			A			D					
Intersec. delay	5.9			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	1	2	0	1	0	1	0	0	0
Lane group		TR		L	T		L		R			
Volume (vph)		1410	95	75	1348		65		100			
% Heavy veh		2	2	2	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A	A	A			
Startup lost time		2.0		2.0	2.0		2.0		2.0			
Ext. eff. green		2.0		2.0	2.0		2.0		2.0			
Arrival type		5		5	5		5		5			
Unit Extension		3.0		3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0		0				0		0	0		
Lane Width		12.0		12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0		0	0		0		0			
Unit Extension		3.0		3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 55.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1584		79	1419		68		105			
Lane group cap.		2260		186	2903		186		167			
v/c ratio		0.70		0.42	0.49		0.37		0.63			
Green ratio		0.61		0.11	0.78		0.11		0.11			
Unif. delay d1		11.9		37.3	3.6		37.1		38.2			
Delay factor k		0.27		0.11	0.11		0.11		0.21			
Increm. delay d2		1.0		1.6	0.1		1.2		7.4			
PF factor		0.129		0.917	0.225		0.917		0.917			
Control delay		2.5		35.8	0.9		35.2		42.4			
Lane group LOS		A		D	A		D		D			
Apprch. delay	2.5			2.8			39.6					
Approach LOS	A			A			D					
Intersec. delay	4.6			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Lane group	L	LT	R	L	T	R	L	TR		L	T	R
Volume (vph)	1127	378	324	189	471	403	284	1945	55	110	1041	618
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	0	0	10	0	50	10	0	30	10		0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	NB Only	Thru & RT	08
Timing	G = 33.0	G = 23.0	G =	G =	G = 7.0	G = 8.0	G = 34.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 5	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	747	837	341	199	496	372	299	2073		116	1096	651
Lane group cap.	827	923	456	576	660	397	501	1926		175	1397	831
v/c ratio	0.90	0.91	0.75	0.35	0.75	0.94	0.60	1.08		0.66	0.78	0.78
Green ratio	0.25	0.25	0.31	0.18	0.18	0.27	0.15	0.36		0.05	0.26	0.55
Unif. delay d1	47.0	47.0	40.5	46.9	50.8	46.4	51.2	41.5		60.3	44.6	22.9
Delay factor k	0.42	0.43	0.30	0.11	0.31	0.45	0.19	0.50		0.24	0.33	0.33
Increm. delay d2	13.2	12.5	6.7	0.4	4.8	29.7	2.0	44.5		9.0	3.0	4.9
PF factor	0.773	0.773	0.704	0.857	0.857	0.754	0.879	0.622		0.962	0.764	0.172
Control delay	49.5	48.8	35.2	40.5	48.4	64.7	47.0	70.3		67.1	37.1	8.9
Lane group LOS	D	D	D	D	D	E	D	E		E	D	A
Apprch. delay	46.7			52.6			67.4			29.1		
Approach LOS	D			D			E			C		
Intersec. delay	49.8			Intersection LOS						D		

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HCS2000: Signalized Intersections Release 4.1f

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WP

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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/22/08
Analysis Time Period: AM PEAK
Intersection: EL CAMINO REAL@ LA COSTA AVE.
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: LA COSTA AVE. N/S St: EL CAMINO REAL

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	1127	378	324	189	471	403	284	1945	55	110	1041	618
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	297	99	85	50	124	106	75	512	14	29	274	163
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000	1800	1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	1	2	2	1	2	3	0	2	3	1
LGConfig	L	LT	R	L	T	R	L	TR		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			50			30			0
Adj Flow	747	837	341	199	496	372	299	2073		116	1096	651
%InSharedLn	37											
Prop LTs		0.524			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.013			0.000	1.000
Peds Bikes		10	0		10	0		10	0		10	
Buses	0	0	0	0	0	0	0	0		0	0	0
%InProtPhase			0.0			0.0			0.0			

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5	5	5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ped Min g		33.3			33.3			20.8			20.8	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	EL CAMINO REAL@ LA COSTA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	2	3	0	2	3	1
Lane group	L	LT	R	L	T	R	L	TR		L	T	R
Volume (vph)	631	602	277	167	400	232	279	1163	110	300	2025	726
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	10	0	0	10		0	10	0	0	10	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	EB Only	WB Only	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 29.0	G = 16.0	G =	G =	G = 15.0	G = 50.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	664	634	292	176	421	244	294	1340		316	2132	764
Lane group cap.	726	833	501	401	459	415	376	2026		376	2054	961
v/c ratio	0.91	0.76	0.58	0.44	0.92	0.59	0.78	0.66		0.84	1.04	0.80
Green ratio	0.22	0.22	0.34	0.12	0.12	0.28	0.12	0.38		0.12	0.38	0.65
Unif. delay d1	49.3	47.3	35.4	52.8	56.3	40.6	55.9	33.0		56.3	40.0	16.7
Delay factor k	0.43	0.31	0.17	0.11	0.44	0.18	0.33	0.24		0.38	0.50	0.34
Increm. delay d2	16.2	4.2	1.7	0.8	23.3	2.2	10.3	0.8		15.6	30.5	4.7
PF factor	0.809	0.809	0.659	0.906	0.906	0.745	0.913	0.583		0.913	0.583	0.141
Control delay	56.0	42.4	25.1	48.7	74.4	32.4	61.3	20.1		67.0	53.8	7.1
Lane group LOS	E	D	C	D	E	C	E	C		E	D	A
Apprch. delay	44.9			56.8			27.5			44.0		
Approach LOS	D			E			C			D		
Intersec. delay	42.0			Intersection LOS						D		

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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/22/08
Analysis Time Period: PM PEAK
Intersection: EL CAMINO REAL@ LA COSTA AVE.
Area Type: All other areas
Jurisdiction: CARLSBAD
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN CENTER
E/W St: LA COSTA AVE. N/S St: EL CAMINO REAL

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	631	602	277	167	400	232	279	1163	110	300	2025	726
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	166	158	73	44	105	61	73	306	29	79	533	191
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000	1800	1800	2000		1800	2000	1800
ParkExist												
NumPark												
No. Lanes	2	2	1	2	2	1	2	3	0	2	3	1
LGConfig	L	LT	R	L	T	R	L	TR		L	T	R
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
RTOR Vol			0			0			0			0
Adj Flow	664	634	292	176	421	244	294	1340		316	2132	764
%InSharedLn	0											
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.000	1.000		0.087			0.000	1.000
Peds Bikes		10	0		10			10	0		10	0
Buses	0	0	0	0	0	0	0	0		0	0	0
%InProtPhase			0.0									0.0

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Arriv. Type	5	5	5	5	5	5	5	5		5	5	5
Unit Ext.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext of g	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ped Min g		33.3			33.3			20.8			20.8	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./VIEJO CASTILLA W
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	0	1	0
Lane group	L	T			TR						LTR	
Volume (vph)	30	519			842	10				35	1	120
% Heavy veh	2	2			2	2				0	2	0
PHF	0.95	0.95			0.95	0.95				0.95	0.95	0.95
Actuated (P/A)	A	A			A	A				A	A	A
Startup lost time	2.0	2.0			2.0						2.0	
Ext. eff. green	2.0	2.0			2.0						2.0	
Arrival type	5	5			5						5	
Unit Extension	3.0	3.0			3.0						3.0	
Ped/Bike/RTOR Volume				0	0	0	0			0	0	30
Lane Width	12.0	12.0			12.0						12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0						0	
Unit Extension	3.0	3.0			3.0						3.0	

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 40.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 75.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	32	546			897						133	
Lane group cap.	223	2737			1974						214	
v/c ratio	0.14	0.20			0.45						0.62	
Green ratio	0.13	0.73			0.53						0.13	
Unif. delay d1	28.7	3.1			10.8						30.7	
Delay factor k	0.11	0.11			0.11						0.20	
Increm. delay d2	0.3	0.0			0.2						5.5	
PF factor	0.897	0.188			0.238						0.897	
Control delay	26.1	0.6			2.7						33.0	
Lane group LOS	C	A			A						C	
Apprch. delay	2.0			2.7						33.0		
Approach LOS	A			A						C		
Intersec. delay	5.0			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./VIEJO CASTILLA W
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	0	1	0
Lane group	L	T			TR						LTR	
Volume (vph)	135	849			595	25				20	1	60
% Heavy veh	2	2			2	2				0	2	0
PHF	0.95	0.95			0.95	0.95				0.95	0.95	0.95
Actuated (P/A)	A	A			A	A				A	A	A
Startup lost time	2.0	2.0			2.0						2.0	
Ext. eff. green	2.0	2.0			2.0						2.0	
Arrival type	5	5			5						5	
Unit Extension	3.0	3.0			3.0						3.0	
Ped/Bike/RTOR Volume				0	0	0	0			0	0	30
Lane Width	12.0	12.0			12.0						12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0						0	
Unit Extension	3.0	3.0			3.0						3.0	

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 10.0	G = 45.0	G =	G =	G = 10.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 80.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	142	894			652						54	
Lane group cap.	210	2799			2082						203	
v/c ratio	0.68	0.32			0.31						0.27	
Green ratio	0.13	0.75			0.56						0.13	
Unif. delay d1	33.5	3.3			9.3						31.7	
Delay factor k	0.25	0.11			0.11						0.11	
Increm. delay d2	8.4	0.1			0.1						0.7	
PF factor	0.905	0.200			0.143						0.905	
Control delay	38.6	0.7			1.4						29.4	
Lane group LOS	D	A			A						C	
Apprch. delay	5.9			1.4						29.4		
Approach LOS	A			A						C		
Intersec. delay	5.0			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./ROMERIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	0	1	0	0	1	0
Lane group	L	T	R	L	TR			LTR			LTR	
Volume (vph)	15	499	40	40	737	38	105	10	31	134	7	10
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Arrival type	5	5	5	5	5			5			5	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0			0	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 5.0	G = 34.0	G =	G =	G = 21.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 75.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	16	525	42	42	816			155			159	
Lane group cap.	112	889	756	112	1680			340			326	
v/c ratio	0.14	0.59	0.06	0.38	0.49			0.46			0.49	
Green ratio	0.07	0.45	0.45	0.07	0.45			0.28			0.28	
Unif. delay d1	33.0	15.3	11.5	33.5	14.4			22.3			22.5	
Delay factor k	0.11	0.18	0.11	0.11	0.11			0.11			0.11	
Increm. delay d2	0.6	1.0	0.0	2.1	0.2			1.0			1.2	
PF factor	0.952	0.447	0.447	0.952	0.447			0.741			0.741	
Control delay	32.0	7.9	5.2	34.0	6.6			17.5			17.8	
Lane group LOS	C	A	A	C	A			B			B	
Apprch. delay	8.4			8.0			17.5			17.8		
Approach LOS	A			A			B			B		
Intersec. delay	9.8			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./ROMERIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	.YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	2	0	0	1	0	0	1	0
Lane group	L	T	R	L	TR			LTR			LTR	
Volume (vph)	10	814	45	51	575	131	35	5	34	27	5	10
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0			2.0	
Arrival type	5	5	5	5	5			5			5	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0			0	
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 8.0	G = 47.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	857	47	54	743			78			44	
Lane group cap.	149	1024	871	149	1895			316			311	
v/c ratio	0.07	0.84	0.05	0.36	0.39			0.25			0.14	
Green ratio	0.09	0.52	0.52	0.09	0.52			0.22			0.22	
Unif. delay d1	37.6	18.2	10.6	38.6	12.9			28.8			28.1	
Delay factor k	0.11	0.37	0.11	0.11	0.11			0.11			0.11	
Increm. delay d2	0.2	6.2	0.0	1.5	0.1			0.4			0.2	
PF factor	0.935	0.271	0.271	0.935	0.271			0.810			0.810	
Control delay	35.4	11.2	2.9	37.6	3.6			23.7			23.0	
Lane group LOS	D	B	A	D	A			C			C	
Apprch. delay	11.0			5.9			23.7			23.0		
Approach LOS	B			A			C			C		
Intersec. delay	9.6			Intersection LOS						A		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CADENCIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/22/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	21	638	5	25	665	31	5	10	46	178	20	145
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			4			4	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 5.0	G = 41.0	G =	G =	G = 29.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 90.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	22	677		26	733			64			361	
Lane group cap.	100	892		100	1689			525			464	
v/c ratio	0.22	0.76		0.26	0.43			0.12			0.78	
Green ratio	0.06	0.46		0.06	0.46			0.32			0.32	
Unif. delay d1	40.6	20.4		40.7	16.6			21.5			27.6	
Delay factor k	0.11	0.31		0.11	0.11			0.11			0.33	
Increm. delay d2	1.1	3.8		1.4	0.2			0.1			8.2	
PF factor	0.961	0.442		0.961	0.442			0.968			0.968	
Control delay	40.2	12.8		40.5	7.5			20.9			34.9	
Lane group LOS	D	B		D	A			C			C	
Apprch. delay	13.7			8.7			20.9			34.9		
Approach LOS	B			A			C			C		
Intersec. delay	16.0			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CADENCIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	161	699	15	55	719	182	10	10	48	52	5	25
% Heavy veh	2	2	0	2	2	2	2	2	2	0	2	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 15.0	G = 40.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 90.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	169	752		58	949			73			86	
Lane group cap.	279	869		279	1609			341			301	
v/c ratio	0.61	0.87		0.21	0.59			0.21			0.29	
Green ratio	0.17	0.44		0.17	0.44			0.22			0.22	
Unif. delay d1	34.8	22.6		32.4	18.8			28.6			29.1	
Delay factor k	0.19	0.39		0.11	0.18			0.11			0.11	
Increm. delay d2	3.7	9.1		0.4	0.6			0.3			0.5	
PF factor	0.867	0.467		0.867	0.467			0.810			0.810	
Control delay	33.9	19.7		28.4	9.4			23.5			24.1	
Lane group LOS	C	B		C	A			C			C	
Apprch. delay	22.3			10.5			23.5			24.1		
Approach LOS	C			B			C			C		
Intersec. delay	16.7			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LT	R
Volume (vph)		1180	245	440	199					454	1	51
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 50.0	G = 25.0	G =	G =	G = 30.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1242	258	463	209					363	116	54
Lane group cap.		1555	695	678	2489					419	421	375
v/c ratio		0.80	0.37	0.68	0.08					0.87	0.28	0.14
Green ratio		0.42	0.42	0.21	0.67					0.25	0.25	0.25
Unif. delay d1		30.6	24.2	43.8	7.1					43.1	36.2	35.0
Delay factor k		0.34	0.11	0.25	0.11					0.40	0.11	0.11
Increm. delay d2		3.0	0.3	2.8	0.0					17.2	0.4	0.2
PF factor		0.524	0.524	0.825	0.150					0.778	0.778	0.778
Control delay		19.1	13.0	39.0	1.1					50.7	28.5	27.4
Lane group LOS		B	B	D	A					D	C	C
Apprch. delay	18.0			27.2						43.5		
Approach LOS	B			C						D		
Intersec. delay	25.3			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 SB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	1	2	2	0	0	0	0	1	1	1
Lane group		T	R	L	T					L	LT	R
Volume (vph)		688	111	327	518					492	1	161
% Heavy veh		2	2	2	2					2	2	2
PHF		0.95	0.95	0.95	0.95					0.95	0.95	0.95
Actuated (P/A)		A	A	A	A					A	A	A
Startup lost time		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Ext. eff. green		2.0	2.0	2.0	2.0					2.0	2.0	2.0
Arrival type		5	5	5	5					5	5	5
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0				0			0		0
Lane Width		12.0	12.0	12.0	12.0					12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr		0	0	0	0					0	0	0
Unit Extension		3.0	3.0	3.0	3.0					3.0	3.0	3.0

Phasing	Thru & RT	WB Only	03	04	SB Only	06	07	08
Timing	G = 30.0	G = 40.0	G =	G =	G = 35.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		724	117	344	545					394	125	169
Lane group cap.		933	417	1085	2333					489	490	437
v/c ratio		0.78	0.28	0.32	0.23					0.81	0.26	0.39
Green ratio		0.25	0.25	0.33	0.63					0.29	0.29	0.29
Unif. delay d1		41.9	36.3	29.8	9.9					39.4	32.5	33.9
Delay factor k		0.33	0.11	0.11	0.11					0.35	0.11	0.11
Increm. delay d2		4.2	0.4	0.2	0.1					9.6	0.3	0.6
PF factor		0.778	0.778	0.667	0.133					0.725	0.725	0.725
Control delay		36.7	28.6	20.0	1.4					38.1	23.9	25.2
Lane group LOS		D	C	C	A					D	C	C
Apprch. delay	35.6			8.6						32.4		
Approach LOS	D			A						C		
Intersec. delay	24.8			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/07	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	0	1	1	2	0	0	0
Lane group	L	T			TR		L	LT	R			
Volume (vph)	880	754			690	420	95	175	299			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0		2.0	2.0	2.0			
Ext. eff. green	2.0	2.0			2.0		2.0	2.0	2.0			
Arrival type	5	5			5		5	5	5			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			
Ped/Bike/RTOR Volume				0		200	0		0	0		
Lane Width	12.0	12.0			12.0		12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0		0	0	0			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 60.0	G = 25.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	926	794			958		100	184	315			
Lane group cap.	838	2800			1072		279	294	443			
v/c ratio	1.11	0.28			0.89		0.36	0.63	0.71			
Green ratio	0.50	0.75			0.21		0.17	0.17	0.17			
Unif. delay d1	30.0	4.8			46.2		44.3	46.5	47.3			
Delay factor k	0.50	0.11			0.42		0.11	0.21	0.27			
Increm. delay d2	64.0	0.1			9.8		0.8	4.2	5.3			
PF factor	0.333	0.200			0.825		0.867	0.867	0.867			
Control delay	74.0	1.0			47.9		39.2	44.5	46.2			
Lane group LOS	E	A			D		D	D	D			
Apprch. delay	40.3			47.9			44.5					
Approach LOS	D			D			D					
Intersec. delay	43.3			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	I-5 NB OFF RAMP/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/23/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	3	0	1	1	2	0	0	0
Lane group	L	T			TR		L	LT	R			
Volume (vph)	203	977			728	426	261	190	602			
% Heavy veh	2	2			2	2	2	2	2			
PHF	0.95	0.95			0.95	0.95	0.95	0.95	0.95			
Actuated (P/A)	A	A			A	A	A	A	A			
Startup lost time	2.0	2.0			2.0		2.0	2.0	2.0			
Ext. eff. green	2.0	2.0			2.0		2.0	2.0	2.0			
Arrival type	5	5			5		5	5	5			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			
Ped/Bike/RTOR Volume				0		200	0		0	0		
Lane Width	12.0	12.0			12.0		12.0	12.0	12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr	0	0			0		0	0	0			
Unit Extension	3.0	3.0			3.0		3.0	3.0	3.0			

Phasing	EB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 20.0	G = 30.0	G =	G =	G = 30.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 95.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	214	1028			1004		275	200	634			
Lane group cap.	353	2161			1627		529	557	838			
v/c ratio	0.61	0.48			0.62		0.52	0.36	0.76			
Green ratio	0.21	0.58			0.32		0.32	0.32	0.32			
Unif. delay d1	33.9	11.6			27.6		26.6	25.1	29.2			
Delay factor k	0.19	0.11			0.20		0.13	0.11	0.31			
Increm. delay d2	3.0	0.2			0.7		0.9	0.4	4.0			
PF factor	0.822	0.119			0.692		0.692	0.692	0.692			
Control delay	30.9	1.5			19.8		19.3	17.8	24.2			
Lane group LOS	C	A			B		B	B	C			
Apprch. delay	6.6			19.8			21.8					
Approach LOS	A			B			C					
Intersec. delay	15.6			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/URANIA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	35	988	15	25	720	25	95	10	31	235	10	75
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 30.0	G = 0.0	G =	G = 20.0	G = 20.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 100.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	37	1056		26	784		100	44		247	90	
Lane group cap.	168	1118		168	1595		335	348		335	341	
v/c ratio	0.22	0.94		0.15	0.49		0.30	0.13		0.74	0.26	
Green ratio	0.10	0.30		0.10	0.30		0.20	0.20		0.20	0.20	
Unif. delay d1	41.4	34.2		41.1	28.7		34.0	32.8		37.5	33.8	
Delay factor k	0.11	0.46		0.11	0.11		0.11	0.11		0.30	0.11	
Increm. delay d2	0.7	15.5		0.4	0.2		0.5	0.2		8.3	0.4	
PF factor	0.926	0.714		0.926	0.714		0.833	0.833		0.833	0.833	
Control delay	39.0	39.9		38.5	20.8		28.9	27.5		39.6	28.6	
Lane group LOS	D	D		D	C		C	C		D	C	
Apprch. delay	39.9			21.3			28.5			36.7		
Approach LOS	D			C			C			D		
Intersec. delay	32.4			Intersection LOS						C		

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General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/URANIA AVE.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	3	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	65	1633	83	95	1548	50	45	10	20	120	10	50
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 55.0	G = 0.0	G =	G = 10.0	G = 10.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 105.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	68	1806		100	1682		47	32		126	64	
Lane group cap.	160	1941		160	2785		160	168		160	164	
v/c ratio	0.43	0.93		0.63	0.60		0.29	0.19		0.79	0.39	
Green ratio	0.10	0.52		0.10	0.52		0.10	0.10		0.10	0.10	
Unif. delay d1	44.8	23.2		45.7	17.4		44.2	43.8		46.5	44.6	
Delay factor k	0.11	0.45		0.21	0.19		0.11	0.11		0.33	0.11	
Increm. delay d2	1.8	8.7		7.5	0.4		1.0	0.6		22.6	1.5	
PF factor	0.930	0.267		0.930	0.267		0.930	0.930		0.930	0.930	
Control delay	43.5	14.9		49.9	5.0		42.1	41.3		65.8	43.0	
Lane group LOS	D	B		D	A		D	D		E	D	
Apprch. delay	15.9			7.5			41.8			58.1		
Approach LOS	B			A			D			E		
Intersec. delay	14.7			Intersection LOS						B		

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General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	25	943	290	346	1041	30	100	165	93	50	180	59
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	80	0	0	0	0	0	54	0		30
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 18.0	G = 7.0	G = 41.0	G =	G = 12.0	G = 18.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 121.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	26	1214		364	1128		105	215		53	220	
Lane group cap.	249	1230		416	1628		166	283		166	285	
v/c ratio	0.10	0.99		0.88	0.69		0.63	0.76		0.32	0.77	
Green ratio	0.15	0.34		0.25	0.44		0.10	0.15		0.10	0.15	
Unif. delay d1	44.5	39.7		43.7	27.4		52.4	49.4		50.7	49.5	
Delay factor k	0.11	0.49		0.40	0.26		0.21	0.31		0.11	0.32	
Increm. delay d2	0.2	22.5		18.4	1.3		7.6	11.4		1.1	12.3	
PF factor	0.883	0.658		0.780	0.480		0.927	0.883		0.927	0.883	
Control delay	39.5	48.6		52.5	14.5		56.2	55.0		48.1	56.1	
Lane group LOS	D	D		D	B		E	E		D	E	
Apprch. delay	48.4			23.7			55.4			54.5		
Approach LOS	D			C			E			D		
Intersec. delay	38.5			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SAXONY RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	69	1453	172	240	1257	37	175	105	232	70	280	30
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	80	0	0	0	0	0	100	0		30
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 7.0	G = 7.0	G = 50.5	G =	G = 14.5	G = 20.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 124.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	73	1626		253	1362		184	250		74	295	
Lane group cap.	95	1507		257	1873		196	290		196	316	
v/c ratio	0.77	1.08		0.98	0.73		0.94	0.86		0.38	0.93	
Green ratio	0.06	0.41		0.15	0.50		0.12	0.16		0.12	0.16	
Unif. delay d1	57.7	36.8		52.4	24.1		54.3	50.7		50.6	51.3	
Delay factor k	0.32	0.50		0.49	0.29		0.45	0.39		0.11	0.45	
Increm. delay d2	31.0	47.7		51.6	1.5		47.0	22.4		1.2	33.7	
PF factor	0.960	0.542		0.879	0.322		0.912	0.872		0.912	0.872	
Control delay	86.4	67.6		97.7	9.2		96.6	66.5		47.3	78.5	
Lane group LOS	F	E		F	A		F	E		D	E	
Apprch. delay	68.4			23.1			79.3			72.2		
Approach LOS	E			C			E			E		
Intersec. delay	52.1			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SIDONIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	35	1096			1370	15				40		32
% Heavy veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					5		5
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 35.0	G = 0.0	G =	G = 10.0	G = 0.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 85.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	37	1154			1458					42		34
Lane group cap.	493	2855			1535					197		176
v/c ratio	0.08	0.40			0.95					0.21		0.19
Green ratio	0.29	0.76			0.41					0.12		0.12
Unif. delay d1	21.7	3.4			24.2					33.9		33.9
Delay factor k	0.11	0.11			0.46					0.11		0.11
Increm. delay d2	0.1	0.1			13.0					0.5		0.5
PF factor	0.722	0.213			0.533					0.911		0.911
Control delay	15.7	0.8			25.9					31.5		31.4
Lane group LOS	B	A			C					C		C
Apprch. delay	1.3			25.9						31.4		
Approach LOS	A			C						C		
Intersec. delay	15.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/SIDONIA ST.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	0	2	0	0	0	0	1	0	1
Lane group	L	T			TR					L		R
Volume (vph)	45	1712			1395	40				25		20
% Heavy veh	2	2			2	2				2		2
PHF	0.95	0.95			0.95	0.95				0.95		0.95
Actuated (P/A)	A	A			A	A				A		A
Startup lost time	2.0	2.0			2.0					2.0		2.0
Ext. eff. green	2.0	2.0			2.0					2.0		2.0
Arrival type	5	5			5					5		5
Unit Extension	3.0	3.0			3.0					3.0		3.0
Ped/Bike/RTOR Volume				0	0	0	0			0	0	0
Lane Width	12.0	12.0			12.0					12.0		12.0
Parking/Grade/Parking	N	0	N	N	0	N	N		N	N	0	N
Parking/hr												
Bus stops/hr	0	0			0					0		0
Unit Extension	3.0	3.0			3.0					3.0		3.0

Phasing	EB Only	Thru & RT	03	04	SB Only	06	07	08
Timing	G = 25.0	G = 35.0	G = 0.0	G =	G = 10.0	G = 0.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 85.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	47	1802			1510					26		21
Lane group cap.	493	2855			1531					197		176
v/c ratio	0.10	0.63			0.99					0.13		0.12
Green ratio	0.29	0.76			0.41					0.12		0.12
Unif. delay d1	21.8	4.5			24.8					33.6		33.6
Delay factor k	0.11	0.21			0.49					0.11		0.11
Increm. delay d2	0.0	0.2			10.3					0.3		0.3
PF factor	0.722	0.213			0.533					0.911		0.911
Control delay	15.8	1.1			23.5					30.9		30.9
Lane group LOS	B	A			C					C		C
Apprch. delay	1.5			23.5						30.9		
Approach LOS	A			C						C		
Intersec. delay	11.6			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/QUAIL GARDENS DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Lane group	L	TR		L	TR		L	T	R	L	T	R
Volume (vph)	35	1481	120	350	1413	20	125	30	280	63	85	15
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5		5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	175	0	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 12.0	G = 50.0	G =	G = 12.0	G = 11.0	G = 0.0	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	37	1685		368	1508		132	32	111	66	89	16
Lane group cap.	140	1538		377	2080		168	180	325	168	180	325
v/c ratio	0.26	1.10		0.98	0.73		0.79	0.18	0.34	0.39	0.49	0.05
Green ratio	0.08	0.42		0.22	0.56		0.10	0.09	0.22	0.10	0.09	0.22
Unif. delay d1	51.6	35.0		46.2	19.7		52.7	50.3	39.8	50.6	51.9	37.2
Delay factor k	0.11	0.50		0.48	0.29		0.33	0.11	0.11	0.11	0.11	0.11
Increm. delay d2	1.0	53.7		39.9	1.3		21.4	0.5	0.6	1.5	2.1	0.1
PF factor	0.939	0.524		0.806	0.157		0.926	0.933	0.816	0.926	0.933	0.816
Control delay	49.4	72.1		77.1	4.4		70.2	47.4	33.1	48.4	50.5	30.4
Lane group LOS	D	E		E	A		E	D	C	D	D	C
Apprch. delay	71.6			18.7			52.6			47.8		
Approach LOS	E			B			D			D		
Intersec. delay	44.7			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/QUAIL GARDENS DR
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Lane group	L	TR		L	TR		L	T	R	L	T	R
Volume (vph)	15	1909	100	350	1695	90	95	32	175	95	30	45
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	5	5		5	5		5	5	5	5	5	5
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	175	0	0	0
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0	0	0	0	0
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 9.0	G = 61.0	G =	G = 9.1	G = 6.0	G = 0.0	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.1

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	16	2114		368	1879		100	34	0	100	32	47
Lane group cap.	140	1882		335	2314		127	98	262	127	98	262
v/c ratio	0.11	1.12		1.10	0.81		0.79	0.35	0.00	0.79	0.33	0.18
Green ratio	0.08	0.51		0.20	0.62		0.08	0.05	0.17	0.08	0.05	0.17
Unif. delay d1	51.0	29.5		48.0	17.2		54.5	55.2	40.9	54.5	55.1	42.2
Delay factor k	0.11	0.50		0.50	0.35		0.33	0.11	0.11	0.33	0.11	0.11
Increm. delay d2	0.4	63.1		78.3	2.3		27.3	2.1	0.0	27.3	1.9	0.3
PF factor	0.939	0.313		0.834	0.133		0.945	0.965	1.000	0.945	0.965	0.859
Control delay	48.2	72.4		118.3	4.6		78.9	55.4	40.9	78.9	55.1	36.6
Lane group LOS	D	E		F	A		E	E	D	E	E	D
Apprch. delay	72.2			23.2			72.9			63.5		
Approach LOS	E			C			E			E		
Intersec. delay	48.4			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/GARDEN VIEW RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	262	696	300	250	955	27	220	145	40	10	265	290
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		65	0	0	0	0	0	0	0	0	150
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 51.0	G = 0.0	G =	G = 13.0	G = 21.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	276	980		263	1033		232	195		11	426	
Lane group cap.	407	1527		407	1580		353	632		353	619	
v/c ratio	0.68	0.64		0.65	0.65		0.66	0.31		0.03	0.69	
Green ratio	0.13	0.43		0.13	0.43		0.11	0.17		0.11	0.17	
Unif. delay d1	50.2	27.3		50.0	27.5		51.4	43.2		47.9	46.4	
Delay factor k	0.25	0.22		0.22	0.23		0.23	0.11		0.11	0.26	
Increm. delay d2	4.5	0.9		3.5	1.0		4.4	0.3		0.0	3.2	
PF factor	0.905	0.507		0.905	0.507		0.919	0.859		0.919	0.859	
Control delay	49.9	14.8		48.8	14.9		51.6	37.3		44.0	43.1	
Lane group LOS	D	B		D	B		D	D		D	D	
Apprch. delay	22.5			21.8			45.1			43.1		
Approach LOS	C			C			D			D		
Intersec. delay	27.7			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/GARDEN VIEW RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	0	2	2	0	2	2	0	2	2	0
Lane group	L	TR		L	TR		L	TR		L	TR	
Volume (vph)	320	1124	330	120	940	95	305	155	65	105	370	353
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Arrival type	5	5		5	5		5	5		5	5	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0		65	0	0	0	0	0	0	0	0	150
Lane Width	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0		0	0		0	0	
Unit Extension	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 51.0	G = 0.0	G =	G = 13.0	G = 21.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	337	1462		126	1089		321	231		111	603	
Lane group cap.	407	1541		407	1565		353	624		353	619	
v/c ratio	0.83	0.95		0.31	0.70		0.91	0.37		0.31	0.97	
Green ratio	0.13	0.43		0.13	0.43		0.11	0.17		0.11	0.17	
Unif. delay d1	51.2	33.2		47.8	28.2		52.9	43.7		49.4	49.2	
Delay factor k	0.37	0.46		0.11	0.26		0.43	0.11		0.11	0.48	
Increm. delay d2	4.8	5.3		0.1	0.5		26.6	0.4		0.5	29.6	
PF factor	0.905	0.507		0.905	0.507		0.919	0.859		0.919	0.859	
Control delay	51.2	22.2		43.4	14.7		75.2	37.9		45.9	71.9	
Lane group LOS	D	C		D	B		E	D		D	E	
Apprch. delay	27.6			17.7			59.6			67.9		
Approach LOS	C			B			E			E		
Intersec. delay	35.6			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/TOWN CENTER PL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	1	2	0	1	1	1
Lane group	L	T	R	L	T	R	L	LTR		L	LT	R
Volume (vph)	135	616	150	215	1035	125	85	20	70	80	20	95
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 15.0	G = 52.0	G = 0.0	G =	G = 14.0	G = 19.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	142	648	158	226	1089	132	89	95		59	46	100
Lane group cap.	407	1634	650	407	1634	650	265	522		196	223	175
v/c ratio	0.35	0.40	0.24	0.56	0.67	0.20	0.34	0.18		0.30	0.21	0.57
Green ratio	0.13	0.43	0.43	0.13	0.43	0.43	0.16	0.16		0.12	0.12	0.12
Unif. delay d1	48.0	23.3	21.5	49.4	27.1	21.1	44.9	43.8		48.5	48.0	50.2
Delay factor k	0.11	0.11	0.11	0.15	0.24	0.11	0.11	0.11		0.11	0.11	0.17
Increm. delay d2	0.5	0.2	0.2	1.7	1.0	0.2	0.8	0.2		0.9	0.5	4.4
PF factor	0.905	0.490	0.490	0.905	0.490	0.490	0.875	0.875		0.912	0.912	0.912
Control delay	44.0	11.6	10.8	46.3	14.3	10.5	40.0	38.4		45.1	44.2	50.2
Lane group LOS	D	B	B	D	B	B	D	D		D	D	D
Apprch. delay	16.3			19.0			39.2			47.4		
Approach LOS	B			B			D			D		
Intersec. delay	21.5			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LEUCADIA BLVD/TOWN CENTER PL.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	2	1	2	2	1	1	2	0	1	1	1
Lane group	L	T	R	L	T	R	L	LTR		L	LT	R
Volume (vph)	165	879	225	250	695	145	265	326	295	145	60	245
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		0	0	0	0	0	0	100	0	0	100
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 15.0	G = 48.0	G = 0.0	G =	G = 15.0	G = 22.0	G = 0.0	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	174	925	237	263	732	153	209	618		99	117	153
Lane group cap.	407	1493	600	407	1493	600	307	647		210	240	188
v/c ratio	0.43	0.62	0.40	0.65	0.49	0.25	0.68	0.96		0.47	0.49	0.81
Green ratio	0.13	0.40	0.40	0.13	0.40	0.40	0.18	0.18		0.13	0.13	0.13
Unif. delay d1	48.5	28.7	25.7	50.0	26.9	24.1	45.7	48.5		48.8	48.9	51.1
Delay factor k	0.11	0.20	0.11	0.22	0.11	0.11	0.25	0.47		0.11	0.11	0.35
Increm. delay d2	0.7	0.8	0.4	3.5	0.3	0.2	6.0	24.8		1.7	1.6	23.2
PF factor	0.905	0.556	0.556	0.905	0.556	0.556	0.850	0.850		0.905	0.905	0.905
Control delay	44.6	16.7	14.7	48.8	15.2	13.6	44.9	66.0		45.8	45.8	69.5
Lane group LOS	D	B	B	D	B	B	D	E		D	D	E
Apprch. delay	20.0			22.7			60.7			55.6		
Approach LOS	C			C			E			E		
Intersec. delay	33.6			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	ECR/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Lane group	L	T	R	L	TR		L	T	R	L	TR	
Volume (vph)	135	571	210	1134	1127	210	105	1870	1058	135	1505	145
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5		5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	100	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 8.9	G = 30.2	G = 15.2	G = 0.0	G = 7.2	G = 43.5	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	142	601	221	1194	1407		111	1968	1008	142	1737	
Lane group cap.	223	624	316	1105	2022		180	1787	1068	180	2351	
v/c ratio	0.64	0.96	0.70	1.08	0.70		0.62	1.10	0.94	0.79	0.74	
Green ratio	0.07	0.12	0.21	0.34	0.39		0.06	0.33	0.71	0.06	0.33	
Unif. delay d1	59.0	57.1	47.5	43.0	33.4		60.1	43.3	16.4	60.6	38.2	
Delay factor k	0.22	0.47	0.27	0.50	0.26		0.20	0.50	0.46	0.34	0.30	
Increm. delay d2	4.8	23.5	5.4	51.6	1.1		3.2	50.5	9.4	20.6	1.3	
PF factor	0.951	0.912	0.822	0.658	0.578		0.961	0.665	0.174	0.961	0.665	
Control delay	60.9	75.6	44.4	79.8	20.3		60.9	79.3	12.3	78.9	26.7	
Lane group LOS	E	E	D	E	C		E	E	B	E	C	
Apprch. delay	66.3			47.7			56.7			30.6		
Approach LOS	E			D			E			C		
Intersec. delay	49.3			Intersection LOS						D		

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HCS2000: Signalized Intersections Release 4.1f

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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: AM PEAK HOUR
Intersection: ECR/LEUCADIA BLVD.
Area Type: All other areas
Jurisdiction: ENCINITAS
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN SQUARE
E/W St: LEUCADIA BLVD. N/S St: ECR

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	135	571	210	1134	1127	210	105	1870	1058	135	1505	145
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	36	150	55	298	297	55	28	492	278	36	396	38
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000	1800	1800	2000	
ParkExist												
NumPark												
No. Lanes	2	3	1	2	3	0	2	3	1	2	4	0
LGConfig	L	T	R	L	TR		L	T	R	L	TR	
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vol			0			0			100			0
Adj Flow	142	601	221	1194	1407		111	1968	1008	142	1737	
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.157			0.000	1.000		0.088	
Peds Bikes	0		0	0		0	0		0	0		0
Buses	0	0	0	0	0		0	0	0	0	0	
%InProtPhase			0.0			0.0			0.0			

Duration 0.25 Area Type: All other areas

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Arriv. Type	5	5	5	5	5		5	5	5	5	5	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
I Factor		0.800			1.000			0.500			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ped Min g		3.2			3.2			3.2			3.2	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	ECR/LEUCADIA BLVD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	ENCINITAS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	2	3	1	2	3	0	2	3	1	2	4	0
Lane group	L	T	R	L	TR		L	T	R	L	TR	
Volume (vph)	250	844	275	678	769	250	303	1459	1275	291	1507	85
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5		5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	5	0	150	5	0	0	5	0	350	5	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0		0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 12.0	G = 15.0	G = 25.0	G = 0.0	G = 14.0	G = 39.0	G = 0.0	G = 0.0
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y = 0	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 130.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	263	888	132	714	1072		319	1536	974	306	1675	
Lane group cap.	301	1027	504	801	1778		351	1602	873	351	2119	
v/c ratio	0.87	0.86	0.26	0.89	0.60		0.91	0.96	1.12	0.87	0.79	
Green ratio	0.09	0.19	0.34	0.25	0.35		0.11	0.30	0.58	0.11	0.30	
Unif. delay d1	58.3	50.9	31.2	47.3	35.1		57.4	44.7	27.0	57.1	41.8	
Delay factor k	0.40	0.39	0.11	0.42	0.19		0.43	0.47	0.50	0.40	0.34	
Increm. delay d2	23.5	7.8	0.3	12.2	0.6		26.6	14.0	67.4	20.6	2.1	
PF factor	0.932	0.841	0.659	0.782	0.647		0.920	0.714	0.358	0.920	0.714	
Control delay	77.8	50.6	20.8	49.3	23.3		79.4	45.9	77.1	73.1	31.9	
Lane group LOS	E	D	C	D	C		E	D	E	E	C	
Apprch. delay	53.1			33.7			60.4			38.3		
Approach LOS	D			C			E			D		
Intersec. delay	47.6			Intersection LOS						D		

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Urban Systems Inc.
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San Diego Ca 92123

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OPERATIONAL ANALYSIS

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: PM PEAK HOUR
Intersection: ECR/LEUCADIA BLVD.
Area Type: All other areas
Jurisdiction: ENCINITAS
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA
E/W St: LEUCADIA BLVD. N/S St: ECR

VOLUME DATA

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	250	844	275	678	769	250	303	1459	1275	291	1507	85
% Heavy Veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PK 15 Vol	66	222	72	178	202	66	80	384	336	77	397	22
Hi Ln Vol												
% Grade		0			0			0			0	
Ideal Sat	1800	2000	1800	1800	2000		1800	2000	1800	1800	2000	
ParkExist												
NumPark												
No. Lanes	2	3	1	2	3	0	2	3	1	2	4	0
LGConfig	L	T	R	L	TR		L	T	R	L	TR	
Lane Width	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0	12.0	12.0	
RTOR Vol			150			0			350			0
Adj Flow	263	888	132	714	1072		319	1536	974	306	1675	
%InSharedLn												
Prop LTs		0.000			0.000			0.000			0.000	
Prop RTs		0.000	1.000		0.245			0.000	1.000		0.053	
Peds Bikes	5		0	5		0	5		0	5		0
Buses	0	0	0	0	0		0	0	0	0	0	
%InProtPhase			0.0			0.0			0.0			
Duration	0.25		Area Type: All other areas									

OPERATING PARAMETERS

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Init Unmet	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Arriv. Type	5	5	5	5	5		5	5	5	5	5	
Unit Ext.	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
I Factor		1.000			1.000			1.000			1.000	
Lost Time	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ext of g	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Ped Min g		33.2			33.2			33.2			33.2	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./AMARGOSA DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	65	1652	50	75	2131	20	140	10	68	20	10	200
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	50	0	0	0	0	0	20	0	0	50
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 9.0	G = 68.0	G =	G =	G = 28.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 120.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	68	1739		79	2264			209			190	
Lane group cap.	128	2115		128	2113			243			354	
v/c ratio	0.53	0.82		0.62	1.07			0.86			0.54	
Green ratio	0.08	0.57		0.08	0.57			0.23			0.23	
Unif. delay d1	53.5	21.1		53.8	26.0			44.1			40.3	
Delay factor k	0.13	0.36		0.20	0.50			0.39			0.14	
Increm. delay d2	4.2	2.8		8.7	41.9			25.4			1.6	
PF factor	0.946	0.128		0.946	0.263			0.797			0.797	
Control delay	54.8	5.5		59.6	48.8			60.5			33.8	
Lane group LOS	D	A		E	D			E			C	
Apprch. delay	7.3			49.2			60.5			33.8		
Approach LOS	A			D			E			C		
Intersec. delay	32.4			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	OLIVENHAIN RD./AMARGOSA DR.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	230	2059	110	75	1552	20	80	10	40	10	15	65
% Heavy veh	0	2	0	0	2	2	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0			2.0	
Arrival type	5	5		5	5			5			5	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0	0	50	0	0	0	0	0	20	0	0	50
Lane Width	12.0	12.0		12.0	12.0			12.0			12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 21.2	G = 68.0	G =	G =	G = 15.8	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	242	2230		79	1655			116			43	
Lane group cap.	302	2108		302	2111			172			207	
v/c ratio	0.80	1.06		0.26	0.78			0.67			0.21	
Green ratio	0.18	0.57		0.18	0.57			0.13			0.13	
Unif. delay d1	47.4	26.0		42.6	20.3			49.6			46.5	
Delay factor k	0.35	0.50		0.11	0.33			0.25			0.11	
Increm. delay d2	14.3	37.0		0.5	2.0			10.0			0.5	
PF factor	0.857	0.236		0.857	0.128			0.899			0.899	
Control delay	54.9	43.2		37.0	4.6			54.6			42.3	
Lane group LOS	D	D		D	A			D			D	
Apprch. delay	44.3			6.1			54.6			42.3		
Approach LOS	D			A			D			D		
Intersec. delay	29.4			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CALLE TIMITEO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Lane group	L	TR		L	TR			LTR		L	TR	
Volume (vph)	116	418	54	10	392	15	136	8	25	2	1	12
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Arrival type	5	5		5	5			5		5	5	
Unit Extension	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0		0	0	
Unit Extension	3.0	3.0		3.0	3.0			3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 20.0	G = 30.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 85.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	122	497		11	429			177		2	14	
Lane group cap.	394	1230		394	1245			308		284	357	
v/c ratio	0.31	0.40		0.03	0.34			0.57		0.01	0.04	
Green ratio	0.24	0.35		0.24	0.35			0.24		0.24	0.24	
Unif. delay d1	26.8	20.8		25.0	20.3			28.7		24.9	25.1	
Delay factor k	0.11	0.11		0.11	0.11			0.17		0.11	0.11	
Increm. delay d2	0.5	0.2		0.0	0.2			2.6		0.0	0.0	
PF factor	0.795	0.636		0.795	0.636			0.795		0.795	0.795	
Control delay	21.8	13.4		19.9	13.1			25.5		19.8	20.0	
Lane group LOS	C	B		B	B			C		B	B	
Apprch. delay	15.1			13.2			25.5			20.0		
Approach LOS	B			B			C			B		
Intersec. delay	16.0			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CALLE TIMITEO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Lane group	L	TR		L	TR			LTR		L	TR	
Volume (vph)	26	393	200	10	394	3	142	2	10	13	7	94
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Ext. eff. green	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Arrival type	5	5		5	5			5		5	5	
Unit Extension	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0		0
Lane Width	12.0	12.0		12.0	12.0			12.0		12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0		0	0			0		0	0	
Unit Extension	3.0	3.0		3.0	3.0			3.0		3.0	3.0	

Phasing	Excl. Left	Thru & RT	03	04	NS Perm	06	07	08
Timing	G = 20.0	G = 30.0	G =	G =	G = 20.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 85.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	27	625		11	418			162		14	106	
Lane group cap.	394	1188		394	1250			263		290	357	
v/c ratio	0.07	0.53		0.03	0.33			0.62		0.05	0.30	
Green ratio	0.24	0.35		0.24	0.35			0.24		0.24	0.24	
Unif. delay d1	25.3	21.9		25.0	20.2			29.1		25.1	26.7	
Delay factor k	0.11	0.13		0.11	0.11			0.20		0.11	0.11	
Increm. delay d2	0.1	0.4		0.0	0.2			4.3		0.1	0.5	
PF factor	0.795	0.636		0.795	0.636			0.795		0.795	0.795	
Control delay	20.2	14.3		19.9	13.0			27.4		20.1	21.7	
Lane group LOS	C	B		B	B			C		C	C	
Apprch. delay	14.6			13.2			27.4			21.5		
Approach LOS	B			B			C			C		
Intersec. delay	16.3			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CAM. DE LOS COCH
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	1	1	1	0	1	0	1	0	0	0
Lane group		T	R	L	T		L		R			
Volume (vph)		98	347	55	157		256		20			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A		A			
Startup lost time		2.0	2.0	2.0	2.0		2.0		2.0			
Ext. eff. green		2.0	2.0	2.0	2.0		2.0		2.0			
Arrival type		5	5	5	5		3		3			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	115				0	0	0	0		
Lane Width		12.0	12.0	12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0	0	0	0		0		0			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 20.0	G = 30.0	G =	G =	G = 25.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 90.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		103	244	58	165		269		21			
Lane group cap.		654	510	380	1198		466		417			
v/c ratio		0.16	0.48	0.15	0.14		0.58		0.05			
Green ratio		0.33	0.33	0.22	0.61		0.28		0.28			
Unif. delay d1		21.1	23.8	28.2	7.4		28.0		23.8			
Delay factor k		0.11	0.11	0.11	0.11		0.17		0.11			
Increm. delay d2		0.1	0.7	0.2	0.1		1.8		0.1			
PF factor		0.667	0.667	0.810	0.129		1.000		1.000			
Control delay		14.2	16.6	23.0	1.0		29.7		23.9			
Lane group LOS		B	B	C	A		C		C			
Apprch. delay	15.9			6.7			29.3					
Approach LOS	B			A			C					
Intersec. delay	18.0			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./CAM. DE LOS COCH
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	1	1	1	0	1	0	1	0	0	0
Lane group		T	R	L	T		L		R			
Volume (vph)		197	219	25	97		310		30			
% Heavy veh		2	0	0	2		2		2			
PHF		0.95	0.95	0.95	0.95		0.95		0.95			
Actuated (P/A)		A	A	A	A		A		A			
Startup lost time		2.0	2.0	2.0	2.0		2.0		2.0			
Ext. eff. green		2.0	2.0	2.0	2.0		2.0		2.0			
Arrival type		5	5	5	5		3		3			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			
Ped/Bike/RTOR Volume	0	0	115				0	0	0	0		
Lane Width		12.0	12.0	12.0	12.0		12.0		12.0			
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N		N
Parking/hr												
Bus stops/hr		0	0	0	0		0		0			
Unit Extension		3.0	3.0	3.0	3.0		3.0		3.0			

Phasing	WB Only	Thru & RT	03	04	NB Only	06	07	08
Timing	G = 10.0	G = 30.0	G =	G =	G = 25.0	G =	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y =	Y =	Y =
Duration of Analysis (hrs) = 0.25					Cycle Length C = 80.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		207	109	26	102		326		32			
Lane group cap.		735	574	214	1103		524		469			
v/c ratio		0.28	0.19	0.12	0.09		0.62		0.07			
Green ratio		0.38	0.38	0.13	0.56		0.31		0.31			
Unif. delay d1		17.5	16.8	31.1	8.1		23.5		19.3			
Delay factor k		0.11	0.11	0.11	0.11		0.21		0.11			
Increm. delay d2		0.2	0.2	0.3	0.0		2.3		0.1			
PF factor		0.600	0.600	0.905	0.143		1.000		1.000			
Control delay		10.7	10.3	28.4	1.2		25.8		19.4			
Lane group LOS		B	B	C	A		C		B			
Apprch. delay	10.5			6.7			25.2					
Approach LOS	B			A			C					
Intersec. delay	16.5			Intersection LOS						B		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR./SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	SAN MARCOS
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	1	1	1	0	1	1	1
Lane group	L	T	R	L	T	R	L	TR		L	LT	R
Volume (vph)	64	661	99	110	712	600	303	200	140	200	100	53
% Heavy veh	2	2	0	0	2	2	0	0	0	2	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	10
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 13.0	G = 52.0	G =	G =	G = 15.0	G = 30.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	67	696	104	116	749	632	319	358		137	179	45
Lane group cap.	168	1493	612	171	1493	600	395	433		193	224	177
v/c ratio	0.40	0.47	0.17	0.68	0.50	1.05	0.81	0.83		0.71	0.80	0.25
Green ratio	0.10	0.40	0.40	0.10	0.40	0.40	0.23	0.23		0.12	0.12	0.12
Unif. delay d1	54.8	28.8	25.1	56.5	29.3	39.0	47.3	47.5		55.4	56.0	52.4
Delay factor k	0.11	0.11	0.11	0.25	0.11	0.50	0.35	0.36		0.27	0.34	0.11
Increm. delay d2	1.6	0.2	0.1	10.3	0.3	51.6	11.8	12.5		11.5	18.3	0.8
PF factor	0.926	0.556	0.556	0.926	0.556	0.556	0.800	0.800		0.913	0.913	0.913
Control delay	52.3	16.2	14.1	62.6	16.5	73.2	49.6	50.5		62.1	69.4	48.6
Lane group LOS	D	B	B	E	B	E	D	D		E	E	D
Apprch. delay	18.7			44.0			50.1			64.0		
Approach LOS	B			D			D			E		
Intersec. delay	40.9			Intersection LOS						D		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	MELROSE DR./SAN ELIJO RD.
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	SAN MARCOS
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	1	1	1	0	1	1	1
Lane group	L	T	R	L	T	R	L	TR		L	LT	R
Volume (vph)	76	1045	196	125	859	550	92	100	70	500	200	82
% Heavy veh	2	2	0	0	2	2	0	0	0	2	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5	5	5	5		5	5	5
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	10
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 13.0	G = 52.0	G =	G =	G = 30.0	G = 15.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 130.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	80	1100	206	132	904	579	97	179		321	416	76
Lane group cap.	168	1493	612	171	1493	600	197	216		387	446	353
v/c ratio	0.48	0.74	0.34	0.77	0.61	0.96	0.49	0.83		0.83	0.93	0.22
Green ratio	0.10	0.40	0.40	0.10	0.40	0.40	0.12	0.12		0.23	0.23	0.23
Unif. delay d1	55.3	33.2	27.0	57.1	30.9	38.1	53.9	56.2		47.6	49.0	40.5
Delay factor k	0.11	0.29	0.11	0.32	0.19	0.47	0.11	0.37		0.37	0.45	0.11
Increm. delay d2	2.1	2.0	0.3	19.3	0.7	28.1	1.9	22.8		14.0	26.6	0.3
PF factor	0.926	0.556	0.556	0.926	0.556	0.556	0.913	0.913		0.800	0.800	0.800
Control delay	53.3	20.4	15.4	72.1	17.9	49.3	51.2	74.2		52.1	65.9	32.7
Lane group LOS	D	C	B	E	B	D	D	E		D	E	C
Apprch. delay	21.5			33.6			66.1			57.3		
Approach LOS	C			C			E			E		
Intersec. delay	36.4			Intersection LOS						D		

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TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: AM PEAK HOUR
Intersection: FALLSVIEW RD./SAN ELIJO RD.
Jurisdiction: SAN MARCOS
Units: U. S. Customary
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: SAN ELIJO RD.
North/South Street: FALLSVIEW RD.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		961	40			
Peak-Hour Factor, PHF		0.95	0.95			
Hourly Flow Rate, HFR		1011	42			
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes		2	0			
Configuration		T	TR			
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume			84			
Peak Hour Factor, PHF			0.95			
Hourly Flow Rate, HFR			88			
Percent Heavy Vehicles			0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes			1			
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config					R			
v (vph)					88			
C(m) (vph)					556			
v/c					0.16			
95% queue length					0.56			
Control Delay					12.7			
LOS					B			
Approach Delay				12.7				
Approach LOS				B				

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TWO-WAY STOP CONTROL SUMMARY

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30P

Analyst: USAI
Agency/Co.: USAI
Date Performed: 09/24/08
Analysis Time Period: PM PEAK HOUR
Intersection: FALLSVIEW RD./SAN ELIJO RD.
Jurisdiction: SAN MARCOS
Units: U. S. Customary
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LA COSTA TOWN SQUARE
East/West Street: SAN ELIJO RD.
North/South Street: FALLSVIEW RD.
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		1533	69			
Peak-Hour Factor, PHF		0.95	0.95			
Hourly Flow Rate, HFR		1613	72			
Percent Heavy Vehicles		--	--		--	--
Median Type/Storage	Raised curb			/ 1		
RT Channelized?						
Lanes		2	0			
Configuration		T	TR			
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume			63			
Peak Hour Factor, PHF			0.95			
Hourly Flow Rate, HFR			66			
Percent Heavy Vehicles			0			
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes			1			
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config					R			
v (vph)					66			
C(m) (vph)					367			
v/c					0.18			
95% queue length					0.65			
Control Delay					16.9			
LOS					C			
Approach Delay				16.9				
Approach LOS				C				

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./W. DWY. #1
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Lane group	L	T	R	L	TR			LTR		L	TR	R
Volume (vph)	151	517	15	39	407	93	10	0	10	61	1	100
% Heavy veh	0	2	0	0	2	0	0	0	0	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5			5		5	5	4
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 20.0	G = 30.0	G =	G =	G = 25.0	G = 15.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 110.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	159	544	16	41	526			22		64	32	74
Lane group cap.	311	1018	417	311	993			223		389	209	220
v/c ratio	0.51	0.53	0.04	0.13	0.53			0.10		0.16	0.15	0.34
Green ratio	0.18	0.27	0.27	0.18	0.27			0.14		0.23	0.14	0.14
Unif. delay d1	40.6	34.1	29.4	37.7	34.0			41.6		34.1	41.9	43.0
Delay factor k	0.12	0.14	0.11	0.11	0.13			0.11		0.11	0.11	0.11
Increm. delay d2	1.4	0.6	0.0	0.2	0.5			0.2		0.2	0.3	0.9
PF factor	0.852	0.750	0.750	0.852	0.750			0.895		0.804	0.895	1.000
Control delay	36.0	26.1	22.1	32.3	26.0			37.4		27.6	37.8	43.9
Lane group LOS	D	C	C	C	C			D		C	D	D
Apprch. delay	28.2			26.5			37.4			36.6		
Approach LOS	C			C			D			D		
Intersec. delay	28.7			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	LA COSTA AVE./W. DWY. #1
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	2	1	1	2	0	0	1	0	1	1	1
Lane group	L	T	R	L	TR			LTR		L	TR	R
Volume (vph)	314	400	35	25	412	193	10	0	10	194	1	319
% Heavy veh	0	2	0	0	2	0	0	0	0	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0			2.0		2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0			2.0		2.0	2.0	2.0
Arrival type	5	5	5	5	5			5		5	5	4
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width	12.0	12.0	12.0	12.0	12.0			12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0			0		0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0

Phasing	Excl. Left	Thru & RT	03	04	SB Only	NB Only	07	08
Timing	G = 26.0	G = 33.0	G =	G =	G = 25.0	G = 15.0	G =	G =
	Y = 5	Y = 5	Y =	Y =	Y = 5	Y = 5	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 119.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	331	421	37	26	637			22		204	169	168
Lane group cap.	374	1035	424	374	992			206		359	322	339
v/c ratio	0.89	0.41	0.09	0.07	0.64			0.11		0.57	0.52	0.50
Green ratio	0.22	0.28	0.28	0.22	0.28			0.13		0.21	0.21	0.21
Unif. delay d1	45.1	35.0	31.8	36.9	37.8			46.1		42.2	41.7	41.4
Delay factor k	0.41	0.11	0.11	0.11	0.22			0.11		0.16	0.13	0.11
Increm. delay d2	21.5	0.3	0.1	0.1	1.4			0.2		2.1	1.6	1.1
PF factor	0.814	0.744	0.744	0.814	0.744			0.904		0.823	0.823	1.000
Control delay	58.1	26.3	23.8	30.1	29.6			41.9		36.8	35.9	42.6
Lane group LOS	E	C	C	C	C			D		D	D	D
Apprch. delay	39.6			29.6			41.9			38.3		
Approach LOS	D			C			D			D		
Intersec. delay	36.0			Intersection LOS						D		

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TWO-WAY STOP CONTROL SUMMARY

Analyst: USAI
Agency/Co.: USAI
Date Performed: 10/10/08
Analysis Time Period: AM PEAK HOUR
Intersection: LA COSTA AVE./PASEO TAMARINDO
Jurisdiction: SAN DIEGO
Units: U. S. Customary
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LAS CASITAS
East/West Street: LA COSTA AVE.
North/South Street: PASEO TAMARINDO
Intersection Orientation: EW Study period (hrs): 0.25

NOTE: NO INTERSECTION WITHOUT PROJECT

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	15	104			180	1
Peak-Hour Factor, PHF	0.95	0.95			0.95	0.95
Hourly Flow Rate, HFR	15	109			189	1
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	1	1			1	0
Configuration	L	T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		36
Peak Hour Factor, PHF				0.95		0.95
Hourly Flow Rate, HFR				1		37
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes				1		1
Configuration				L		R

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	15					1		37
C(m) (vph)	1396					663		857
v/c	0.01					0.00		0.04
95% queue length	0.03					0.00		0.14
Control Delay	7.6					10.4		9.4
LOS	A					B		A
Approach Delay							9.4	
Approach LOS							A	

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TWO-WAY STOP CONTROL SUMMARY

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WP

NOTE: NO INTERSECTION WITHOUT PROJECT

Analyst: USAI
Agency/Co.: USAI
Date Performed: 10/10/08
Analysis Time Period: PM PEAK HOUR
Intersection: LA COSTA AVE./PASEO TAMARINDO
Jurisdiction: SAN DIEGO
Units: U. S. Customary
Analysis Year: YEAR 2030 WITH PROJECT
Project ID: LAS CASITAS
East/West Street: LA COSTA AVE.
North/South Street: PASEO TAMARINDO
Intersection Orientation: EW Study period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	44	83			103	1
Peak-Hour Factor, PHF	0.95	0.95			0.95	0.95
Hourly Flow Rate, HFR	46	87			108	1
Percent Heavy Vehicles	0	--	--		--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes	1	1			1	0
Configuration	L	T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				1		19
Peak Hour Factor, PHF				0.95		0.95
Hourly Flow Rate, HFR				1		20
Percent Heavy Vehicles				0		0
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage				/		/
Lanes					1	1
Configuration					L	R

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	L					L		R
v (vph)	46					1		20
C(m) (vph)	1494					686		951
v/c	0.03					0.00		0.02
95% queue length	0.10					0.00		0.06
Control Delay	7.5					10.3		8.9
LOS	A					B		A
Approach Delay							8.9	
Approach LOS							A	

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO STA. FE/EAST DWY. / PASEO LUPINO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	2	3	1	1	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	42	2107	38	215	1821	24	50	6	144	74	12	141
% Heavy veh	0	2	2	2	2	0	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0		0	0	0	50
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 10.0	G = 10.0	G = 50.0	G =	G = 11.0	G = 14.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	44	2218	40	226	1917	25	53	6	152	78	109	
Lane group cap.	143	2225	625	678	2893	875	154	229	550	157	182	
v/c ratio	0.31	1.00	0.06	0.33	0.66	0.03	0.34	0.03	0.28	0.50	0.60	
Green ratio	0.08	0.42	0.42	0.21	0.54	0.54	0.09	0.12	0.37	0.09	0.12	
Unif. delay d1	51.7	34.9	21.0	40.4	19.7	12.8	51.1	47.0	26.8	51.9	50.3	
Delay factor k	0.11	0.50	0.11	0.11	0.24	0.11	0.11	0.11	0.11	0.11	0.19	
Increm. delay d2	1.2	18.3	0.0	0.3	0.6	0.0	1.3	0.0	0.3	2.5	5.4	
PF factor	0.939	0.524	0.524	0.825	0.212	0.212	0.933	0.912	0.614	0.933	0.912	
Control delay	49.8	36.6	11.0	33.6	4.7	2.7	49.0	42.9	16.7	50.8	51.3	
Lane group LOS	D	D	B	C	A	A	D	D	B	D	D	
Apprch. delay	36.4			7.7			25.6			51.1		
Approach LOS	D			A			C			D		
Intersec. delay	23.7			Intersection LOS						C		

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AS-P 30 PM

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RANCHO STA. FE/EAST DWY / PASEO LUPINO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	3	1	2	3	1	1	1	1	1	1	0
Lane group	L	T	R	L	T	R	L	TR	R	L	TR	
Volume (vph)	138	1481	78	454	1862	74	157	18	449	24	14	46
% Heavy veh	0	2	2	2	2	0	2	2	2	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Arrival type	5	5	5	5	5	5	5	5	5	5	5	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0		0	0	0	25
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	

Phasing	Excl. Left	WB Only	Thru & RT	04	Excl. Left	Thru & RT	07	08
Timing	G = 15.0	G = 13.0	G = 36.0	G =	G = 20.0	G = 11.0	G =	G =
	Y = 5	Y = 5	Y = 5	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	145	1559	82	478	1960	78	165	66	426	25	37	
Lane group cap.	214	1602	450	895	2403	727	279	160	612	285	150	
v/c ratio	0.68	0.97	0.18	0.53	0.82	0.11	0.59	0.41	0.70	0.09	0.25	
Green ratio	0.13	0.30	0.30	0.28	0.45	0.45	0.17	0.09	0.41	0.17	0.09	
Unif. delay d1	50.2	41.5	31.1	37.0	28.7	19.1	46.2	51.4	29.3	42.3	50.6	
Delay factor k	0.25	0.48	0.11	0.14	0.36	0.11	0.18	0.11	0.26	0.11	0.11	
Increm. delay d2	8.3	16.5	0.2	0.6	2.3	0.1	3.3	1.7	3.5	0.1	0.9	
PF factor	0.905	0.714	0.714	0.747	0.455	0.455	0.867	0.933	0.540	0.867	0.933	
Control delay	53.7	46.2	22.4	28.2	15.3	8.7	43.4	49.7	19.3	36.8	48.1	
Lane group LOS	D	D	C	C	B	A	D	D	B	D	D	
Apprch. delay	45.7			17.6			28.4			43.5		
Approach LOS	D			B			C			D		
Intersec. delay	29.3			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE RD../CALLE ACERVO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	AM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	1	0	1	1	1
Lane group		LTR			LTR		L	TR		L	T	R
Volume (vph)	160	200	40	170	260	50	45	505	290	40	818	255
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Arrival type		5			5		5	5		5	5	5
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	85	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	0
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 47.0	G =	G =	G =	G = 8.0	G = 50.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		421			506		47	748		42	861	268
Lane group cap.		445			488		112	782		112	817	625
v/c ratio		0.95			1.04		0.42	0.96		0.38	1.05	0.43
Green ratio		0.39			0.39		0.07	0.42		0.07	0.42	0.42
Unif. delay d1		35.3			36.5		53.8	33.9		53.6	35.0	24.9
Delay factor k		0.46			0.50		0.11	0.47		0.11	0.50	0.11
Increm. delay d2		29.4			50.6		2.5	22.1		2.1	46.6	0.5
PF factor		0.571			0.571		0.952	0.524		0.952	0.524	0.524
Control delay		49.5			71.4		53.7	39.9		53.2	65.0	13.5
Lane group LOS		D			E		D	D		D	E	B
Apprch. delay	49.5			71.4			40.7			52.8		
Approach LOS	D			E			D			D		
Intersec. delay	52.3			Intersection LOS						D		

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WP

SHORT REPORT

General Information		Site Information	
Analyst	USAI	Intersection	RHO. STA. FE RD../CALLE ACERVO
Agency or Co.	USAI	Area Type	All other areas
Date Performed	09/24/08	Jurisdiction	CARLSBAD
Time Period	PM PEAK HOUR	Analysis Year	YEAR 2030 WITH PROJECT

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	1	0	0	1	0	1	1	0	1	1	1
Lane group		LTR			LTR		L	TR		L	T	R
Volume (vph)	50	20	20	140	65	65	40	783	90	60	543	405
% Heavy veh	2	2	2	2	2	2	2	2	2	2	2	2
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Ext. eff. green		2.0			2.0		2.0	2.0		2.0	2.0	2.0
Arrival type		5			5		5	5		5	5	5
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Ped/Bike/RTOR Volume	0	0	0	0	0	0	0	0	85	0	0	0
Lane Width		12.0			12.0		12.0	12.0		12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr		0			0		0	0		0	0	0
Unit Extension		3.0			3.0		3.0	3.0		3.0	3.0	3.0

Phasing	EW Perm	02	03	04	Excl. Left	Thru & RT	07	08
Timing	G = 44.0	G =	G =	G =	G = 10.0	G = 51.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y = 5	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 | Cycle Length C = 120.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		95			283		42	829		63	572	426
Lane group cap.		462			492		140	833		140	833	638
v/c ratio		0.21			0.58		0.30	1.00		0.45	0.69	0.67
Green ratio		0.37			0.37		0.08	0.43		0.08	0.43	0.43
Unif. delay d1		26.0			30.5		51.7	34.4		52.4	28.0	27.7
Delay factor k		0.11			0.17		0.11	0.50		0.11	0.26	0.24
Increm. delay d2		0.2			1.7		1.2	29.9		2.3	2.4	2.7
PF factor		0.614			0.614		0.939	0.507		0.939	0.507	0.507
Control delay		16.2			20.4		49.8	47.4		51.5	16.6	16.7
Lane group LOS		B			C		D	D		D	B	B
Apprch. delay	16.2			20.4			47.5			18.7		
Approach LOS	B			C			D			B		
Intersec. delay	29.7			Intersection LOS						C		

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