

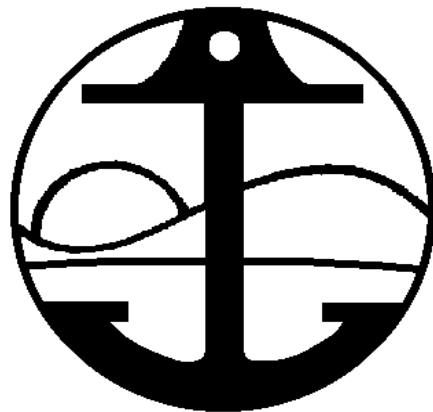
# TUSCANY MEADOWS

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SCH#2012112061

**FINAL  
ENVIRONMENTAL IMPACT REPORT  
(VOLUME II: ATTACHMENTS 1 – 4)**

PREPARED FOR  
THE CITY OF PITTSBURG



JULY 2015

PREPARED BY



1501 SPORTS DRIVE, SUITE A, SACRAMENTO, CA 95834

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ATTACHMENT 1

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**TUSCANY  
MEADOWS  
SUBDIVISION 8654**

**CITY OF PITTSBURG  
CONTRA COSTA COUNTY, CALIFORNIA**

**DRAINAGE STUDY**

**FEBRUARY 13, 2013**

**OWNER:  
WEST COAST HOME BUILDERS, INC.  
4021 PORT CHICAGO HIGHWAY  
CONCORD, CALIFORNIA 94520  
PH: (925) 671-7711**

**ENGINEER OF WORK:  
ISAKSON & ASSOCIATES, INC.**

**2255 YGNACIO VALLEY ROAD, SUITE C  
WALNUT CREEK, CALIFORNIA 94598  
PH: (925) 937-9333  
JOB NO. 201002**

# **TUSCANY MEADOWS**

PITTSBURG, CALIFORNIA

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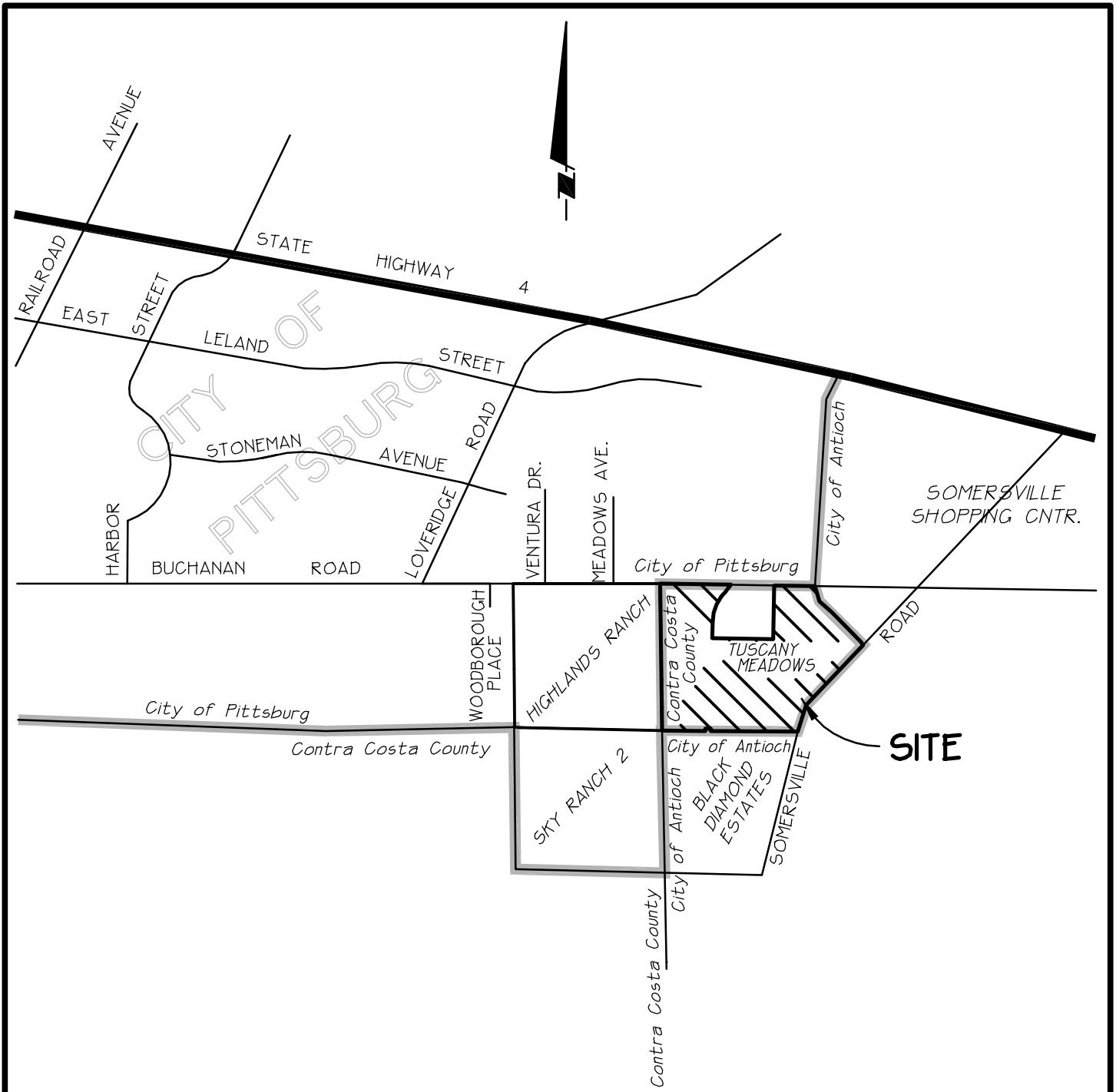
### **APPENDICES**

- Appendix A. Contra Costa County Flood Hydrographs
- Appendix B. Detention Basin Parameters & Details – East Side
- Appendix C. Detention Basin Parameters & Details – West Side
- Appendix D. HEC-1 Runs – East Side
- Appendix E. HEC-1 Runs – West Side

### **REFERENCES**

1. “Buchanan Crossings Shopping Center Tributary Area Hydrology Study” by PA Design Resources, dated 7/20/09.
2. “Sky Ranch II Drainage Study” by Isakson & Associates, dated 5/07.

S:\2010\_JOBS\201002\dwg\HYDRO\201002-VicMap.dwg, VICINITY MAP, 2/19/2013 7:09:56 AM, bob2, EL, EL



### TUSCANY MEADOWS

## ISAKSON & ASSOCIATES INC.

2255 YGNACIO VALLEY ROAD, SUITE C WALNUT CREEK, CA. 94598-3335  
PHONE (925) 937-9333 FAX (925) 937-7926

<b>VICINITY MAP</b>	CHECKED BY: D.O.I.	DRAWN BY: F/D	JOB NO. 201002
	NOT TO SCALE	DATE: 2-13-13	PAGE 1

## 1. LOCATION

Tuscany Meadows Subdivision 8654 is located on the south side of Buchanan Road, approximately 4,300 feet west of the intersection of Buchanan Road and Somersville Road in Pittsburg, California as shown in the vicinity map on page 1.

## 2. BACKGROUND

The Subdivision is divided into two watersheds, east and west. The east watershed drains to an existing 2' x 2' reinforced concrete box culvert beneath the Contra Costa Canal, located in the northeasterly portion of the Subdivision. The west watershed drains to an existing 18" corrugated metal pipe beneath Buchanan Road, located in the northwesterly portion of the site. A maximum allowable  $Q_{100}$  peak flow leaving the east watershed was determined to be 75 cfs in the "Buchanan Crossings Shopping Center Tributary Area Hydrology Study" by P A Design Resources dated 7/20/09. A maximum allowable  $Q_{100}$  peak flow leaving the west watershed was determined to be 10 cfs in the "Sky Ranch II Drainage Study" by Isakson & Associates dated 5/07. Both studies are attached for reference.

## 3. RESULTS

The results of this drainage study show that the on site detention basins proposed on the vesting tentative map and grading plan for this Project will keep peak flows, once the site is developed, below the allowable peak flows as summarized in the following table:

### Summary of Results

<b>DEVELOPED CONDITIONS</b>			
	Water Surface (ft)	$Q_{100}$ -out (cfs)	$Q_{100}$ -out allowable (cfs)
East Side Basin	125.06 (1)	27 (2)	75 (4)
West Side Basin	120.32 (3)	9 (3)	10 (5)

(1) See Appendix D, page 47

(2) See Appendix D, page 48

(3) See Appendix E, page 40

(4) 75 cfs was determined to be the maximum allowable 100 year peak outflow as listed on page 7 of the “Buchanan Crossings Shopping Center Tributary Area Hydrology Study” dated 7/20/09 and prepared by PA Design Resources.

(5) 10 cfs was determined to be the maximum allowable 100 year peak outflow as listed on page 5 of the “Sky Ranch II Drainage Study” dated 5/07 and prepared by Isakson & Associates.

The Contra Costa County Flood Control & Water Conservation District was contracted to prepare flood hydrographs for the east and west watershed areas. These hydrographs are included in Appendix A of this study.

Detention basin parameters for the east and west watershed areas have been detailed in appendices B and C of this study, respectively.

HEC-1 runs for the east and west watershed areas were developed and have been included in appendices D and E of this study, respectively.

#### 4. CONCLUSION

Based on the results of this study, the drainage design detailed herein is acceptable and in accordance with governing agency standards.

## APPENDIX A

### **Contra Costa County Flood Hydrographs**

<u>DESCRIPTION</u>	<u>LOCATION</u>
1. Request for Hydrographs.....	A1 thru 7
2. 10yr/24hr Hydrograph Areas 1 & 2A.....	A8 thru 9
3. 10yr/24hr Hydrograph Areas 2B, 3 & 4A.....	A10 thru 11
4. 10yr/24hr Hydrograph Area 4B & 10yr/3hr Areas 1 & 2A.....	A12 thru 13
5. 10yr/3hr Hydrograph Areas 2B, 3 & 4A.....	A14 thru 15
6. 10yr/3hr Hydrograph Area 4B & 100yr/24hr Areas 1 & 2A.....	A16 thru 17
7. 100yr/24hr Hydrograph Areas 2B, 3 & 4A.....	A18 thru 19
8. 100yr/24hr Hydrograph Area 4B & 100yr/3hr Areas 1 & 2A.....	A20 thru 21
9. 100yr/3hr Hydrograph Areas 2B, 3 & 4A.....	A22 thru 23
10. 100yr/3hr Hydrograph Areas 4B.....	A24 thru 25



INPUT DATA FOR HYDRO6 PROGRAM

Location: TUSCANY MEADOWS - TO WEST DET. BASIN

AREA 1 - TUSCANY WEST - DEVELOPED

Date: 12/18/11 (541 Lots) 77.9 AC - R, 4000 SF LOTS - I = 0.05  
4.2 AC - C.3/DET BASIN - I = 0.17

By: F/D

$$I = \left(0.05\right) \frac{77.9}{82.1} + \left(0.17\right) \frac{4.2}{82.1} = .056$$

Watershed Parameters	Units
Drainage Area 82.1 AC	0.128 Square miles
Mean Seasonal Rainfall	14 Inches
Storm Frequency (Circle all that apply to this watershed)	2 5 (10) 25 50 (100) Year
Storm Duration (Circle all that apply to this watershed)	(3) 6 12 (24) 96 Hour
Infiltration Rate	0.056 (SEE ABOVE) Inches/Hour
Channel Length 3,815'	0.723 Miles
Channel Length from Centroid 1,985'	0.376 Miles
Elevation Difference 178-105	73 Feet
N Value	0.026 (SEE BELOW) (Dimensionless)
Time Interval (Circle one)	3 5 (15) Minutes

N VALUE: FROM FIG 1, 82AC & R4 ZONING → N = 0.026

INPUT DATA FOR HYDRO6 PROGRAM

Location: TUSCANY MEADOWS - TO WEST DET. BASIN

AREA 2A - SKY RANCH EAST / BLACK DIAMOND RANCH WEST - DEVELOPED

Date: 12/15/11

By: F/D

(69 LOTS) 20 AC - R 9000 SF LOTS - I = .088

7.3 AC - OPEN SPACE - I = .17

6.1 AC - JAMES DONLON - I = .02

1.1 AC - COMMERCIAL - I = .035

34.5 AC

$$I = (.088) \frac{20}{34.5} + (.17) \frac{7.3}{34.5} + (.02) \frac{6.1}{34.5} + (.035) \frac{1.1}{34.5} = 0.092$$

Watershed Parameters	Units
Drainage Area 34.5 AC	0.054 Square miles
Mean Seasonal Rainfall	14.5 Inches
Storm Frequency (Circle all that apply to this watershed)	2 5 (10) 25 50 (100) Year
Storm Duration (Circle all that apply to this watershed)	(3) 6 12 (24) 96 Hour
Infiltration Rate	0.092 (SEE ABOVE) Inches/Hour
Channel Length 5,620'	1.064 Miles
Channel Length from Centroid 3,795'	0.719 Miles
Elevation Difference 437-105	332 Feet
N Value	0.031 (SEE BELOW) (Dimensionless)
Time Interval (Circle one)	3 5 (15) Minutes

N VALUE: FROM FIG 1, 34 AC & PREDOMINANTLY R 9 ZONING  
USE N = .031

INPUT DATA FOR HYDRO6 PROGRAM

Location: TUSCANY MEADOWS - TO WEST DET. BASIN

AREA 2B - CHEVRON/BUCHANAN RD. - DEVELOPED

Date: 12/13/11      9.1 AC CHEVRON (INDUSTRIAL) - I = .045  
 2.5 AC BUCHANAN RD - I = 0.02

By: F/D      11.6 AC

$$I = (.045) \frac{9.1}{11.6} + (.02) \frac{2.5}{11.6} = 0.040$$

Watershed Parameters	Units	
Drainage Area 11.6 AC	0.018	Square miles
Mean Seasonal Rainfall	14	Inches
Storm Frequency (Circle all that apply to this watershed)	2   5   (10)   25   50   (100)	Year
Storm Duration (Circle all that apply to this watershed)	(3)   6   12   (24)   96	Hour
Infiltration Rate	0.040 (SEE ABOVE) Inches/Hour	
Channel Length 1,825'	0.346	Miles
Channel Length from Centroid 1,305'	0.247	Miles
Elevation Difference 145-105	40	Feet
N Value	0.034 (SEE BELOW)	(Dimensionless)
Time Interval (Circle one)	3   5   (15)	Minutes

N VALUE: FROM FIG 1, 11.5 AC & INDUSTRIAL

USE N = 0.034

A3

INPUT DATA FOR HYDRO6 PROGRAM

Location: TUSCANY MEADOWS - TO EAST DET. BASIN

AREA 3 - TUSCANY EAST - DEVELOPED

Date: 12/15/11 <sup>(459 LOTS)</sup> 66.4 AC - R4000 SF LOTS - I = 0.05  
<sub>(300 UNITS)</sub> 13.6 AC - APTS - I = 0.05  
 By: F/D 5.2 AC - SOMERSVILLE RD - I = .02  
 6.8 AC - PARK/C.3/DET BASIN - I = 0.17

$$I = (.05) \frac{80}{92} + (.02) \frac{5.2}{92} + (.17) \frac{6.8}{92} = 0.057$$

Watershed Parameters	Units
Drainage Area 92 AC	0.144 Square miles
Mean Seasonal Rainfall	14 Inches
Storm Frequency (Circle all that apply to this watershed)	2 5 <u>10</u> 25 50 <u>100</u> Year
Storm Duration (Circle all that apply to this watershed)	<u>3</u> 6 12 <u>24</u> 96 Hour
Infiltration Rate	0.057 (SEE ABOVE) Inches/Hour
Channel Length 3,355'	0.635 Miles
Channel Length from Centroid 1160'	0.220 Miles
Elevation Difference 175-110	65 Feet
N Value	0.026 (SEE BELOW) (Dimensionless)
Time Interval (Circle one)	3 5 <u>15</u> Minutes

N VALUE: FROM FIG 1, 92 AC & R4 ZONING → N = 0.026

INPUT DATA FOR HYDRO6 PROGRAM

Location: TUSCANY MEADOWS - TO EAST DETENTION BASIN

AREA 4A - BLACK DIAMOND RANCH EAST - DEVELOPED

Date: 12/16/11 (77 LOTS) - 15.7 AC R6000 LOTS - I = 0.065  
6.5 AC OPEN SPACE - I = 0.17  
1.6 AC PARK - I = 0.17  
23.8 AC

By: FID

$$I = (0.065) \frac{15.7}{23.8} + (0.17) \frac{8.1}{23.8} = 0.101$$

Watershed Parameters	Units
Drainage Area <u>23.8 AC</u>	<u>0.037</u> Square miles
Mean Seasonal Rainfall	<u>14.5</u> Inches
Storm Frequency (Circle all that apply to this watershed)	2 5 <u>(10)</u> 25 50 <u>(100)</u> Year
Storm Duration (Circle all that apply to this watershed)	<u>(3)</u> 6 12 <u>(24)</u> 96 Hour
Infiltration Rate	<u>0.101 (SEE ABOVE)</u> Inches/Hour
Channel Length <u>5,680'</u>	<u>1.076</u> Miles
Channel Length from Centroid <u>4,245'</u>	<u>0.097</u> Miles
Elevation Difference <u>445-110</u>	<u>335</u> Feet
N Value	<u>0.031 (SEE BELOW)</u> (Dimensionless)
Time Interval (Circle one)	3 5 <u>(15)</u> Minutes

N VALUE: FROM FIG 1, 24 AC & R6 ZONING → N = 0.031

INPUT DATA FOR HYDRO6 PROGRAM

Location: TUSCANY MEADOWS - TO EAST DETENTION BASIN

AREA 4B - CHEVRON / BUCHANAN RD - DEVELOPED

Date: 12/15/11

14.8 CHEVRON (INDUSTRIAL) - I = .045

0.8 BUCHANAN RD - I = 0.02

By: FID

15.6

$$I = (.045) \frac{14.8}{15.6} + (.02) \frac{0.8}{15.6} = 0.044$$

Watershed Parameters	Units
Drainage Area 15.6 AC	0.024 Square miles
Mean Seasonal Rainfall	14 Inches
Storm Frequency (Circle all that apply to this watershed)	2 5 (10) 25 50 (100) Year
Storm Duration (Circle all that apply to this watershed)	(3) 6 12 (24) 96 Hour
Infiltration Rate	0.044 (SEE ABOVE) Inches/Hour
Channel Length 2,810'	0.532 Miles
LCA (4B-2) = 2,290' (.131) Channel Length from Centroid LCA (4B-1) = 1,490' (.282) AVG = 1,890'	0.358 (AVG) Miles
Elevation Difference 145 - 110	35 Feet
N Value	0.032 (SEE BELOW) (Dimensionless)
Time Interval (Circle one)	3 5 (15) Minutes

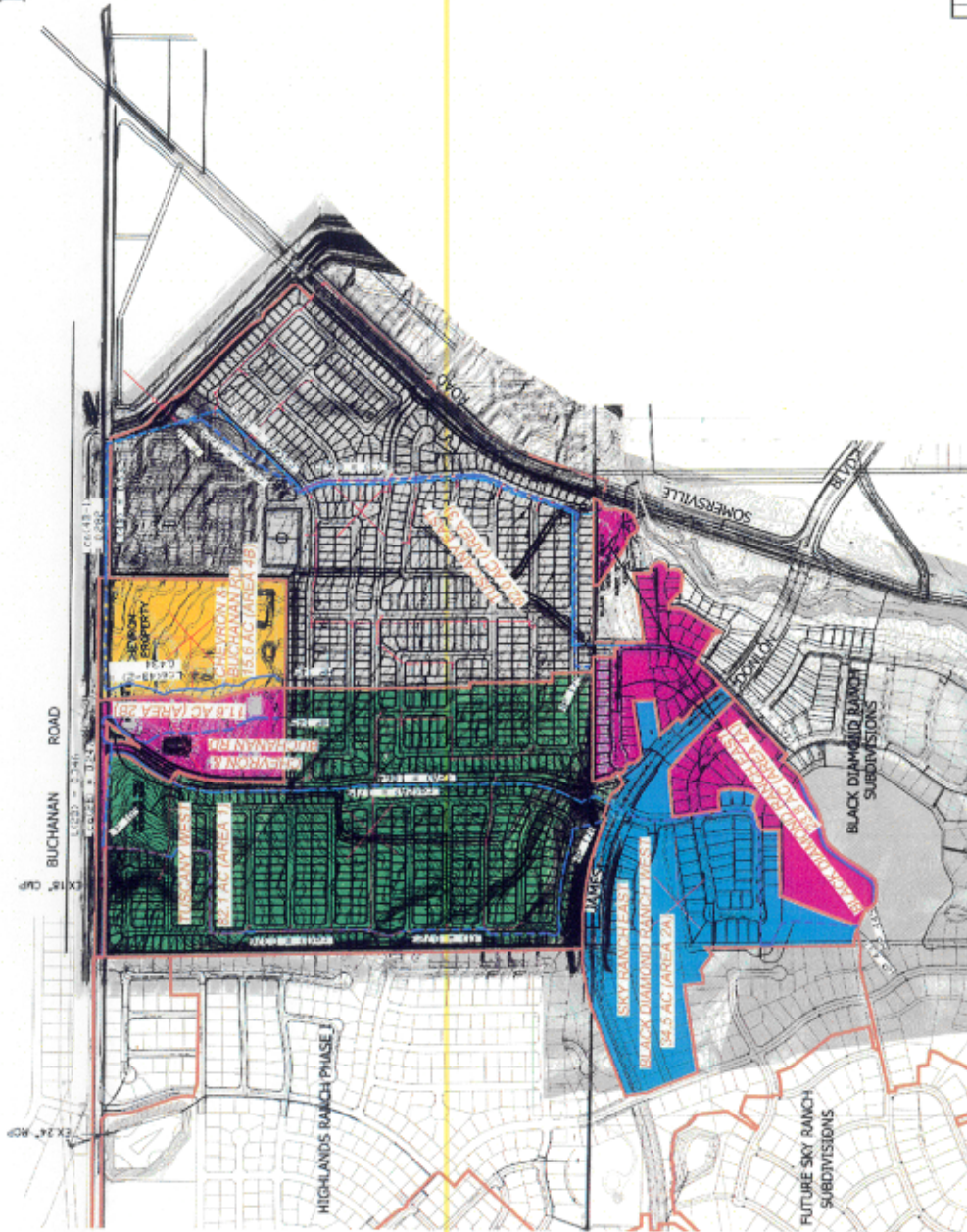
N VALUE: FROM FIG 1, 16 AC + INDUSTRIAL USE N = 0.032

# HYDROLOGY MAP POST-DEVELOPMENT CONDITIONS

CITY OF PITTSBURG  
CONTRA COSTA COUNTY, STATE OF CALIFORNIA



- LEGEND**
- TUSCANY WEST DRAINAGE AREA  
62.1 AC
  - TRIBUTARY BOUNDARY
  - WATERCOURSE
  - STANDARD STORM DRAIN
  - CLEAN WATER STORM DRAIN
  - CENTROID LOCATION



TUSCANY MEADOWS SUBDIVISION  
**HYDROLOGY MAP**  
POST-DEVELOPMENT CONDITIONS  
CITY OF PITTSBURG, CONTRA COSTA COUNTY, CALIFORNIA

**Jackson B. Assoc., Inc.**  
CIVIL ENGINEERS  
48046 License No. 48046  
2125 YERGEN AVENUE, SUITE 100, PITTSBURG, CA 94565  
PHONE (925) 321-1122  
FAX (925) 321-1123  
WWW.JBA-ASSOC.COM

DATE: 11-2-12	PROJECT NO: 201200	SHEET 3 OF 3
DATE: 11-2-12	PROJECT NO: 201200	SHEET 3 OF 3
DATE: 11-2-12	PROJECT NO: 201200	SHEET 3 OF 3
DATE: 11-2-12	PROJECT NO: 201200	SHEET 3 OF 3
DATE: 11-2-12	PROJECT NO: 201200	SHEET 3 OF 3

AT

		AREA 1	AREA 2A
		FLOW	FLOW
		RUN:010YR 24HR AREAS 1 - 4B	RUN:010YR 24HR AREAS 1 - 4B
Units		CFS	CFS
Type		INST-VAL	INST-VAL
1	01Jan2006 0000	0.640	0.270
2	01Jan2006 0015	0.640	0.270
3	01Jan2006 0030	0.640	0.270
4	01Jan2006 0045	0.640	0.270
5	01Jan2006 0100	0.640	0.270
6	01Jan2006 0115	0.640	0.270
7	01Jan2006 0130	0.640	0.270
8	01Jan2006 0145	0.640	0.270
9	01Jan2006 0200	0.640	0.270
10	01Jan2006 0215	0.640	0.270
11	01Jan2006 0230	0.640	0.270
12	01Jan2006 0245	0.640	0.270
13	01Jan2006 0300	0.640	0.270
14	01Jan2006 0315	0.640	0.270
15	01Jan2006 0330	0.640	0.270
16	01Jan2006 0345	0.640	0.270
17	01Jan2006 0400	0.640	0.270
18	01Jan2006 0415	0.640	0.270
19	01Jan2006 0430	0.640	0.270
20	01Jan2006 0445	0.640	0.270
21	01Jan2006 0500	0.640	0.270
22	01Jan2006 0515	0.640	0.270
23	01Jan2006 0530	2.190	0.270
24	01Jan2006 0545	7.829	0.270
25	01Jan2006 0600	9.451	0.270
26	01Jan2006 0615	10.186	0.270
27	01Jan2006 0630	10.637	0.270
28	01Jan2006 0645	14.263	0.270
29	01Jan2006 0700	15.237	1.942
30	01Jan2006 0715	38.831	17.790
31	01Jan2006 0730	45.515	20.336
32	01Jan2006 0745	29.271	10.404
33	01Jan2006 0800	25.845	8.737
34	01Jan2006 0815	19.423	5.819
35	01Jan2006 0830	16.635	5.402
36	01Jan2006 0845	12.423	3.589
37	01Jan2006 0900	11.138	3.311
38	01Jan2006 0915	9.693	2.738
39	01Jan2006 0930	9.170	2.655
40	01Jan2006 0945	8.026	2.119
41	01Jan2006 1000	7.683	2.035
42	01Jan2006 1015	7.229	1.846
43	01Jan2006 1030	7.064	1.818
44	01Jan2006 1045	6.368	1.466
45	01Jan2006 1100	6.166	1.411
46	01Jan2006 1115	5.448	1.053
47	01Jan2006 1130	5.222	0.998
48	01Jan2006 1145	5.131	0.987



AREA 1

AREA 2A

FLOW

FLOW

RUN:010YR 24HR AREAS 1 - 4B

RUN:010YR 24HR AREAS 1 - 4B

CFS

CFS

INST-VAL

INST-VAL

01Jan2006 1200	5.080	0.987
01Jan2006 1215	4.747	0.814
01Jan2006 1230	4.658	0.786
01Jan2006 1245	4.620	0.781
01Jan2006 1300	4.595	0.781
01Jan2006 1315	4.270	0.607
01Jan2006 1330	4.182	0.579
01Jan2006 1345	4.144	0.574
01Jan2006 1400	4.119	0.574
01Jan2006 1415	3.794	0.401
01Jan2006 1430	3.705	0.373
01Jan2006 1445	3.668	0.368
01Jan2006 1500	3.643	0.368
01Jan2006 1515	3.317	0.286
01Jan2006 1530	3.229	0.272
01Jan2006 1545	3.192	0.270
01Jan2006 1600	3.167	0.270
01Jan2006 1615	3.159	0.270
01Jan2006 1630	3.158	0.270
01Jan2006 1645	2.841	0.270
01Jan2006 1700	2.753	0.270
01Jan2006 1715	2.715	0.270
01Jan2006 1730	2.690	0.270
01Jan2006 1745	2.365	0.270
01Jan2006 1800	2.277	0.270
01Jan2006 1815	2.239	0.270
01Jan2006 1830	2.214	0.270
01Jan2006 1845	1.889	0.270
01Jan2006 1900	1.800	0.270
01Jan2006 1915	1.763	0.270
01Jan2006 1930	1.738	0.270
01Jan2006 1945	1.730	0.270
01Jan2006 2000	1.729	0.270
01Jan2006 2015	1.729	0.270
01Jan2006 2030	1.729	0.270
01Jan2006 2045	1.729	0.270
01Jan2006 2100	1.729	0.270
01Jan2006 2115	1.729	0.270
01Jan2006 2130	1.729	0.270
01Jan2006 2145	1.412	0.270
01Jan2006 2200	1.324	0.270
01Jan2006 2215	1.287	0.270
01Jan2006 2230	1.262	0.270
01Jan2006 2245	1.254	0.270
01Jan2006 2300	1.253	0.270
01Jan2006 2315	1.253	0.270
01Jan2006 2330	1.253	0.270
01Jan2006 2345	0.844	0.270
02Jan2006 0000	0.731	0.270

AREA 2B		AREA 3		AREA 4A	
FLOW		FLOW		FLOW	
RUN:010YR 24HR AREAS 1 - 4B		RUN:010YR 24HR AREAS 1 - 4B		RUN:010YR 24HR AREAS 1 - 4B	
CFS		CFS		CFS	
INST-VAL		INST-VAL		INST-VAL	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.0900		0.720		0.185	
0.6126		0.720		0.185	
1.0379		0.720		0.185	
1.2598		0.720		0.185	
1.3366		1.142		0.185	
1.6046		9.189		0.185	
1.6645		10.949		0.185	
1.6905		11.780		0.185	
1.7009		12.027		0.185	
2.2366		16.398		0.185	
2.3574		17.339		0.185	
5.9648		46.756		9.937	
6.7892		53.140		13.526	
4.2471		32.312		6.735	
3.7406		28.073		5.676	
2.7122		19.694		3.736	
2.4224		17.673		3.463	
1.8511		13.075		2.220	
1.7100		12.035		2.038	
1.5108		10.432		1.654	
1.4570		10.052		1.599	
1.2944		8.737		1.230	
1.2552		8.443		1.175	
1.1907		7.923		1.048	
1.1735		7.801		1.029	
1.0707		6.965		0.785	
1.0466		6.782		0.749	
0.9390		5.906		0.502	
0.9128		5.710		0.466	
0.9023		5.628		0.461	

AREA 2B	AREA 3	AREA 4A
FLOW	FLOW	FLOW
RUN:010YR 24HR AREAS 1 - 4B	RUN:010YR 24HR AREAS 1 - 4B	RUN:010YR 24HR AREAS 1 - 4B
CFS	CFS	CFS
INST-VAL	INST-VAL	INST-VAL
0.8981	5.604	0.461
0.8492	5.206	0.340
0.8382	5.121	0.322
0.8331	5.080	0.320
0.8310	5.068	0.320
0.7822	4.671	0.204
0.7713	4.585	0.187
0.7661	4.544	0.185
0.7640	4.532	0.185
0.7153	4.135	0.185
0.7043	4.049	0.185
0.6992	4.008	0.185
0.6971	3.996	0.185
0.6483	3.599	0.185
0.6373	3.513	0.185
0.6322	3.473	0.185
0.6301	3.460	0.185
0.6300	3.460	0.185
0.6300	3.460	0.185
0.5813	3.063	0.185
0.5703	2.978	0.185
0.5652	2.937	0.185
0.5631	2.924	0.185
0.5144	2.527	0.185
0.5034	2.442	0.185
0.4982	2.401	0.185
0.4961	2.389	0.185
0.4474	1.992	0.185
0.4364	1.906	0.185
0.4313	1.865	0.185
0.4292	1.853	0.185
0.4290	1.853	0.185
0.4290	1.853	0.185
0.4290	1.853	0.185
0.4290	1.853	0.185
0.4290	1.853	0.185
0.4290	1.853	0.185
0.4290	1.853	0.185
0.4290	1.853	0.185
0.3804	1.456	0.185
0.3694	1.370	0.185
0.3643	1.329	0.185
0.3622	1.317	0.185
0.3621	1.317	0.185
0.3621	1.317	0.185
0.3621	1.317	0.185
0.3621	1.317	0.185
0.1645	0.875	0.185
0.1199	0.779	0.185

AREA 4B	AREA 1	AREA 2A
FLOW	FLOW	FLOW
RUN:010YR 24HR AREAS 1 - 4B	RUN:010YR 3HR AREAS 1-4B	RUN:010YR 3HR AREAS 1-4B
CFS	CFS	CFS
INST-VAL	INST-VAL	INST-VAL
0.1200	0.640	0.270
0.1200	0.640	0.270
0.1200	0.640	0.270
0.1200	0.640	0.270
0.1200	0.640	0.270
0.1200	0.640	0.270
0.1200	8.045	0.270
0.1200	13.610	3.769
0.1200	19.273	7.825
0.1200	30.243	13.335
0.1200	34.893	14.909
0.1200	79.230	38.277
0.1200	37.945	12.662
0.1200	14.878	2.363
0.1200	8.224	0.462
0.1200	3.435	0.270
0.1200	1.084	0.270
0.1200	0.661	0.270
0.1200	0.640	0.270
0.1200	0.640	0.270
1.0574	0.640	0.270
1.5502	0.640	0.270
1.7046	0.640	0.270
2.0904	0.640	0.270
2.1664	0.640	0.270
2.1996	0.640	0.270
2.2068	0.640	0.270
2.9469	0.640	0.270
3.1003	0.640	0.270
8.0853	0.640	0.270
9.1188	0.640	0.270
5.5665	0.640	0.270
4.8341	0.640	0.270
3.4263	0.640	0.270
3.1315	0.640	0.270
2.3590	0.640	0.270
2.1982	0.640	0.270
1.9299	0.640	0.270
1.8738	0.640	0.270
1.6520	0.640	0.270
1.6059	0.640	0.270
1.5187	0.640	0.270
1.5005	0.640	0.270
1.3592	0.640	0.270
1.3299	0.640	0.270
1.1821	0.640	0.270
1.1513	0.640	0.270
1.1381	0.640	0.270

AREA 4B	AREA 1	AREA 2A
FLOW	FLOW	FLOW
RUN:010YR 24HR AREAS 1 - 4B	RUN:010YR 3HR AREAS 1-4B	RUN:010YR 3HR AREAS 1-4B
CFS	CFS	CFS
INST-VAL	INST-VAL	INST-VAL
1.1352	0.640	0.270
1.0679	0.640	0.270
1.0540	0.640	0.270
1.0473	0.640	0.270
1.0459	0.640	0.270
0.9786	0.640	0.270
0.9647	0.640	0.270
0.9580	0.640	0.270
0.9566	0.640	0.270
0.8893	0.640	0.270
0.8754	0.640	0.270
0.8687	0.640	0.270
0.8673	0.640	0.270
0.8000	0.640	0.270
0.7861	0.640	0.270
0.7794	0.640	0.270
0.7780	0.640	0.270
0.7780	0.640	0.270
0.7780	0.640	0.270
0.7107	0.640	0.270
0.6968	0.640	0.270
0.6901	0.640	0.270
0.6887	0.640	0.270
0.6214	0.640	0.270
0.6075	0.640	0.270
0.6008	0.640	0.270
0.5994	0.640	0.270
0.5321	0.640	0.270
0.5182	0.640	0.270
0.5115	0.640	0.270
0.5101	0.640	0.270
0.5101	0.640	0.270
0.5101	0.640	0.270
0.5101	0.640	0.270
0.5101	0.640	0.270
0.5101	0.640	0.270
0.5101	0.640	0.270
0.5101	0.640	0.270
0.5101	0.640	0.270
0.5101	0.640	0.270
0.4428	0.640	0.270
0.4289	0.640	0.270
0.4222	0.640	0.270
0.4208	0.640	0.270
0.4208	0.640	0.270
0.4208	0.640	0.270
0.4208	0.640	0.270
0.4208	0.640	0.270
0.4208	0.640	0.270
0.1942	0.640	0.270
0.1472	0.640	0.270

AREA 2B		AREA 3		AREA 4A	
FLOW		FLOW		FLOW	
RUN:010YR 3HR AREAS 1-4B		RUN:010YR 3HR AREAS 1-4B		RUN:010YR 3HR AREAS 1-4B	
CFS		CFS		CFS	
INST-VAL		INST-VAL		INST-VAL	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
2.034		9.559		0.185	
2.337		16.207		1.342	
3.097		22.912		5.063	
4.663		35.842		9.002	
5.228		40.480		10.054	
11.955		95.266		26.336	
5.236		39.776		8.269	
1.871		13.980		1.233	
0.782		5.073		0.256	
0.212		1.300		0.185	
0.096		0.732		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	
0.090		0.720		0.185	



AREA 4B	AREA 1	AREA 2A
FLOW	FLOW	FLOW
RUN:010YR 3HR AREAS 1-4B	RUN:100YR 24HR AREAS 1 - 4B	RUN:100YR 24HR AREAS 1 - 4B
CFS	CFS	CFS
INST-VAL	INST-VAL	INST-VAL
0.120	0.640	0.270
0.120	0.640	0.270
0.120	0.640	0.270
0.120	0.640	0.270
0.120	0.640	0.270
0.120	0.640	0.270
2.529	0.640	0.270
3.074	0.640	0.270
4.130	0.640	0.270
6.242	0.640	0.270
6.984	0.640	0.270
16.256	0.640	0.270
6.750	0.640	0.270
2.280	0.640	0.270
0.722	2.894	0.270
0.184	7.187	0.270
0.120	8.466	0.270
0.120	10.024	0.270
0.120	10.633	0.270
0.120	12.263	1.849
0.120	12.737	4.043
0.120	13.876	4.920
0.120	14.252	5.062
0.120	16.770	6.372
0.120	17.502	6.579
0.120	17.805	6.619
0.120	17.994	6.619
0.120	23.269	9.466
0.120	24.714	9.922
0.120	59.940	28.907
0.120	69.919	31.934
0.120	45.667	16.976
0.120	40.552	14.488
0.120	30.964	10.132
0.120	26.801	9.510
0.120	20.512	6.804
0.120	18.594	6.389
0.120	16.436	5.534
0.120	15.656	5.409
0.120	13.948	4.609
0.120	13.435	4.485
0.120	12.758	4.202
0.120	12.512	4.161
0.120	11.473	3.635
0.120	11.171	3.552
0.120	10.099	3.019
0.120	9.761	2.936
0.120	9.626	2.920



AREA 4B	AREA 1	AREA 2A
FLOW	FLOW	FLOW
RUN:010YR 3HR AREAS 1-4B	RUN:100YR 24HR AREAS 1 - 4B	RUN:100YR 24HR AREAS 1 - 4B
CFS	CFS	CFS
INST-VAL	INST-VAL	INST-VAL
0.120	9.549	2.920
0.120	9.052	2.661
0.120	8.919	2.620
0.120	8.863	2.612
0.120	8.826	2.612
0.120	8.340	2.353
0.120	8.208	2.311
0.120	8.152	2.304
0.120	8.115	2.304
0.120	7.629	2.045
0.120	7.497	2.003
0.120	7.441	1.995
0.120	7.404	1.995
0.120	6.918	1.736
0.120	6.786	1.695
0.120	6.730	1.687
0.120	6.693	1.687
0.120	6.681	1.687
0.120	6.680	1.687
0.120	6.206	1.428
0.120	6.075	1.387
0.120	6.019	1.379
0.120	5.982	1.379
0.120	5.496	1.120
0.120	5.364	1.079
0.120	5.308	1.071
0.120	5.271	1.071
0.120	4.785	0.812
0.120	4.653	0.770
0.120	4.597	0.763
0.120	4.559	0.763
0.120	4.548	0.763
0.120	4.547	0.763
0.120	4.547	0.763
0.120	4.547	0.763
0.120	4.547	0.763
0.120	4.547	0.763
0.120	4.547	0.763
0.120	4.073	0.504
0.120	3.942	0.462
0.120	3.886	0.454
0.120	3.848	0.454
0.120	3.837	0.454
0.120	3.836	0.454
0.120	3.836	0.454
0.120	3.836	0.454
0.120	1.705	0.300
0.120	1.116	0.275

AREA 2B	AREA 3	AREA 4A
FLOW	FLOW	FLOW
RUN:100YR 24HR AREAS 1 - 4B	RUN:100YR 24HR AREAS 1 - 4B	RUN:100YR 24HR AREAS 1 - 4B
CFS	CFS	CFS
INST-VAL	INST-VAL	INST-VAL
0.090	0.720	0.185
0.090	0.720	0.185
0.090	0.720	0.185
0.090	0.720	0.185
0.090	0.720	0.185
0.090	0.720	0.185
0.090	0.720	0.185
0.090	0.720	0.185
0.090	0.720	0.185
0.090	0.720	0.185
0.090	0.720	0.185
0.385	0.720	0.185
1.126	0.720	0.185
1.310	2.572	0.185
1.466	8.453	0.185
1.512	9.826	0.185
1.667	11.632	0.185
1.703	12.058	0.185
1.936	13.961	0.185
1.992	14.382	0.435
2.160	15.750	2.861
2.203	16.061	3.224
2.582	19.146	4.169
2.670	19.822	4.305
2.709	20.127	4.320
2.724	20.219	4.320
3.524	26.738	6.310
3.704	28.144	6.610
9.090	72.062	19.851
10.321	81.594	21.838
6.526	50.498	11.203
5.769	44.169	9.570
4.234	31.659	6.674
3.801	28.641	6.266
2.948	21.778	4.411
2.738	20.224	4.139
2.440	17.831	3.566
2.360	17.265	3.484
2.117	15.300	2.932
2.059	14.862	2.851
1.962	14.085	2.661
1.937	13.903	2.634
1.783	12.655	2.269
1.747	12.381	2.214
1.587	11.074	1.846
1.548	10.782	1.792
1.532	10.659	1.786

AREA 2B	AREA 3	AREA 4A
FLOW	FLOW	FLOW
RUN:100YR 24HR AREAS 1 - 4B	RUN:100YR 24HR AREAS 1 - 4B	RUN:100YR 24HR AREAS 1 - 4B
CFS	CFS	CFS
INST-VAL	INST-VAL	INST-VAL
1.526	10.623	1.786
1.453	10.029	1.605
1.436	9.902	1.578
1.429	9.841	1.575
1.425	9.822	1.575
1.353	9.229	1.394
1.336	9.102	1.367
1.329	9.041	1.363
1.325	9.022	1.363
1.253	8.430	1.183
1.236	8.302	1.155
1.229	8.241	1.152
1.225	8.222	1.152
1.153	7.630	0.971
1.136	7.502	0.944
1.129	7.441	0.941
1.125	7.423	0.941
1.125	7.422	0.941
1.125	7.422	0.941
1.053	6.830	0.760
1.036	6.702	0.733
1.029	6.641	0.730
1.025	6.623	0.730
0.953	6.030	0.549
0.936	5.902	0.522
0.929	5.841	0.519
0.925	5.823	0.519
0.853	5.230	0.338
0.836	5.102	0.311
0.829	5.041	0.308
0.825	5.023	0.308
0.825	5.022	0.308
0.825	5.022	0.308
0.825	5.022	0.308
0.825	5.022	0.308
0.825	5.022	0.308
0.825	5.022	0.308
0.825	5.022	0.308
0.825	5.022	0.308
0.753	4.430	0.203
0.736	4.302	0.187
0.729	4.241	0.185
0.725	4.223	0.185
0.725	4.222	0.185
0.725	4.222	0.185
0.725	4.222	0.185
0.725	4.222	0.185
0.264	1.628	0.185
0.160	1.069	0.185

AREA 4B	AREA 1	AREA 2A
FLOW	FLOW	FLOW
RUN:100YR 24HR AREAS 1 - 4B	RUN:100YR 3HR AREAS 1 - 4B	RUN:100YR 3HR AREAS 1 - 4B
CFS	CFS	CFS
INST-VAL	INST-VAL	INST-VAL
0.120	0.64	0.270
0.120	0.64	0.270
0.120	0.64	0.270
0.120	0.64	0.270
0.120	0.64	0.270
0.120	10.28	1.084
0.120	38.06	18.272
0.120	28.70	11.553
0.120	33.16	13.578
0.120	47.87	20.831
0.120	53.23	23.061
0.120	117.27	57.106
0.120	57.10	19.789
1.263	22.09	3.553
1.652	12.00	0.586
1.896	4.86	0.270
1.956	1.32	0.270
2.170	0.67	0.270
2.214	0.64	0.270
2.535	0.64	0.270
2.602	0.64	0.270
2.833	0.64	0.270
2.881	0.64	0.270
3.403	0.64	0.270
3.511	0.64	0.270
3.561	0.64	0.270
3.572	0.64	0.270
4.677	0.64	0.270
4.906	0.64	0.270
12.348	0.64	0.270
13.891	0.64	0.270
8.588	0.64	0.270
7.494	0.64	0.270
5.392	0.64	0.270
4.952	0.64	0.270
3.799	0.64	0.270
3.559	0.64	0.270
3.158	0.64	0.270
3.074	0.64	0.270
2.743	0.64	0.270
2.674	0.64	0.270
2.544	0.64	0.270
2.517	0.64	0.270
2.306	0.64	0.270
2.262	0.64	0.270
2.042	0.64	0.270
1.996	0.64	0.270
1.976	0.64	0.270

AREA 4B		AREA 1		AREA 2A	
FLOW		FLOW		FLOW	
RUN:100YR 24HR AREAS 1 - 4B		RUN:100YR 3HR AREAS 1 - 4B		RUN:100YR 3HR AREAS 1 - 4B	
CFS		CFS		CFS	
INST-VAL		INST-VAL		INST-VAL	
1.972		0.64		0.270	
1.871		0.64		0.270	
1.850		0.64		0.270	
1.840		0.64		0.270	
1.838		0.64		0.270	
1.738		0.64		0.270	
1.717		0.64		0.270	
1.707		0.64		0.270	
1.705		0.64		0.270	
1.605		0.64		0.270	
1.584		0.64		0.270	
1.574		0.64		0.270	
1.572		0.64		0.270	
1.471		0.64		0.270	
1.450		0.64		0.270	
1.440		0.64		0.270	
1.438		0.64		0.270	
1.438		0.64		0.270	
1.438		0.64		0.270	
1.338		0.64		0.270	
1.317		0.64		0.270	
1.307		0.64		0.270	
1.305		0.64		0.270	
1.205		0.64		0.270	
1.184		0.64		0.270	
1.174		0.64		0.270	
1.172		0.64		0.270	
1.071		0.64		0.270	
1.050		0.64		0.270	
1.041		0.64		0.270	
1.038		0.64		0.270	
1.038		0.64		0.270	
1.038		0.64		0.270	
1.038		0.64		0.270	
1.038		0.64		0.270	
1.038		0.64		0.270	
1.038		0.64		0.270	
1.038		0.64		0.270	
0.938		0.64		0.270	
0.917		0.64		0.270	
0.907		0.64		0.270	
0.905		0.64		0.270	
0.905		0.64		0.270	
0.905		0.64		0.270	
0.905		0.64		0.270	
0.905		0.64		0.270	
0.314		0.64		0.270	
0.191		0.64		0.270	

AREA 2B	AREA 3	AREA 4A
FLOW	FLOW	FLOW
RUN:100YR 3HR AREAS 1 - 4B	RUN:100YR 3HR AREAS 1 - 4B	RUN:100YR 3HR AREAS 1 - 4B
CFS	CFS	CFS
INST-VAL	INST-VAL	INST-VAL
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
2.241	12.42	0.185
6.035	46.61	12.140
4.337	32.85	7.667
5.029	38.72	9.038
7.076	55.20	14.183
7.793	61.08	15.665
17.587	140.87	39.385
7.799	60.03	13.064
2.743	20.66	1.870
1.121	7.30	0.304
0.275	1.62	0.185
0.099	0.74	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185
0.090	0.72	0.185









**APPENDIX B**

**Detention Basin Parameters & Details – East Side**

<u>DESCRIPTION</u>	<u>LOCATION</u>
1. Basin Parameters & Equations .....	B1 thru B2

**EAST SIDE**

**DETENTION BASIN PARAMETERS**

( TYPE C INLET GRATE TOP – GRATE ELEV = 125.0)

36” RCP FL = 112.4 – OUTFLOW PIPE

8” SUBDRAIN ORIFICE PIPE - CL = 120.41 (Qs)

PAD ELEV = 122.5

BOTTOM OF ROCK ELEV = 118.25

ELEV (ft)	AREA (sf)	ΣVOL (cf)	ΣVOL (ac-ft)	Qg		Qs		Qt (cfs)
				Hg (ft)	Qg (cfs)	Hs (ft)	Qs (cfs)	
118.25	224,171*	0	0	0	0	0	0	<b>0</b>
120.41	224,171*	193,684*	4.446	0	0	0	0	<b>0</b>
122.5	224,171*	246,588*	5.661	0	0	2.09	2.44	<b>2.44</b>
125	242,184	829,532	19.043	0	0	4.59	3.61	<b>3.61</b>
125.1	242,914	853,787	19.600	.1	6.17	4.69	3.65	<b>9.82</b>
125.5	246,314	951,633	24.687	.5	13.79	5.09	3.80	<b>17.59</b>

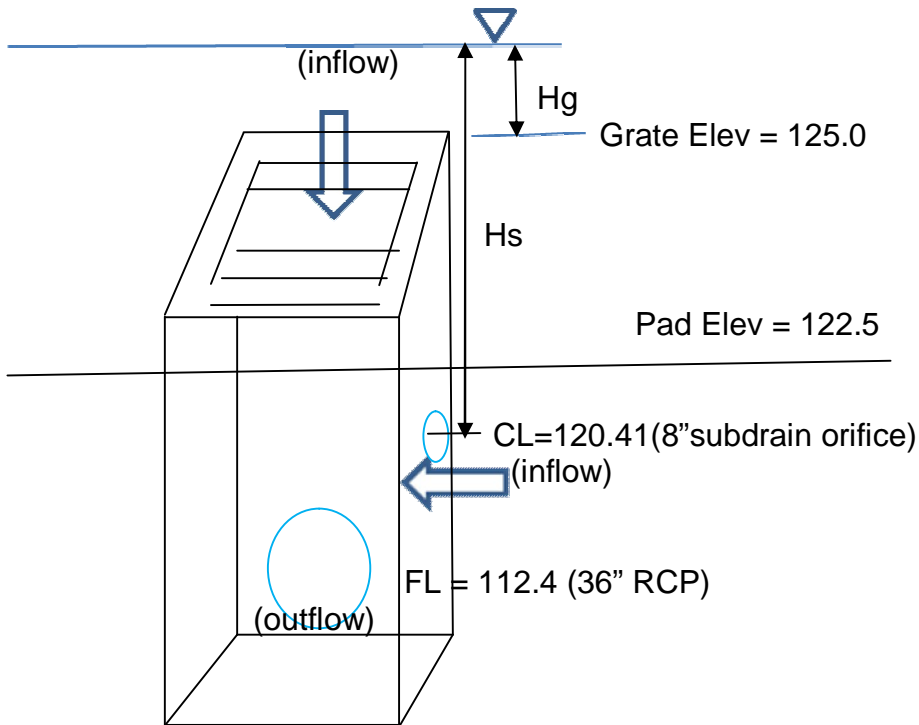
\* For ease of calculation, the underground bio retention storage volume V2 will be considered a 2.75’ deep layer of rock between elevations 118.25 and 121 (the rock layer along the side slopes to elevation 123.5 will be disregarded – conservative), with an area of 224,171sf (same area as bottom of basin @ elev 122.5). The underground volume is considered to be the pore volume of the rock, which is 40% of the rock volume as recommended in the C.3, 6<sup>th</sup> edition manual on page 71.

$$Qg(\text{grate inflow}) = (380.3H)^{1/2} \quad (\text{see next page})$$

$$Qs(\text{sub drain inflow}) = (2.84H)^{1/2} \quad (\text{see next page})$$

$$Qt(\text{total inflow}) = Qg + Qs$$

## Outflow Structure East



### Grate Inflow

$$Q_g = (C)(A)(2gH)^{1/2} \text{ Orifice Flow Equation - Kings 4-3}$$

$C = 0.603$  (Kings 4-29, Table 4-3)

$H =$  Head from water surface to grate top

$A = 4.03$  sf (for type C inlet grate net opening)

$$Q_g = (0.603)(4.03)(2gH)^{1/2} = (380.3H)^{1/2}$$

### Subdrain Inflow

$$Q_s = (C)(A)(2gH)^{1/2} \text{ Orifice Flow Equation - Kings 4-3}$$

$C = 0.6$  (C.3 manual, pg 55)

$H =$  Head from water surface to centerline 8" orifice @ 120.41

$A = 0.35$ sf (for 8" sub drain orifice)

$$Q_s = (.6)(.35)(2gH)^{1/2} = (2.84H)^{1/2}$$

## APPENDIX C

### **Detention Basin Parameters & Details – West Side**

<u>DESCRIPTION</u>	<u>LOCATION</u>
1. Basin Parameters & Equations .....	C1 thru C2

## WEST SIDE

### DETENTION BASIN PARAMETERS

( TYPE C INLET GRATE TOP – GRATE ELEV = 119.0)

30” RCP FL = 105.42/ TOP = 107.92

10” ORIFICE CL = 107.5/ TOP = 107.92/ FL = 107.13(Qo)

7.7” ORIFICE CENTERED OVER 8” SUBDRAIN CL = 115.91 (Qs)

PAD ELEV = 118

BOTTOM OF ROCK ELEV = 113.75

ELEV (ft)	AREA (sf)	ΣVOL (cf)	ΣVOL (ac-ft)	Qg		Qs		Qo		Qc (cfs)
				Hg (ft)	Qg (cfs)	Hs (ft)	Qs (cfs)	Ho (ft)	Qo (cfs)	
113.75	225,086*	0	0	0	0	0	0	0	0	<b>0</b>
115.91	225,086*	194,474*	4.465	0	0	0	0	0	0	<b>0</b>
118	225,086*	247,594*	5.684	0	0	2.09	2.23	10.5	8.51	<b>2.23</b>
119.0	231,647	475,961	10.927	0	0	3.09	2.71	11.5	8.90	<b>2.71</b>
119.1	232,307	499,159	11.459	0.1	6.17	3.19	2.75	11.6	8.94	<b>8.92</b>
121.5	248,303	1,075,891	24.699	2.5	30.83	5.59	3.64	14	9.82	<b>9.82</b>
122.5	255,067	1,327,576	30.477	3.5	36.48	6.59	3.95	15	10.17	<b>10.17</b>

\* The underground bio retention storage volume V2 is a 2.75’ deep layer of rock between elevations 113.75 and 116.5, with an area of 225,086 sf (same area as bottom of basin @ elev 118.0). The underground volume is considered to be the pore volume of the rock, which is 40% of the rock volume as recommended in the C.3, 6<sup>th</sup> edition manual on page 71.

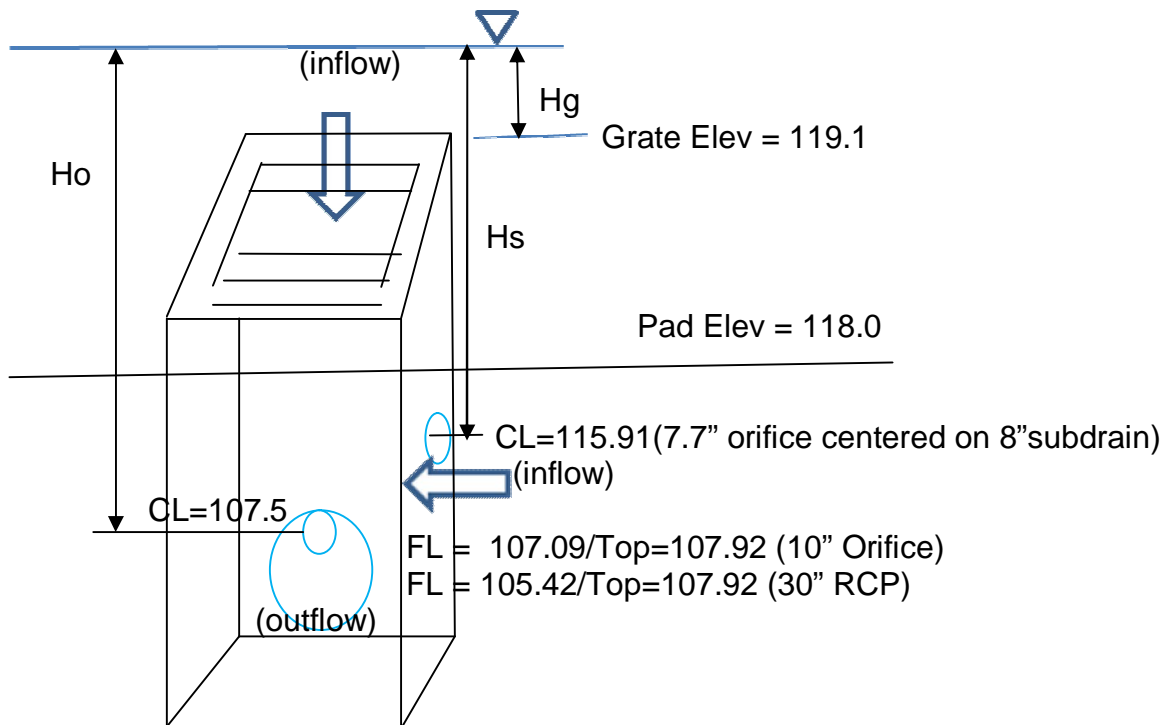
$$Q_g(\text{grate inflow}) = (380.3H)^{1/2} \quad (\text{see next page})$$

$$Q_s(\text{sub drain inflow}) = (2.37H)^{1/2} \quad (\text{see next page})$$

$$Q_o(\text{orifice outflow}) = (6.89H)^{1/2} \quad (\text{see next page})$$

$$Q_c(\text{critical outflow}) = \text{lowest of either } Q_o \text{ or } (Q_g+Q_s)$$

## Outflow Structure West



### Grate Inflow

$$Q_g = (C)(A)(2gH)^{1/2} \text{ Orifice Flow Equation - Kings 4-3}$$

$C = 0.603$  (Kings 4-29, Table 4-3)  
 $H =$  Head from water surface to grate top  
 $A = 4.03$  sf (for type C inlet grate net opening)  
 $Q_g = (0.603)(4.03)(2gH)^{1/2} = (380.3H)^{1/2}$

### Subdrain Inflow

$$Q_s = (C)(A)(2gH)^{1/2} \text{ Orifice Flow Equation - Kings 4-3}$$

$C = 0.6$  (C.3 manual, pg 55)  
 $H =$  Head from water surface to centerline 7.7" orifice @ 115.91  
 $A = 0.32$ sf (for 7.7" orifice on 8" subdrain)  
 $Q_s = (.6)(.32)(2gH)^{1/2} = (2.37H)^{1/2}$

### Orifice Outflow

$$Q_o = (C)(A)(2gH)^{1/2} \text{ Orifice Flow Equation - Kings 4-3}$$

$C = .60$  (.60 @ H from .8 to 100 – Kings 4-29, Table 4-3)  
 $H =$  Head from water surface to centerline 10" orifice @ 107.5  
 $A = 0.545$ sf (for 10" orifice on 30" RCP)  
 $Q_o = (.6)(.545)(2gH)^{1/2} = (6.89H)^{1/2}$

## **APPENDIX D**

### **HEC-1 Runs – East Side**



```

*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *          * U.S. ARMY CORPS OF ENGINEERS *
*   JUN 1998 *                                * HYDROLOGIC ENGINEERING CENTER *
*   VERSION 4.1 *                              *   609 SECOND STREET *
* * * * *                                     * DAVIS, CALIFORNIA 95616 *
* RUN DATE 11OCT12 TIME 09:33:58 *          *   (916) 756-1104 *
*****

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X X XXXXXXXX XXXXX X
X X X X X XX
X X X X X
XXXXXXX XXXX X XXXXX X
X X X X X
X X X X X
X X XXXXXXXX XXXXX XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
  1 ID TUSCANY MEADOWS - DET BASINS EAST
  2 ID (X-REF 201002)
  3 ID *****
  4 ID EAST SIDE BASIN
  5 ID *****
  6 ID 24-HR 100-YR STORM
  7 ID *****
  8 ID STEP 1
  9 ID FLOOD HYDROGRAPH AREA 4A(BLACK DIAMOND) (23.8 AC TO DB EAST)
 10 ID 0.037 SQ MI BASIN
 11 ID *****
 12 ID STEP 2
 13 ID ROUTE RUNOFF FROM AREA 4A USING TATUM METHOD - 1 STEP LAG TIME
 14 ID *****
 15 ID STEP 3
 16 ID FLOOD HYDROGRAPH AREA 3(TUSCANY EAST) (92.0 AC TO DB EAST)
 17 ID 0.144 SQ MI BASIN
 18 ID *****
 19 ID STEP 4
 20 ID COMBINE HYDROGRAPHS FROM STEPS 2,3
 21 ID *****
 22 ID STEP 5
 23 ID ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 4 THRU 2'X 3'
 24 ID (TYPE C INLET GRATE) AND 8" SUBDRAIN ORIFICE ABOVE OUTFALL PIPE
 25 ID *****
 26 ID STEP 6
 27 ID FLOOD HYDROGRAPH AREA 4B(CHEVRON) (15.6 AC TO DB OUTLET STR EAST)
 28 ID 0.024 SQ MI BASIN
 29 ID *****
 30 ID STEP 7
 31 ID COMBINE HYDROGRAPHS FROM STEPS 5,6
 32 ID *****
 33 ID 3-HR 100-YR STORM
 34 ID *****
 35 ID STEP 8
 36 ID FLOOD HYDROGRAPH AREA 4A(BLACK DIAMOND) (23.8 AC TO DB EAST)
 37 ID 0.037 SQ MI BASIN
 38 ID *****
 39 ID STEP 9
 40 ID ROUTE RUNOFF FROM AREA 4A USING TATUM METHOD - 1 STEP LAG TIME
 41 ID *****
 42 ID STEP 10
 43 ID FLOOD HYDROGRAPH AREA 3(TUSCANY WEST) (92.0 AC TO DB EAST)
 44 ID 0.144 SQ MI BASIN
 45 ID *****
 46 ID STEP 11
 47 ID COMBINE HYDROGRAPHS FROM STEPS 9,10
 48 ID *****
 49 ID STEP 12
 50 ID ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 11 THRU 2'X 3'

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51 ID (TYPE C INLET GRATE) AND 8" SUBDRAIN ORIFICE ABOVE OUTFALL PIPE  
 52 ID \*\*\*\*\*  
 53 ID STEP 13  
 54 ID FLOOD HYDROGRAPH AREA 4B(CHEVRON) (15.6 AC TO DB OUTFALL STR EAST)  
 55 ID 0.024 SQ MI BASIN  
 1 HEC-1 INPUT PAGE 2

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

56 ID \*\*\*\*\*  
 57 ID STEP 14  
 58 ID COMBINE HYDROGRAPHS FROM STEPS 12,13  
 59 ID \*\*\*\*\*  
 60 ID 24-HR 10-YR STORM  
 61 ID \*\*\*\*\*  
 62 ID STEP 15  
 63 ID FLOOD HYDROGRAPH AREA 4A(BLACK DIAMOND) (23.8 AC TO DB EAST)  
 64 ID 0.037 SQ MI BASIN  
 65 ID \*\*\*\*\*  
 66 ID STEP 16  
 67 ID ROUTE RUNOFF FROM AREA 4A USING TATUM METHOD - 2 STEP LAG TIME  
 68 ID \*\*\*\*\*  
 69 ID STEP 17  
 70 ID FLOOD HYDROGRAPH AREA 3(TUSCANY WEST) (92.0 AC TO DB EAST)  
 71 ID 0.144 SQ MI BASIN  
 72 ID \*\*\*\*\*  
 73 ID STEP 18  
 74 ID COMBINE HYDROGRAPHS FROM STEPS 16,17  
 75 ID \*\*\*\*\*  
 76 ID STEP 19  
 77 ID ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 18 THRU 2'X 3'  
 78 ID (TYPE C INLET GRATE) AND 8" SUBDRAIN ORIFICE ABOVE OUTFALL PIPE  
 79 ID \*\*\*\*\*  
 80 ID STEP 20  
 81 ID FLOOD HYDROGRAPH AREA 4B(CHEVRON) (15.6 AC TO DB OUTFALL STR EAST)  
 82 ID 0.024 SQ MI BASIN  
 83 ID \*\*\*\*\*  
 84 ID STEP 21  
 85 ID COMBINE HYDROGRAPHS FROM STEPS 19,20  
 86 ID \*\*\*\*\*  
 87 ID 3-HR 10-YR STORM  
 88 ID \*\*\*\*\*  
 89 ID STEP 22  
 90 ID FLOOD HYDROGRAPH AREA 4A(BLACK DIAMOND) (23.8 AC TO DB EAST)  
 91 ID 0.037 SQ MI BASIN  
 92 ID \*\*\*\*\*  
 93 ID STEP 23  
 94 ID ROUTE RUNOFF FROM AREA 4A USING TATUM METHOD - 1 STEP LAG TIME  
 95 ID \*\*\*\*\*  
 96 ID STEP 24  
 97 ID FLOOD HYDROGRAPH AREA 3(TUSCANY WEST) (92.0 AC TO DB EAST)  
 98 ID 0.144 SQ MI BASIN  
 99 ID \*\*\*\*\*  
 100 ID STEP 25  
 101 ID COMBINE HYDROGRAPHS FROM STEPS 23,24  
 102 ID \*\*\*\*\*  
 103 ID STEP 26  
 104 ID ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 25 THRU 2'X 3'  
 105 ID (TYPE C INLET GRATE) AND 8" SUBDRAIN ORIFICE ABOVE OUTFALL PIPE  
 106 ID \*\*\*\*\*  
 107 ID STEP 27  
 108 ID FLOOD HYDROGRAPH AREA 4B(CHEVRON) (15.6 AC TO DB OUTFALL STR EAST)  
 109 ID 0.024 SQ MI BASIN  
 110 ID \*\*\*\*\*  
 1 HEC-1 INPUT PAGE 3

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

111 ID STEP 28  
 112 ID COMBINE HYDROGRAPHS FROM STEPS 26,27  
 113 ID \*\*\*\*\*  
 114 IO 1  
 115 IT 15 300  
 \* \*\*\*\*\* 100YR/24HR \*\*\*\*\*  
 \* STEP 1  
 116 KK STP1 AREA 4A  
 117 KM RUNOFF FROM AREA 4A  
 118 BA .037 14.5  
 119 QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19  
 120 QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19  
 121 QI 0.44 2.86 3.22 4.17 4.31 4.32 4.32 6.31 6.61 19.85  
 122 QI 21.84 11.20 9.57 6.67 6.27 4.41 4.14 3.57 3.48 2.93  
 123 QI 2.85 2.66 2.63 2.27 2.21 1.85 1.79 1.79 1.79 1.61  
 124 QI 1.58 1.58 1.58 1.39 1.38 1.36 1.36 1.18 1.16 1.15  
 125 QI 1.15 0.97 0.94 0.94 0.94 0.94 0.94 0.76 0.73 0.73  
 126 QI 0.73 0.55 0.52 0.52 0.52 0.34 0.31 0.31 0.31 0.31  
 127 QI 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.20 0.19 0.19

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128  QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19
*   STEP 2

129  KK LAG1
130  KM   Routed LAG TIME LAG1 (1 STEP)
131  RT 1 2 0
*   STEP 3

132  KK STP3 AREA 3
133  KM   RUNOFF FROM AREA 3
134  BA .114 14.0
135  QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72
136  QI 0.72 0.72 0.72 0.72 2.57 8.45 9.83 11.63 12.06 13.96
137  QI 14.38 15.75 16.06 19.15 19.82 20.13 20.22 26.74 28.14 72.06
138  QI 81.59 50.50 44.17 31.66 28.64 21.78 20.22 17.83 17.27 15.30
139  QI 14.86 14.09 13.90 12.66 12.38 11.07 10.78 10.66 10.62 10.03
140  QI 9.90 9.84 9.82 9.23 9.10 9.04 9.02 8.43 8.30 8.24
141  QI 8.22 7.63 7.50 7.44 7.42 7.42 7.42 6.83 6.70 6.64
142  QI 6.62 6.03 5.90 5.84 5.82 5.23 5.10 5.04 5.02 5.02
143  QI 5.02 5.02 5.02 5.02 5.02 5.02 5.02 4.43 4.30 4.24
144  QI 4.22 4.22 4.22 4.22 4.22 1.63 1.07
*   STEP 4

145  KK C1
146  KM   COMBINE 2,3
147  HC 2
*   STEP 5

148  KK RDBE1
149  KM   DBE1 ROUTING
150  RS 1 ELEV 118.25
151  SV 0 4.446 5.661 19.043 19.600 24.687 30.500
152  SE 118.25 120.41 122.5 125.0 125.1 126.0 127.0
153  SQ 0 0 2.44 3.61 9.82 23.48 31.91
*   STEP 6
1          HEC-1 INPUT                                PAGE 4

LINE  ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

154  KK STP4 AREA 4B
155  KM   RUNOFF FROM AREA 4B
156  BA .024 14.0
157  QI 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12
158  QI 0.12 0.12 0.12 1.26 1.65 1.90 1.96 2.17 2.21 2.54
159  QI 2.60 2.83 2.88 3.40 3.51 3.56 3.57 4.68 4.91 12.35
160  QI 13.89 8.59 7.49 5.39 4.95 3.80 3.56 3.16 3.07 2.74
161  QI 2.67 2.54 2.52 2.31 2.26 2.04 2.00 1.98 1.97 1.87
162  QI 1.85 1.84 1.84 1.74 1.72 1.71 1.71 1.61 1.58 1.57
163  QI 1.57 1.47 1.45 1.44 1.44 1.44 1.44 1.34 1.32 1.31
164  QI 1.31 1.21 1.18 1.17 1.17 1.07 1.05 1.04 1.04 1.04
165  QI 1.04 1.04 1.04 1.04 1.04 1.04 1.04 0.94 0.92 0.91
166  QI 0.91 0.91 0.91 0.91 0.91 0.91 0.31 0.19
*   STEP 7

167  KK C2
168  KM   COMBINE 5,6
169  HC 2
* ***** 100YR/3HR *****
*   STEP 8

170  KK STP8 AREA 4A
171  KM   RUNOFF FROM AREA 4A
172  BA .037 14.5
173  QI 0.19 0.19 0.19 0.19 0.19 0.19 12.14 7.67 9.04 14.18
174  QI 15.67 39.39 13.06 1.87 0.30 0.19 0.19 0.19 0.19 0.19
175  QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19
176  QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19
177  QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19
178  QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19
179  QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19
180  QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19
181  QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19
182  QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19
*   STEP 9

183  KK LAG9
184  KM   Routed LAG TIME LAG9 (1 STEP)
185  RT 1 2 0
*   STEP 10

186  KK STP10 AREA 3
187  KM   RUNOFF FROM AREA 3
188  BA .114 14.0
189  QI 0.72 0.72 0.72 0.72 0.72 12.42 46.61 32.85 38.72 55.20
190  QI 61.08 140.87 60.03 20.66 7.30 1.62 0.74 0.72 0.72 0.72
191  QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72
192  QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72

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193 QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72  
 194 QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72  
 195 QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72  
 196 QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72  
 197 QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72  
 198 QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72

1 \* STEP 11 HEC-1 INPUT PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

199 KK C3  
 200 KM COMBINE 9,10  
 201 HC 2  
 \* STEP 12  
 202 KK RDBE2  
 203 KM DBE2 ROUTING  
 204 RS 1 ELEV 118.25  
 205 SV 0 4.446 5.661 19.043 19.600 24.687 30.500  
 206 SE 118.25 120.41 122.5 125.0 125.1 126.0 127.0  
 207 SQ 0 0 2.44 3.61 9.82 23.48 31.91  
 \* STEP 13  
 208 KK STP13 AREA 4B  
 209 KM RUNOFF FROM AREA 4B  
 210 BA .024 14.0  
 211 QI 0.12 0.12 0.12 0.12 0.12 0.12 2.86 8.19 5.76 6.70 9.43  
 212 QI 10.43 23.94 10.09 3.34 1.03 0.22 0.12 0.12 0.12 0.12  
 213 QI 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12  
 214 QI 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12  
 215 QI 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12  
 216 QI 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12  
 217 QI 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12  
 218 QI 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12  
 219 QI 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12  
 220 QI 0.12 0.12 0.12 0.12 0.12 0.12 0.12 0.12

\* STEP 14  
 221 KK C4  
 222 KM COMBINE 12,13  
 223 HC 2  
 \* \*\*\*\*\* 10YR/24HR \*\*\*\*\*  
 \* STEP 15

224 KK STP15 AREA 4A  
 225 KM RUNOFF FROM AREA 4A  
 226 BA .037 14.5  
 227 QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19  
 228 QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19  
 229 QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 9.94  
 230 QI 13.53 6.74 5.68 3.74 3.46 2.22 2.04 1.65 1.60 1.23  
 231 QI 1.18 1.05 1.03 0.79 0.75 0.50 0.47 0.46 0.46 0.34  
 232 QI 0.32 0.32 0.32 0.20 0.19 0.19 0.19 0.19 0.19 0.19  
 233 QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19  
 234 QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19  
 235 QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.19  
 236 QI 0.19 0.19 0.19 0.19 0.19 0.19 0.19

1 \* STEP 16 HEC-1 INPUT PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

237 KK LAG16  
 238 KM ROUTED LAG TIME LAG16 (2 STEPS)  
 239 RT 2 2 0  
 \* STEP 17  
 240 KK STP17 AREA 3  
 241 KM RUNOFF FROM AREA 3  
 242 BA .114 14.0  
 243 QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72  
 244 QI 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72 0.72  
 245 QI 0.72 0.72 1.14 9.19 10.95 11.78 12.02 16.40 17.34 46.76  
 246 QI 53.14 32.31 28.07 19.69 17.67 13.08 12.04 10.43 10.05 8.74  
 247 QI 8.44 7.92 7.80 6.97 6.78 5.91 5.71 5.63 5.60 5.21  
 248 QI 5.12 5.08 5.07 4.67 4.59 4.54 4.53 4.14 4.05 4.01  
 249 QI 4.00 3.60 3.51 3.47 3.46 3.46 3.46 3.06 2.98 2.94  
 250 QI 2.92 2.53 2.44 2.40 2.39 1.99 1.91 1.87 1.85 1.85  
 251 QI 1.85 1.85 1.85 1.85 1.85 1.85 1.85 1.46 1.36 1.33  
 252 QI 1.32 1.32 1.32 1.32 1.32 0.88 0.78  
 \* STEP 18  
 253 KK C5  
 254 KM COMBINE 16,17  
 255 HC 2

```

*   STEP 19

256  KK  RD3E3
257  KM   DBE3 ROUTING
258  RS   1  ELEV 118.25
259  SV   0  4.446  5.661  19.043  19.600  24.687  30.500
260  SE 118.25 120.41 122.5 125.0 125.1 126.0 127.0
261  SQ   0   0  2.44  3.61  9.82  23.48  31.91
*   STEP 20

262  KK  STP20 AREA 4B
263  KM   RUNOFF FROM AREA 4B
264  BA  .024  14.0
265  QI  0.12  0.12  0.12  0.12  0.12  0.12  0.12  0.12  0.12  0.12
266  QI  0.12  0.12  0.12  0.12  0.12  0.12  0.12  0.12  0.12  0.12
267  QI  1.06  1.55  1.70  2.09  2.17  2.20  2.20  2.95  3.10  8.09
268  QI  9.12  5.57  4.83  3.43  3.13  2.36  2.20  1.93  1.87  1.65
269  QI  1.61  1.52  1.50  1.36  1.33  1.18  1.15  1.14  1.14  1.07
270  QI  1.05  1.05  1.05  0.98  0.96  0.96  0.96  0.89  0.88  0.87
271  QI  0.87  0.80  0.79  0.78  0.78  0.78  0.78  0.71  0.70  0.69
272  QI  0.69  0.62  0.61  0.60  0.60  0.53  0.52  0.51  0.51  0.51
273  QI  0.51  0.51  0.51  0.51  0.51  0.51  0.51  0.44  0.43  0.42
274  QI  0.42  0.42  0.42  0.42  0.42  0.19  0.15
*   STEP 21

275  KK  C6
276  KM   COMBINE 19,20
277  HC   2
* ***** 10YR/3HR *****
*   STEP 22
1      HEC-1 INPUT                                PAGE 7

LINE  ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

278  KK  STP22 AREA 4A
279  KM   RUNOFF FROM AREA 4A
280  BA  .037  14.5
281  QI  0.19  0.19  0.19  0.19  0.19  0.19  0.19  1.34  5.06  9.00
282  QI  10.05 26.34  8.27  1.23  0.26  0.19  0.19  0.19  0.19  0.19
283  QI  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19
284  QI  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19
285  QI  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19
286  QI  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19
287  QI  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19
288  QI  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19
289  QI  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19
290  QI  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19  0.19
*   STEP 23

291  KK  LAG23
292  KM   ROUTED LAG TIME LAG23 (1 STEP)
293  RT   1   2   0
*   STEP 24

294  KK  STP24 AREA 3
295  KM   RUNOFF FROM AREA 3
296  BA  .114  14.0
297  QI  0.72  0.72  0.72  0.72  0.72  0.72  0.96  16.21  22.91  35.84
298  QI  40.48 95.27 39.78 13.98  5.07  1.30  0.73  0.72  0.72  0.72
299  QI  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72
300  QI  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72
301  QI  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72
302  QI  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72
303  QI  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72
304  QI  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72
305  QI  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72  0.72
306  QI  0.72  0.72  0.72  0.72  0.72  0.72  0.72
*   STEP 25

307  KK  C7
308  KM   COMBINE 23,24
309  HC   2
*   STEP 26

310  KK  RD3E4
311  KM   DBE4 ROUTING
312  RS   1  ELEV 118.25
313  SV   0  4.446  5.661  19.043  19.600  24.687  30.500
314  SE 118.25 120.41 122.5 125.0 125.1 126.0 127.0
315  SQ   0   0  2.44  3.61  9.82  23.48  31.91
*   STEP 27

316  KK  STP27 AREA 4B
317  KM   RUNOFF FROM AREA 4B
318  BA  .024  14.0
319  QI  0.12  0.12  0.12  0.12  0.12  0.12  2.53  3.07  4.13  6.24
320  QI  6.98 16.26  6.75  2.28  0.72  0.18  0.12  0.12  0.12  0.12

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1	321	QI	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
			HEC-1 INPUT											
			PAGE 8											
	LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10												
	322	QI	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
	323	QI	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
	324	QI	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
	325	QI	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
	326	QI	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
	327	QI	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
	328	QI	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
	*	STEP 28												
	329	KK	C8											
	330	KM	COMBINE 26,27											
	331	HC	2											
	332	ZZ												

```
*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *          * U.S. ARMY CORPS OF ENGINEERS *
* JUN 1998 *          * HYDROLOGIC ENGINEERING CENTER *
* VERSION 4.1 *          * 609 SECOND STREET *
* RUN DATE 11OCT12 TIME 09:33:58 *          * DAVIS, CALIFORNIA 95616 *
*          *          *          * (916) 756-1104 *
*****
```

```
TUSCANY MEADOWS - DET BASINS EAST
(X-REF 201002)
*****
EAST SIDE BASIN
*****
24-HR 100-YR STORM
*****
STEP 1
FLOOD HYDROGRAPH AREA 4A(BLACK DIAMOND) (23.8 AC TO DB EAST)
0.037 SQ MI BASIN
*****
STEP 2
ROUTE RUNOFF FROM AREA 4A USING TATUM METHOD - 1 STEP LAG TIME
*****
STEP 3
FLOOD HYDROGRAPH AREA 3(TUSCANY EAST) (92.0 AC TO DB EAST)
0.144 SQ MI BASIN
*****
STEP 4
COMBINE HYDROGRAPHS FROM STEPS 2,3
*****
STEP 5
ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 4 THRU 2'X 3'
(TYPE C INLET GRATE) AND 8" SUBDRAIN ORIFICE ABOVE OUTFALL PIPE
*****
STEP 6
FLOOD HYDROGRAPH AREA 4B(CHEVRON) (15.6 AC TO DB OUTLET STR EAST)
0.024 SQ MI BASIN
*****
STEP 7
COMBINE HYDROGRAPHS FROM STEPS 5,6
*****
3-HR 100-YR STORM
*****
STEP 8
FLOOD HYDROGRAPH AREA 4A(BLACK DIAMOND) (23.8 AC TO DB EAST)
0.037 SQ MI BASIN
*****
STEP 9
ROUTE RUNOFF FROM AREA 4A USING TATUM METHOD - 1 STEP LAG TIME
*****
STEP 10
FLOOD HYDROGRAPH AREA 3(TUSCANY WEST) (92.0 AC TO DB EAST)
0.144 SQ MI BASIN
*****
STEP 11
COMBINE HYDROGRAPHS FROM STEPS 9,10
*****
STEP 12
ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 11 THRU 2'X 3'
(TYPE C INLET GRATE) AND 8" SUBDRAIN ORIFICE ABOVE OUTFALL PIPE
*****
STEP 13
FLOOD HYDROGRAPH AREA 4B(CHEVRON) (15.6 AC TO DB OUTLET STR EAST)
0.024 SQ MI BASIN
*****
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STEP 14
COMBINE HYDROGRAPHS FROM STEPS 12,13
*****
24-HR 10-YR STORM
*****
STEP 15
FLOOD HYDROGRAPH AREA 4A(BLACK DIAMOND) (23.8 AC TO DB EAST)
0.037 SQ MI BASIN
*****
STEP 16
ROUTE RUNOFF FROM AREA 4A USING TATUM METHOD - 2 STEP LAG TIME
*****
STEP 17
FLOOD HYDROGRAPH AREA 3(TUSCANY WEST) (92.0 AC TO DB EAST)
0.144 SQ MI BASIN
*****
STEP 18
COMBINE HYDROGRAPHS FROM STEPS 16,17
*****
STEP 19
ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 18 THRU 2'X 3'
(TYPE C INLET GRATE) AND 8" SUBDRAIN ORIFICE ABOVE OUTFALL PIPE
*****
STEP 20
FLOOD HYDROGRAPH AREA 4B(CHEVRON) (15.6 AC TO DB OUTLET STR EAST)
0.024 SQ MI BASIN
*****
STEP 21
COMBINE HYDROGRAPHS FROM STEPS 19,20
*****
3-HR 10-YR STORM
*****
STEP 22
FLOOD HYDROGRAPH AREA 4A(BLACK DIAMOND) (23.8 AC TO DB EAST)
0.037 SQ MI BASIN
*****
STEP 23
ROUTE RUNOFF FROM AREA 4A USING TATUM METHOD - 1 STEP LAG TIME
*****
STEP 24
FLOOD HYDROGRAPH AREA 3(TUSCANY WEST) (92.0 AC TO DB EAST)
0.144 SQ MI BASIN
*****
STEP 25
COMBINE HYDROGRAPHS FROM STEPS 23,24
*****
STEP 26
ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 25 THRU 2'X 3'
(TYPE C INLET GRATE) AND 8" SUBDRAIN ORIFICE ABOVE OUTFALL PIPE
*****
STEP 27
FLOOD HYDROGRAPH AREA 4B(CHEVRON) (15.6 AC TO DB OUTLET STR EAST)
0.024 SQ MI BASIN
*****
STEP 28
COMBINE HYDROGRAPHS FROM STEPS 26,27
*****

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114 IO  OUTPUT CONTROL VARIABLES
        IPRNT   1  PRINT CONTROL
        IPLOT   0  PLOT CONTROL
        QSCAL   0. HYDROGRAPH PLOT SCALE

IT      HYDROGRAPH TIME DATA
        NMIN   15  MINUTES IN COMPUTATION INTERVAL
        IDATE  1  0  STARTING DATE
        ITIME  0000 STARTING TIME
        NQ     300 NUMBER OF HYDROGRAPH ORDINATES
        NDDATE 4  0  ENDING DATE
        NDTIME 0245 ENDING TIME
        ICENT  19  CENTURY MARK

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COMPUTATION INTERVAL .25 HOURS
TOTAL TIME BASE 74.75 HOURS

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ENGLISH UNITS
DRAINAGE AREA    SQUARE MILES
PRECIPITATION DEPTH  INCHES
LENGTH, ELEVATION FEET
FLOW             CUBIC FEET PER SECOND
STORAGE VOLUME   ACRE-FEET
SURFACE AREA     ACRES
TEMPERATURE      DEGREES FAHRENHEIT

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*****
*           *
116 KK * STP1 * AREA 4A
*           *
*****
    
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RUNOFF FROM AREA 4A

SUBBASIN RUNOFF DATA

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118 BA SUBBASIN CHARACTERISTICS
      TAREA .04 SUBBASIN AREA
      SNAP 14.50 NORMAL ANNUAL PRECIPITATION
      RATIO .00 RATIO OF HYDROGRAPH
    
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HYDROGRAPH AT STATION STP1

DA MON HRMN ORD				FLOW *				DA MON HRMN ORD				FLOW *			
1	0000	1	0.	1	1845	76	0.	2	1330	151	0.	3	0815	226	0.
1	0015	2	0.	1	1900	77	0.	2	1345	152	0.	3	0830	227	0.
1	0030	3	0.	1	1915	78	0.	2	1400	153	0.	3	0845	228	0.
1	0045	4	0.	1	1930	79	0.	2	1415	154	0.	3	0900	229	0.
1	0100	5	0.	1	1945	80	0.	2	1430	155	0.	3	0915	230	0.
1	0115	6	0.	1	2000	81	0.	2	1445	156	0.	3	0930	231	0.
1	0130	7	0.	1	2015	82	0.	2	1500	157	0.	3	0945	232	0.
1	0145	8	0.	1	2030	83	0.	2	1515	158	0.	3	1000	233	0.
1	0200	9	0.	1	2045	84	0.	2	1530	159	0.	3	1015	234	0.
1	0215	10	0.	1	2100	85	0.	2	1545	160	0.	3	1030	235	0.
1	0230	11	0.	1	2115	86	0.	2	1600	161	0.	3	1045	236	0.
1	0245	12	0.	1	2130	87	0.	2	1615	162	0.	3	1100	237	0.
1	0300	13	0.	1	2145	88	0.	2	1630	163	0.	3	1115	238	0.
1	0315	14	0.	1	2200	89	0.	2	1645	164	0.	3	1130	239	0.
1	0330	15	0.	1	2215	90	0.	2	1700	165	0.	3	1145	240	0.
1	0345	16	0.	1	2230	91	0.	2	1715	166	0.	3	1200	241	0.
1	0400	17	0.	1	2245	92	0.	2	1730	167	0.	3	1215	242	0.
1	0415	18	0.	1	2300	93	0.	2	1745	168	0.	3	1230	243	0.
1	0430	19	0.	1	2315	94	0.	2	1800	169	0.	3	1245	244	0.
1	0445	20	0.	1	2330	95	0.	2	1815	170	0.	3	1300	245	0.
1	0500	21	0.	1	2345	96	0.	2	1830	171	0.	3	1315	246	0.
1	0515	22	3.	2	0000	97	0.	2	1845	172	0.	3	1330	247	0.
1	0530	23	3.	2	0015	98	0.	2	1900	173	0.	3	1345	248	0.
1	0545	24	4.	2	0030	99	0.	2	1915	174	0.	3	1400	249	0.
1	0600	25	4.	2	0045	100	0.	2	1930	175	0.	3	1415	250	0.
1	0615	26	4.	2	0100	101	0.	2	1945	176	0.	3	1430	251	0.
1	0630	27	4.	2	0115	102	0.	2	2000	177	0.	3	1445	252	0.
1	0645	28	6.	2	0130	103	0.	2	2015	178	0.	3	1500	253	0.
1	0700	29	7.	2	0145	104	0.	2	2030	179	0.	3	1515	254	0.
1	0715	30	20.	2	0200	105	0.	2	2045	180	0.	3	1530	255	0.
1	0730	31	22.	2	0215	106	0.	2	2100	181	0.	3	1545	256	0.
1	0745	32	11.	2	0230	107	0.	2	2115	182	0.	3	1600	257	0.
1	0800	33	10.	2	0245	108	0.	2	2130	183	0.	3	1615	258	0.
1	0815	34	7.	2	0300	109	0.	2	2145	184	0.	3	1630	259	0.
1	0830	35	6.	2	0315	110	0.	2	2200	185	0.	3	1645	260	0.
1	0845	36	4.	2	0330	111	0.	2	2215	186	0.	3	1700	261	0.
1	0900	37	4.	2	0345	112	0.	2	2230	187	0.	3	1715	262	0.
1	0915	38	4.	2	0400	113	0.	2	2245	188	0.	3	1730	263	0.
1	0930	39	3.	2	0415	114	0.	2	2300	189	0.	3	1745	264	0.
1	0945	40	3.	2	0430	115	0.	2	2315	190	0.	3	1800	265	0.
1	1000	41	3.	2	0445	116	0.	2	2330	191	0.	3	1815	266	0.
1	1015	42	3.	2	0500	117	0.	2	2345	192	0.	3	1830	267	0.
1	1030	43	3.	2	0515	118	0.	3	0000	193	0.	3	1845	268	0.
1	1045	44	2.	2	0530	119	0.	3	0015	194	0.	3	1900	269	0.
1	1100	45	2.	2	0545	120	0.	3	0030	195	0.	3	1915	270	0.
1	1115	46	2.	2	0600	121	0.	3	0045	196	0.	3	1930	271	0.
1	1130	47	2.	2	0615	122	0.	3	0100	197	0.	3	1945	272	0.
1	1145	48	2.	2	0630	123	0.	3	0115	198	0.	3	2000	273	0.
1	1200	49	2.	2	0645	124	0.	3	0130	199	0.	3	2015	274	0.
1	1215	50	2.	2	0700	125	0.	3	0145	200	0.	3	2030	275	0.
1	1230	51	2.	2	0715	126	0.	3	0200	201	0.	3	2045	276	0.
1	1245	52	2.	2	0730	127	0.	3	0215	202	0.	3	2100	277	0.
1	1300	53	2.	2	0745	128	0.	3	0230	203	0.	3	2115	278	0.
1	1315	54	1.	2	0800	129	0.	3	0245	204	0.	3	2130	279	0.
1	1330	55	1.	2	0815	130	0.	3	0300	205	0.	3	2145	280	0.
1	1345	56	1.	2	0830	131	0.	3	0315	206	0.	3	2200	281	0.
1	1400	57	1.	2	0845	132	0.	3	0330	207	0.	3	2215	282	0.
1	1415	58	1.	2	0900	133	0.	3	0345	208	0.	3	2230	283	0.
1	1430	59	1.	2	0915	134	0.	3	0400	209	0.	3	2245	284	0.
1	1445	60	1.	2	0930	135	0.	3	0415	210	0.	3	2300	285	0.
1	1500	61	1.	2	0945	136	0.	3	0430	211	0.	3	2315	286	0.
1	1515	62	1.	2	1000	137	0.	3	0445	212	0.	3	2330	287	0.
1	1530	63	1.	2	1015	138	0.	3	0500	213	0.	3	2345	288	0.



1	1545	64	1.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	1.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	1.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	1.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	1.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	1.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	1.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	1.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	1.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	1.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	1.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	1.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

.....

PEAK FLOW TIME MAXIMUM AVERAGE FLOW  
 + (CFS) (HR) 6-HR 24-HR 72-HR 74.75-HR  
 + 22. 7.50 6. 2. 1. 1.  
 (INCHES) 1.488 1.956 2.338 2.360  
 (AC-FT) 3. 4. 5. 5.  
 CUMULATIVE AREA = .04 SQ MI

.....

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 \* \*  
 129 KK \* LAG1 \*  
 \* \*  
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ROUTED LAG TIME LAG1 (1 STEP)

HYDROGRAPH ROUTING DATA

131 RT TATUM OR STRADDLE-STAGGER ROUTING  
 NSTPS 1 NUMBER OF TATUM STEPS  
 NSTDL 2 NUMBER OF ORDINATES TO BE AVERAGED  
 LAG 0 NUMBER OF INTERVALS TO LAG HYDROGRAPH

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HYDROGRAPH AT STATION LAG1

.....

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	1845	76	0.	*	2	1330	151	0.	*	3	0815	226	0.	
1	0015	2	0.	*	1	1900	77	0.	*	2	1345	152	0.	*	3	0830	227	0.	
1	0030	3	0.	*	1	1915	78	0.	*	2	1400	153	0.	*	3	0845	228	0.	
1	0045	4	0.	*	1	1930	79	0.	*	2	1415	154	0.	*	3	0900	229	0.	
1	0100	5	0.	*	1	1945	80	0.	*	2	1430	155	0.	*	3	0915	230	0.	
1	0115	6	0.	*	1	2000	81	0.	*	2	1445	156	0.	*	3	0930	231	0.	
1	0130	7	0.	*	1	2015	82	0.	*	2	1500	157	0.	*	3	0945	232	0.	
1	0145	8	0.	*	1	2030	83	0.	*	2	1515	158	0.	*	3	1000	233	0.	
1	0200	9	0.	*	1	2045	84	0.	*	2	1530	159	0.	*	3	1015	234	0.	
1	0215	10	0.	*	1	2100	85	0.	*	2	1545	160	0.	*	3	1030	235	0.	
1	0230	11	0.	*	1	2115	86	0.	*	2	1600	161	0.	*	3	1045	236	0.	
1	0245	12	0.	*	1	2130	87	0.	*	2	1615	162	0.	*	3	1100	237	0.	
1	0300	13	0.	*	1	2145	88	0.	*	2	1630	163	0.	*	3	1115	238	0.	
1	0315	14	0.	*	1	2200	89	0.	*	2	1645	164	0.	*	3	1130	239	0.	
1	0330	15	0.	*	1	2215	90	0.	*	2	1700	165	0.	*	3	1145	240	0.	
1	0345	16	0.	*	1	2230	91	0.	*	2	1715	166	0.	*	3	1200	241	0.	
1	0400	17	0.	*	1	2245	92	0.	*	2	1730	167	0.	*	3	1215	242	0.	
1	0415	18	0.	*	1	2300	93	0.	*	2	1745	168	0.	*	3	1230	243	0.	
1	0430	19	0.	*	1	2315	94	0.	*	2	1800	169	0.	*	3	1245	244	0.	
1	0445	20	0.	*	1	2330	95	0.	*	2	1815	170	0.	*	3	1300	245	0.	
1	0500	21	0.	*	1	2345	96	0.	*	2	1830	171	0.	*	3	1315	246	0.	
1	0515	22	2.	*	2	0000	97	0.	*	2	1845	172	0.	*	3	1330	247	0.	
1	0530	23	3.	*	2	0015	98	0.	*	2	1900	173	0.	*	3	1345	248	0.	
1	0545	24	4.	*	2	0030	99	0.	*	2	1915	174	0.	*	3	1400	249	0.	
1	0600	25	4.	*	2	0045	100	0.	*	2	1930	175	0.	*	3	1415	250	0.	
1	0615	26	4.	*	2	0100	101	0.	*	2	1945	176	0.	*	3	1430	251	0.	
1	0630	27	4.	*	2	0115	102	0.	*	2	2000	177	0.	*	3	1445	252	0.	
1	0645	28	5.	*	2	0130	103	0.	*	2	2015	178	0.	*	3	1500	253	0.	
1	0700	29	6.	*	2	0145	104	0.	*	2	2030	179	0.	*	3	1515	254	0.	
1	0715	30	13.	*	2	0200	105	0.	*	2	2045	180	0.	*	3	1530	255	0.	
1	0730	31	21.	*	2	0215	106	0.	*	2	2100	181	0.	*	3	1545	256	0.	
1	0745	32	17.	*	2	0230	107	0.	*	2	2115	182	0.	*	3	1600	257	0.	
1	0800	33	10.	*	2	0245	108	0.	*	2	2130	183	0.	*	3	1615	258	0.	

1	0815	34	8.	*	2	0300	109	0.	*	2	2145	184	0.	*	3	1630	259	0.
1	0830	35	6.	*	2	0315	110	0.	*	2	2200	185	0.	*	3	1645	260	0.
1	0845	36	5.	*	2	0330	111	0.	*	2	2215	186	0.	*	3	1700	261	0.
1	0900	37	4.	*	2	0345	112	0.	*	2	2230	187	0.	*	3	1715	262	0.
1	0915	38	4.	*	2	0400	113	0.	*	2	2245	188	0.	*	3	1730	263	0.
1	0930	39	4.	*	2	0415	114	0.	*	2	2300	189	0.	*	3	1745	264	0.
1	0945	40	3.	*	2	0430	115	0.	*	2	2315	190	0.	*	3	1800	265	0.
1	1000	41	3.	*	2	0445	116	0.	*	2	2330	191	0.	*	3	1815	266	0.
1	1015	42	3.	*	2	0500	117	0.	*	2	2345	192	0.	*	3	1830	267	0.
1	1030	43	3.	*	2	0515	118	0.	*	3	0000	193	0.	*	3	1845	268	0.
1	1045	44	2.	*	2	0530	119	0.	*	3	0015	194	0.	*	3	1900	269	0.
1	1100	45	2.	*	2	0545	120	0.	*	3	0030	195	0.	*	3	1915	270	0.
1	1115	46	2.	*	2	0600	121	0.	*	3	0045	196	0.	*	3	1930	271	0.
1	1130	47	2.	*	2	0615	122	0.	*	3	0100	197	0.	*	3	1945	272	0.
1	1145	48	2.	*	2	0630	123	0.	*	3	0115	198	0.	*	3	2000	273	0.
1	1200	49	2.	*	2	0645	124	0.	*	3	0130	199	0.	*	3	2015	274	0.
1	1215	50	2.	*	2	0700	125	0.	*	3	0145	200	0.	*	3	2030	275	0.
1	1230	51	2.	*	2	0715	126	0.	*	3	0200	201	0.	*	3	2045	276	0.
1	1245	52	2.	*	2	0730	127	0.	*	3	0215	202	0.	*	3	2100	277	0.
1	1300	53	2.	*	2	0745	128	0.	*	3	0230	203	0.	*	3	2115	278	0.
1	1315	54	1.	*	2	0800	129	0.	*	3	0245	204	0.	*	3	2130	279	0.
1	1330	55	1.	*	2	0815	130	0.	*	3	0300	205	0.	*	3	2145	280	0.
1	1345	56	1.	*	2	0830	131	0.	*	3	0315	206	0.	*	3	2200	281	0.
1	1400	57	1.	*	2	0845	132	0.	*	3	0330	207	0.	*	3	2215	282	0.
1	1415	58	1.	*	2	0900	133	0.	*	3	0345	208	0.	*	3	2230	283	0.
1	1430	59	1.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	1.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	1.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	1.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	1.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	1.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	1.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	1.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	1.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	1.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	1.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	1.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	1.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	1.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	1.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	1.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	1.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
21.	7.50	6.	2.	1.	1.
	(CFS)				
	(INCHES)	1.487	1.956	2.338	2.360
	(AC-FT)	3.	4.	5.	5.

CUMULATIVE AREA = .04 SQ MI

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132 KK * STP3 * AREA 3
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RUNOFF FROM AREA 3

SUBBASIN RUNOFF DATA

134 BA SUBBASIN CHARACTERISTICS
TAREA .11 SUBBASIN AREA
SNAP 14.00 NORMAL ANNUAL PRECIPITATION
RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP3

*****																			
DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
*****																			
1	0000	1	1.	1845	76	5.	2	1330	151	1.	3	0815	226	1.					
1	0015	2	1.	1900	77	5.	2	1345	152	1.	3	0830	227	1.					
1	0030	3	1.	1915	78	5.	2	1400	153	1.	3	0845	228	1.					

1	0045	4	1.	*	1	1930	79	5.	*	2	1415	154	1.	*	3	0900	229	1.
1	0100	5	1.	*	1	1945	80	5.	*	2	1430	155	1.	*	3	0915	230	1.
1	0115	6	1.	*	1	2000	81	5.	*	2	1445	156	1.	*	3	0930	231	1.
1	0130	7	1.	*	1	2015	82	5.	*	2	1500	157	1.	*	3	0945	232	1.
1	0145	8	1.	*	1	2030	83	5.	*	2	1515	158	1.	*	3	1000	233	1.
1	0200	9	1.	*	1	2045	84	5.	*	2	1530	159	1.	*	3	1015	234	1.
1	0215	10	1.	*	1	2100	85	5.	*	2	1545	160	1.	*	3	1030	235	1.
1	0230	11	1.	*	1	2115	86	5.	*	2	1600	161	1.	*	3	1045	236	1.
1	0245	12	1.	*	1	2130	87	5.	*	2	1615	162	1.	*	3	1100	237	1.
1	0300	13	1.	*	1	2145	88	4.	*	2	1630	163	1.	*	3	1115	238	1.
1	0315	14	1.	*	1	2200	89	4.	*	2	1645	164	1.	*	3	1130	239	1.
1	0330	15	3.	*	1	2215	90	4.	*	2	1700	165	1.	*	3	1145	240	1.
1	0345	16	8.	*	1	2230	91	4.	*	2	1715	166	1.	*	3	1200	241	1.
1	0400	17	10.	*	1	2245	92	4.	*	2	1730	167	1.	*	3	1215	242	1.
1	0415	18	12.	*	1	2300	93	4.	*	2	1745	168	1.	*	3	1230	243	1.
1	0430	19	12.	*	1	2315	94	4.	*	2	1800	169	1.	*	3	1245	244	1.
1	0445	20	14.	*	1	2330	95	4.	*	2	1815	170	1.	*	3	1300	245	1.
1	0500	21	14.	*	1	2345	96	2.	*	2	1830	171	1.	*	3	1315	246	1.
1	0515	22	16.	*	2	0000	97	1.	*	2	1845	172	1.	*	3	1330	247	1.
1	0530	23	16.	*	2	0015	98	1.	*	2	1900	173	1.	*	3	1345	248	1.
1	0545	24	19.	*	2	0030	99	1.	*	2	1915	174	1.	*	3	1400	249	1.
1	0600	25	20.	*	2	0045	100	1.	*	2	1930	175	1.	*	3	1415	250	1.
1	0615	26	20.	*	2	0100	101	1.	*	2	1945	176	1.	*	3	1430	251	1.
1	0630	27	20.	*	2	0115	102	1.	*	2	2000	177	1.	*	3	1445	252	1.
1	0645	28	27.	*	2	0130	103	1.	*	2	2015	178	1.	*	3	1500	253	1.
1	0700	29	28.	*	2	0145	104	1.	*	2	2030	179	1.	*	3	1515	254	1.
1	0715	30	72.	*	2	0200	105	1.	*	2	2045	180	1.	*	3	1530	255	1.
1	0730	31	82.	*	2	0215	106	1.	*	2	2100	181	1.	*	3	1545	256	1.
1	0745	32	51.	*	2	0230	107	1.	*	2	2115	182	1.	*	3	1600	257	1.
1	0800	33	44.	*	2	0245	108	1.	*	2	2130	183	1.	*	3	1615	258	1.
1	0815	34	32.	*	2	0300	109	1.	*	2	2145	184	1.	*	3	1630	259	1.
1	0830	35	29.	*	2	0315	110	1.	*	2	2200	185	1.	*	3	1645	260	1.
1	0845	36	22.	*	2	0330	111	1.	*	2	2215	186	1.	*	3	1700	261	1.
1	0900	37	20.	*	2	0345	112	1.	*	2	2230	187	1.	*	3	1715	262	1.
1	0915	38	18.	*	2	0400	113	1.	*	2	2245	188	1.	*	3	1730	263	1.
1	0930	39	17.	*	2	0415	114	1.	*	2	2300	189	1.	*	3	1745	264	1.
1	0945	40	15.	*	2	0430	115	1.	*	2	2315	190	1.	*	3	1800	265	1.
1	1000	41	15.	*	2	0445	116	1.	*	2	2330	191	1.	*	3	1815	266	1.
1	1015	42	14.	*	2	0500	117	1.	*	2	2345	192	1.	*	3	1830	267	1.
1	1030	43	14.	*	2	0515	118	1.	*	3	0000	193	1.	*	3	1845	268	1.
1	1045	44	13.	*	2	0530	119	1.	*	3	0015	194	1.	*	3	1900	269	1.
1	1100	45	12.	*	2	0545	120	1.	*	3	0030	195	1.	*	3	1915	270	1.
1	1115	46	11.	*	2	0600	121	1.	*	3	0045	196	1.	*	3	1930	271	1.
1	1130	47	11.	*	2	0615	122	1.	*	3	0100	197	1.	*	3	1945	272	1.
1	1145	48	11.	*	2	0630	123	1.	*	3	0115	198	1.	*	3	2000	273	1.
1	1200	49	11.	*	2	0645	124	1.	*	3	0130	199	1.	*	3	2015	274	1.
1	1215	50	10.	*	2	0700	125	1.	*	3	0145	200	1.	*	3	2030	275	1.
1	1230	51	10.	*	2	0715	126	1.	*	3	0200	201	1.	*	3	2045	276	1.
1	1245	52	10.	*	2	0730	127	1.	*	3	0215	202	1.	*	3	2100	277	1.
1	1300	53	10.	*	2	0745	128	1.	*	3	0230	203	1.	*	3	2115	278	1.
1	1315	54	9.	*	2	0800	129	1.	*	3	0245	204	1.	*	3	2130	279	1.
1	1330	55	9.	*	2	0815	130	1.	*	3	0300	205	1.	*	3	2145	280	1.
1	1345	56	9.	*	2	0830	131	1.	*	3	0315	206	1.	*	3	2200	281	1.
1	1400	57	9.	*	2	0845	132	1.	*	3	0330	207	1.	*	3	2215	282	1.
1	1415	58	8.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	8.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	8.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	8.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	8.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	8.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	7.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	7.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	7.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	7.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	7.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	7.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	7.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	7.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	6.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	6.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	6.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	6.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

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PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 82.	7.50	27.	11.	4.	4.
		(INCHES) 2.167	3.624	4.319	4.346
		(AC-FT) 13.	22.	26.	26.

CUMULATIVE AREA = .11 SQ MI

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145 KK * C1 *
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COMBINE 2,3

147 HC HYDROGRAPH COMBINATION  
ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION C1  
SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	1.	1845	76	6.	2	1330	151	1.	3	0815	226	1.					
1	0015	2	1.	1900	77	5.	2	1345	152	1.	3	0830	227	1.					
1	0030	3	1.	1915	78	5.	2	1400	153	1.	3	0845	228	1.					
1	0045	4	1.	1930	79	5.	2	1415	154	1.	3	0900	229	1.					
1	0100	5	1.	1945	80	5.	2	1430	155	1.	3	0915	230	1.					
1	0115	6	1.	2000	81	5.	2	1445	156	1.	3	0930	231	1.					
1	0130	7	1.	2015	82	5.	2	1500	157	1.	3	0945	232	1.					
1	0145	8	1.	2030	83	5.	2	1515	158	1.	3	1000	233	1.					
1	0200	9	1.	2045	84	5.	2	1530	159	1.	3	1015	234	1.					
1	0215	10	1.	2100	85	5.	2	1545	160	1.	3	1030	235	1.					
1	0230	11	1.	2115	86	5.	2	1600	161	1.	3	1045	236	1.					
1	0245	12	1.	2130	87	5.	2	1615	162	1.	3	1100	237	1.					
1	0300	13	1.	2145	88	5.	2	1630	163	1.	3	1115	238	1.					
1	0315	14	1.	2200	89	4.	2	1645	164	1.	3	1130	239	1.					
1	0330	15	3.	2215	90	4.	2	1700	165	1.	3	1145	240	1.					
1	0345	16	9.	2230	91	4.	2	1715	166	1.	3	1200	241	1.					
1	0400	17	10.	2245	92	4.	2	1730	167	1.	3	1215	242	1.					
1	0415	18	12.	2300	93	4.	2	1745	168	1.	3	1230	243	1.					
1	0430	19	12.	2315	94	4.	2	1800	169	1.	3	1245	244	1.					
1	0445	20	14.	2330	95	4.	2	1815	170	1.	3	1300	245	1.					
1	0500	21	15.	2345	96	2.	2	1830	171	1.	3	1315	246	1.					
1	0515	22	17.	2000	97	1.	2	1845	172	1.	3	1330	247	1.					
1	0530	23	19.	0015	98	1.	2	1900	173	1.	3	1345	248	1.					
1	0545	24	23.	0030	99	1.	2	1915	174	1.	3	1400	249	1.					
1	0600	25	24.	0045	100	1.	2	1930	175	1.	3	1415	250	1.					
1	0615	26	24.	0100	101	1.	2	1945	176	1.	3	1430	251	1.					
1	0630	27	25.	0115	102	1.	2	2000	177	1.	3	1445	252	1.					
1	0645	28	32.	0130	103	1.	2	2015	178	1.	3	1500	253	1.					
1	0700	29	35.	0145	104	1.	2	2030	179	1.	3	1515	254	1.					
1	0715	30	85.	0200	105	1.	2	2045	180	1.	3	1530	255	1.					
1	0730	31	102.	0215	106	1.	2	2100	181	1.	3	1545	256	1.					
1	0745	32	67.	0230	107	1.	2	2115	182	1.	3	1600	257	1.					
1	0800	33	55.	0245	108	1.	2	2130	183	1.	3	1615	258	1.					
1	0815	34	40.	0300	109	1.	2	2145	184	1.	3	1630	259	1.					
1	0830	35	35.	0315	110	1.	2	2200	185	1.	3	1645	260	1.					
1	0845	36	27.	0330	111	1.	2	2215	186	1.	3	1700	261	1.					
1	0900	37	24.	0345	112	1.	2	2230	187	1.	3	1715	262	1.					
1	0915	38	22.	0400	113	1.	2	2245	188	1.	3	1730	263	1.					
1	0930	39	21.	0415	114	1.	2	2300	189	1.	3	1745	264	1.					
1	0945	40	19.	0430	115	1.	2	2315	190	1.	3	1800	265	1.					
1	1000	41	18.	0445	116	1.	2	2330	191	1.	3	1815	266	1.					
1	1015	42	17.	0500	117	1.	2	2345	192	1.	3	1830	267	1.					
1	1030	43	17.	0515	118	1.	3	0000	193	1.	3	1845	268	1.					
1	1045	44	15.	0530	119	1.	3	0015	194	1.	3	1900	269	1.					
1	1100	45	15.	0545	120	1.	3	0030	195	1.	3	1915	270	1.					
1	1115	46	13.	0600	121	1.	3	0045	196	1.	3	1930	271	1.					
1	1130	47	13.	0615	122	1.	3	0100	197	1.	3	1945	272	1.					
1	1145	48	12.	0630	123	1.	3	0115	198	1.	3	2000	273	1.					
1	1200	49	12.	0645	124	1.	3	0130	199	1.	3	2015	274	1.					
1	1215	50	12.	0700	125	1.	3	0145	200	1.	3	2030	275	1.					
1	1230	51	11.	0715	126	1.	3	0200	201	1.	3	2045	276	1.					
1	1245	52	11.	0730	127	1.	3	0215	202	1.	3	2100	277	1.					
1	1300	53	11.	0745	128	1.	3	0230	203	1.	3	2115	278	1.					
1	1315	54	11.	0800	129	1.	3	0245	204	1.	3	2130	279	1.					
1	1330	55	10.	0815	130	1.	3	0300	205	1.	3	2145	280	1.					
1	1345	56	10.	0830	131	1.	3	0315	206	1.	3	2200	281	1.					
1	1400	57	10.	0845	132	1.	3	0330	207	1.	3	2215	282	1.					
1	1415	58	10.	0900	133	1.	3	0345	208	1.	3	2230	283	1.					
1	1430	59	9.	0915	134	1.	3	0400	209	1.	3	2245	284	1.					
1	1445	60	9.	0930	135	1.	3	0415	210	1.	3	2300	285	1.					
1	1500	61	9.	0945	136	1.	3	0430	211	1.	3	2315	286	1.					
1	1515	62	9.	1000	137	1.	3	0445	212	1.	3	2330	287	1.					
1	1530	63	8.	1015	138	1.	3	0500	213	1.	3	2345	288	1.					
1	1545	64	8.	1030	139	1.	3	0515	214	1.	4	0000	289	1.					

1	1600	65	8.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	8.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	8.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	8.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	7.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	7.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	7.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	7.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	6.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	6.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	6.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

+ (CFS)	(HR)	6-HR	24-HR	72-HR	74.75-HR
+ 102.	7.50	32.	13.	5.	5.
	(CFS)				
	(INCHES)	1.993	3.215	3.834	3.860
	(AC-FT)	16.	26.	31.	31.

CUMULATIVE AREA = .15 SQ MI

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*          *
148 KK * RD BE1 *
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DBE1 ROUTING

HYDROGRAPH ROUTING DATA

150 RS	STORAGE ROUTING								
	NSTPS	1	NUMBER OF SUBREACHES						
	ITYP	ELEV	TYPE OF INITIAL CONDITION						
	RSVRIC	118.25	INITIAL CONDITION						
	X	.00	WORKING R AND D COEFFICIENT						
151 SV	STORAGE	.0	4.4	5.7	19.0	19.6	24.7	30.5	
152 SE	ELEVATION	118.25	120.41	122.50	125.00	125.10	126.00	127.00	
153 SQ	DISCHARGE	0.	0.	2.	4.	10.	23.	32.	

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HYDROGRAPH AT STATION RD BE1

*****																								
*          *																								
DA	MON	HR	MRN	ORD	OUTFLOW	STORAGE	STAGE	* DA	MON	HR	MRN	ORD	OUTFLOW	STORAGE	STAGE	* DA	MON	HR	MRN	ORD	OUTFLOW	STORAGE	STAGE	
*          *																								
1	0000	1	0.	.0	118.3	* 2	0100	101	4.	18.9	125.0	* 3	0200	201	3.	14.4	124.1							
1	0015	2	0.	.0	118.3	* 2	0115	102	4.	18.8	125.0	* 3	0215	202	3.	14.4	124.1							
1	0030	3	0.	.0	118.3	* 2	0130	103	4.	18.8	124.9	* 3	0230	203	3.	14.4	124.1							
1	0045	4	0.	.1	118.3	* 2	0145	104	4.	18.7	124.9	* 3	0245	204	3.	14.3	124.1							
1	0100	5	0.	.1	118.3	* 2	0200	105	4.	18.7	124.9	* 3	0300	205	3.	14.3	124.1							
1	0115	6	0.	.1	118.3	* 2	0215	106	4.	18.6	124.9	* 3	0315	206	3.	14.2	124.1							
1	0130	7	0.	.1	118.3	* 2	0230	107	4.	18.6	124.9	* 3	0330	207	3.	14.2	124.1							
1	0145	8	0.	.1	118.3	* 2	0245	108	4.	18.5	124.9	* 3	0345	208	3.	14.2	124.1							
1	0200	9	0.	.2	118.3	* 2	0300	109	4.	18.5	124.9	* 3	0400	209	3.	14.1	124.1							
1	0215	10	0.	.2	118.3	* 2	0315	110	4.	18.4	124.9	* 3	0415	210	3.	14.1	124.1							
1	0230	11	0.	.2	118.3	* 2	0330	111	4.	18.4	124.9	* 3	0430	211	3.	14.0	124.1							
1	0245	12	0.	.2	118.4	* 2	0345	112	4.	18.3	124.9	* 3	0445	212	3.	14.0	124.1							
1	0300	13	0.	.2	118.4	* 2	0400	113	4.	18.3	124.9	* 3	0500	213	3.	14.0	124.1							
1	0315	14	0.	.2	118.4	* 2	0415	114	4.	18.2	124.8	* 3	0515	214	3.	13.9	124.0							
1	0330	15	0.	.3	118.4	* 2	0430	115	4.	18.2	124.8	* 3	0530	215	3.	13.9	124.0							
1	0345	16	0.	.4	118.4	* 2	0445	116	4.	18.1	124.8	* 3	0545	216	3.	13.9	124.0							
1	0400	17	0.	.6	118.5	* 2	0500	117	4.	18.1	124.8	* 3	0600	217	3.	13.8	124.0							
1	0415	18	0.	.8	118.6	* 2	0515	118	4.	18.1	124.8	* 3	0615	218	3.	13.8	124.0							
1	0430	19	0.	1.1	118.8	* 2	0530	119	4.	18.0	124.8	* 3	0630	219	3.	13.7	124.0							
1	0445	20	0.	1.3	118.9	* 2	0545	120	4.	18.0	124.8	* 3	0645	220	3.	13.7	124.0							
1	0500	21	0.	1.6	119.0	* 2	0600	121	4.	17.9	124.8	* 3	0700	221	3.	13.7	124.0							
1	0515	22	0.	2.0	119.2	* 2	0615	122	4.	17.9	124.8	* 3	0715	222	3.	13.6	124.0							
1	0530	23	0.	2.3	119.4	* 2	0630	123	4.	17.8	124.8	* 3	0730	223	3.	13.6	124.0							
1	0545	24	0.	2.8	119.6	* 2	0645	124	3.	17.8	124.8	* 3	0745	224	3.	13.5	124.0							
1	0600	25	0.	3.3	119.8	* 2	0700	125	3.	17.7	124.8	* 3	0800	225	3.	13.5	124.0							
1	0615	26	0.	3.8	120.1	* 2	0715	126	3.	17.7	124.7	* 3	0815	226	3.	13.5	124.0							
1	0630	27	0.	4.3	120.3	* 2	0730	127	3.	17.6	124.7	* 3	0830	227	3.	13.4	124.0							



PEAK STAGE TIME MAXIMUM AVERAGE STAGE  
 6-HR 24-HR 72-HR 74.75-HR  
 + (FEET) (HR)  
 125.06 16.75 125.05 124.90 124.02 123.81

CUMULATIVE AREA = .15 SQ MI

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 \* \*  
 154 KK \* STP4 \* AREA 4B  
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RUNOFF FROM AREA 4B

SUBBASIN RUNOFF DATA

156 BA SUBBASIN CHARACTERISTICS  
 TAREA .02 SUBBASIN AREA  
 SNAP 14.00 NORMAL ANNUAL PRECIPITATION  
 RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP4

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW		
1	0000	1	0.	* 1	1845	76	1.	* 2	1330 151	0.	* 3	0815	226	0.							
1	0015	2	0.	* 1	1900	77	1.	* 2	1345 152	0.	* 3	0830	227	0.							
1	0030	3	0.	* 1	1915	78	1.	* 2	1400 153	0.	* 3	0845	228	0.							
1	0045	4	0.	* 1	1930	79	1.	* 2	1415 154	0.	* 3	0900	229	0.							
1	0100	5	0.	* 1	1945	80	1.	* 2	1430 155	0.	* 3	0915	230	0.							
1	0115	6	0.	* 1	2000	81	1.	* 2	1445 156	0.	* 3	0930	231	0.							
1	0130	7	0.	* 1	2015	82	1.	* 2	1500 157	0.	* 3	0945	232	0.							
1	0145	8	0.	* 1	2030	83	1.	* 2	1515 158	0.	* 3	1000	233	0.							
1	0200	9	0.	* 1	2045	84	1.	* 2	1530 159	0.	* 3	1015	234	0.							
1	0215	10	0.	* 1	2100	85	1.	* 2	1545 160	0.	* 3	1030	235	0.							
1	0230	11	0.	* 1	2115	86	1.	* 2	1600 161	0.	* 3	1045	236	0.							
1	0245	12	0.	* 1	2130	87	1.	* 2	1615 162	0.	* 3	1100	237	0.							
1	0300	13	0.	* 1	2145	88	1.	* 2	1630 163	0.	* 3	1115	238	0.							
1	0315	14	1.	* 1	2200	89	1.	* 2	1645 164	0.	* 3	1130	239	0.							
1	0330	15	2.	* 1	2215	90	1.	* 2	1700 165	0.	* 3	1145	240	0.							
1	0345	16	2.	* 1	2230	91	1.	* 2	1715 166	0.	* 3	1200	241	0.							
1	0400	17	2.	* 1	2245	92	1.	* 2	1730 167	0.	* 3	1215	242	0.							
1	0415	18	2.	* 1	2300	93	1.	* 2	1745 168	0.	* 3	1230	243	0.							
1	0430	19	2.	* 1	2315	94	1.	* 2	1800 169	0.	* 3	1245	244	0.							
1	0445	20	3.	* 1	2330	95	1.	* 2	1815 170	0.	* 3	1300	245	0.							
1	0500	21	3.	* 1	2345	96	0.	* 2	1830 171	0.	* 3	1315	246	0.							
1	0515	22	3.	* 2	0000	97	0.	* 2	1845 172	0.	* 3	1330	247	0.							
1	0530	23	3.	* 2	0015	98	0.	* 2	1900 173	0.	* 3	1345	248	0.							
1	0545	24	3.	* 2	0030	99	0.	* 2	1915 174	0.	* 3	1400	249	0.							
1	0600	25	4.	* 2	0045	100	0.	* 2	1930 175	0.	* 3	1415	250	0.							
1	0615	26	4.	* 2	0100	101	0.	* 2	1945 176	0.	* 3	1430	251	0.							
1	0630	27	4.	* 2	0115	102	0.	* 2	2000 177	0.	* 3	1445	252	0.							
1	0645	28	5.	* 2	0130	103	0.	* 2	2015 178	0.	* 3	1500	253	0.							
1	0700	29	5.	* 2	0145	104	0.	* 2	2030 179	0.	* 3	1515	254	0.							
1	0715	30	12.	* 2	0200	105	0.	* 2	2045 180	0.	* 3	1530	255	0.							
1	0730	31	14.	* 2	0215	106	0.	* 2	2100 181	0.	* 3	1545	256	0.							
1	0745	32	9.	* 2	0230	107	0.	* 2	2115 182	0.	* 3	1600	257	0.							
1	0800	33	7.	* 2	0245	108	0.	* 2	2130 183	0.	* 3	1615	258	0.							
1	0815	34	5.	* 2	0300	109	0.	* 2	2145 184	0.	* 3	1630	259	0.							
1	0830	35	5.	* 2	0315	110	0.	* 2	2200 185	0.	* 3	1645	260	0.							
1	0845	36	4.	* 2	0330	111	0.	* 2	2215 186	0.	* 3	1700	261	0.							
1	0900	37	4.	* 2	0345	112	0.	* 2	2230 187	0.	* 3	1715	262	0.							
1	0915	38	3.	* 2	0400	113	0.	* 2	2245 188	0.	* 3	1730	263	0.							
1	0930	39	3.	* 2	0415	114	0.	* 2	2300 189	0.	* 3	1745	264	0.							
1	0945	40	3.	* 2	0430	115	0.	* 2	2315 190	0.	* 3	1800	265	0.							
1	1000	41	3.	* 2	0445	116	0.	* 2	2330 191	0.	* 3	1815	266	0.							
1	1015	42	3.	* 2	0500	117	0.	* 2	2345 192	0.	* 3	1830	267	0.							
1	1030	43	3.	* 2	0515	118	0.	* 3	0000 193	0.	* 3	1845	268	0.							
1	1045	44	2.	* 2	0530	119	0.	* 3	0015 194	0.	* 3	1900	269	0.							
1	1100	45	2.	* 2	0545	120	0.	* 3	0030 195	0.	* 3	1915	270	0.							
1	1115	46	2.	* 2	0600	121	0.	* 3	0045 196	0.	* 3	1930	271	0.							
1	1130	47	2.	* 2	0615	122	0.	* 3	0100 197	0.	* 3	1945	272	0.							
1	1145	48	2.	* 2	0630	123	0.	* 3	0115 198	0.	* 3	2000	273	0.							
1	1200	49	2.	* 2	0645	124	0.	* 3	0130 199	0.	* 3	2015	274	0.							
1	1215	50	2.	* 2	0700	125	0.	* 3	0145 200	0.	* 3	2030	275	0.							

1	1230	51	2.	*	2	0715	126	0.	*	3	0200	201	0.	*	3	2045	276	0.
1	1245	52	2.	*	2	0730	127	0.	*	3	0215	202	0.	*	3	2100	277	0.
1	1300	53	2.	*	2	0745	128	0.	*	3	0230	203	0.	*	3	2115	278	0.
1	1315	54	2.	*	2	0800	129	0.	*	3	0245	204	0.	*	3	2130	279	0.
1	1330	55	2.	*	2	0815	130	0.	*	3	0300	205	0.	*	3	2145	280	0.
1	1345	56	2.	*	2	0830	131	0.	*	3	0315	206	0.	*	3	2200	281	0.
1	1400	57	2.	*	2	0845	132	0.	*	3	0330	207	0.	*	3	2215	282	0.
1	1415	58	2.	*	2	0900	133	0.	*	3	0345	208	0.	*	3	2230	283	0.
1	1430	59	2.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	2.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	2.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	1.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	1.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	1.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	1.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	1.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	1.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	1.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	1.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	1.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	1.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	1.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	1.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	1.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	1.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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PEAK FLOW      TIME      MAXIMUM AVERAGE FLOW
+ (CFS) (HR)      6-HR      24-HR      72-HR      74.75-HR
+ 14. 7.50      5.        2.        1.        1.
  (INCHES) 1.793  3.177  3.764  3.786
  (AC-FT)  2.        4.        5.        5.
CUMULATIVE AREA = .02 SQ MI
  
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*          *
167 KK * C2 *
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COMBINE 5,6

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169 HC HYDROGRAPH COMBINATION
ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE
  
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HYDROGRAPH AT STATION C2  
SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	1845	76	8.	*	2	1330	151	4.	*	3	0815	226	3.	
1	0015	2	0.	*	1	1900	77	8.	*	2	1345	152	4.	*	3	0830	227	3.	
1	0030	3	0.	*	1	1915	78	7.	*	2	1400	153	4.	*	3	0845	228	3.	
1	0045	4	0.	*	1	1930	79	7.	*	2	1415	154	4.	*	3	0900	229	3.	
1	0100	5	0.	*	1	1945	80	7.	*	2	1430	155	4.	*	3	0915	230	3.	
1	0115	6	0.	*	1	2000	81	7.	*	2	1445	156	4.	*	3	0930	231	3.	
1	0130	7	0.	*	1	2015	82	7.	*	2	1500	157	4.	*	3	0945	232	3.	
1	0145	8	0.	*	1	2030	83	7.	*	2	1515	158	4.	*	3	1000	233	3.	
1	0200	9	0.	*	1	2045	84	7.	*	2	1530	159	4.	*	3	1015	234	3.	
1	0215	10	0.	*	1	2100	85	7.	*	2	1545	160	4.	*	3	1030	235	3.	
1	0230	11	0.	*	1	2115	86	7.	*	2	1600	161	4.	*	3	1045	236	3.	
1	0245	12	0.	*	1	2130	87	6.	*	2	1615	162	4.	*	3	1100	237	3.	
1	0300	13	0.	*	1	2145	88	6.	*	2	1630	163	4.	*	3	1115	238	3.	
1	0315	14	1.	*	1	2200	89	6.	*	2	1645	164	4.	*	3	1130	239	3.	
1	0330	15	2.	*	1	2215	90	6.	*	2	1700	165	4.	*	3	1145	240	3.	
1	0345	16	2.	*	1	2230	91	6.	*	2	1715	166	4.	*	3	1200	241	3.	
1	0400	17	2.	*	1	2245	92	6.	*	2	1730	167	4.	*	3	1215	242	3.	
1	0415	18	2.	*	1	2300	93	6.	*	2	1745	168	4.	*	3	1230	243	3.	
1	0430	19	2.	*	1	2315	94	6.	*	2	1800	169	4.	*	3	1245	244	3.	
1	0445	20	3.	*	1	2330	95	6.	*	2	1815	170	4.	*	3	1300	245	3.	
1	0500	21	3.	*	1	2345	96	5.	*	2	1830	171	4.	*	3	1315	246	3.	
1	0515	22	3.	*	2	0000	97	4.	*	2	1845	172	4.	*	3	1330	247	3.	
1	0530	23	3.	*	2	0015	98	4.	*	2	1900	173	3.	*	3	1345	248	3.	



1	0545	24	3.	* 2	0030	99	4.	* 2	1915	174	3.	* 3	1400	249	3.
1	0600	25	4.	* 2	0045	100	4.	* 2	1930	175	3.	* 3	1415	250	3.
1	0615	26	4.	* 2	0100	101	4.	* 2	1945	176	3.	* 3	1430	251	3.
1	0630	27	4.	* 2	0115	102	4.	* 2	2000	177	3.	* 3	1445	252	3.
1	0645	28	5.	* 2	0130	103	4.	* 2	2015	178	3.	* 3	1500	253	3.
1	0700	29	7.	* 2	0145	104	4.	* 2	2030	179	3.	* 3	1515	254	3.
1	0715	30	15.	* 2	0200	105	4.	* 2	2045	180	3.	* 3	1530	255	3.
1	0730	31	17.	* 2	0215	106	4.	* 2	2100	181	3.	* 3	1545	256	3.
1	0745	32	11.	* 2	0230	107	4.	* 2	2115	182	3.	* 3	1600	257	3.
1	0800	33	10.	* 2	0245	108	4.	* 2	2130	183	3.	* 3	1615	258	3.
1	0815	34	8.	* 2	0300	109	4.	* 2	2145	184	3.	* 3	1630	259	3.
1	0830	35	8.	* 2	0315	110	4.	* 2	2200	185	3.	* 3	1645	260	3.
1	0845	36	7.	* 2	0330	111	4.	* 2	2215	186	3.	* 3	1700	261	3.
1	0900	37	7.	* 2	0345	112	4.	* 2	2230	187	3.	* 3	1715	262	3.
1	0915	38	6.	* 2	0400	113	4.	* 2	2245	188	3.	* 3	1730	263	3.
1	0930	39	6.	* 2	0415	114	4.	* 2	2300	189	3.	* 3	1745	264	3.
1	0945	40	6.	* 2	0430	115	4.	* 2	2315	190	3.	* 3	1800	265	3.
1	1000	41	6.	* 2	0445	116	4.	* 2	2330	191	3.	* 3	1815	266	3.
1	1015	42	6.	* 2	0500	117	4.	* 2	2345	192	3.	* 3	1830	267	3.
1	1030	43	6.	* 2	0515	118	4.	* 3	0000	193	3.	* 3	1845	268	3.
1	1045	44	6.	* 2	0530	119	4.	* 3	0015	194	3.	* 3	1900	269	3.
1	1100	45	6.	* 2	0545	120	4.	* 3	0030	195	3.	* 3	1915	270	3.
1	1115	46	5.	* 2	0600	121	4.	* 3	0045	196	3.	* 3	1930	271	3.
1	1130	47	5.	* 2	0615	122	4.	* 3	0100	197	3.	* 3	1945	272	3.
1	1145	48	5.	* 2	0630	123	4.	* 3	0115	198	3.	* 3	2000	273	3.
1	1200	49	5.	* 2	0645	124	4.	* 3	0130	199	3.	* 3	2015	274	3.
1	1215	50	5.	* 2	0700	125	4.	* 3	0145	200	3.	* 3	2030	275	3.
1	1230	51	5.	* 2	0715	126	4.	* 3	0200	201	3.	* 3	2045	276	3.
1	1245	52	5.	* 2	0730	127	4.	* 3	0215	202	3.	* 3	2100	277	3.
1	1300	53	5.	* 2	0745	128	4.	* 3	0230	203	3.	* 3	2115	278	3.
1	1315	54	5.	* 2	0800	129	4.	* 3	0245	204	3.	* 3	2130	279	3.
1	1330	55	5.	* 2	0815	130	4.	* 3	0300	205	3.	* 3	2145	280	3.
1	1345	56	5.	* 2	0830	131	4.	* 3	0315	206	3.	* 3	2200	281	3.
1	1400	57	5.	* 2	0845	132	4.	* 3	0330	207	3.	* 3	2215	282	3.
1	1415	58	5.	* 2	0900	133	4.	* 3	0345	208	3.	* 3	2230	283	3.
1	1430	59	5.	* 2	0915	134	4.	* 3	0400	209	3.	* 3	2245	284	3.
1	1445	60	5.	* 2	0930	135	4.	* 3	0415	210	3.	* 3	2300	285	3.
1	1500	61	6.	* 2	0945	136	4.	* 3	0430	211	3.	* 3	2315	286	3.
1	1515	62	7.	* 2	1000	137	4.	* 3	0445	212	3.	* 3	2330	287	3.
1	1530	63	8.	* 2	1015	138	4.	* 3	0500	213	3.	* 3	2345	288	3.
1	1545	64	8.	* 2	1030	139	4.	* 3	0515	214	3.	* 4	0000	289	3.
1	1600	65	9.	* 2	1045	140	4.	* 3	0530	215	3.	* 4	0015	290	3.
1	1615	66	9.	* 2	1100	141	4.	* 3	0545	216	3.	* 4	0030	291	3.
1	1630	67	9.	* 2	1115	142	4.	* 3	0600	217	3.	* 4	0045	292	3.
1	1645	68	9.	* 2	1130	143	4.	* 3	0615	218	3.	* 4	0100	293	3.
1	1700	69	9.	* 2	1145	144	4.	* 3	0630	219	3.	* 4	0115	294	3.
1	1715	70	9.	* 2	1200	145	4.	* 3	0645	220	3.	* 4	0130	295	3.
1	1730	71	9.	* 2	1215	146	4.	* 3	0700	221	3.	* 4	0145	296	3.
1	1745	72	9.	* 2	1230	147	4.	* 3	0715	222	3.	* 4	0200	297	3.
1	1800	73	8.	* 2	1245	148	4.	* 3	0730	223	3.	* 4	0215	298	3.
1	1815	74	8.	* 2	1300	149	4.	* 3	0745	224	3.	* 4	0230	299	3.
1	1830	75	8.	* 2	1315	150	4.	* 3	0800	225	3.	* 4	0245	300	3.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW  
+ (CFS) (HR) 6-HR 24-HR 72-HR 74.75-HR  
(CFS)  
+ 17. 7.50 8. 6. 4. 4.  
(INCHES) .417 1.293 2.690 2.692  
(AC-FT) 4. 12. 25. 25.  
CUMULATIVE AREA = .17 SQ MI

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170 KK \* STP8 \* AREA 4A  
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RUNOFF FROM AREA 4A  
SUBBASIN RUNOFF DATA  
172 BA SUBBASIN CHARACTERISTICS  
TAREA .04 SUBBASIN AREA  
SNAP 14.50 NORMAL ANNUAL PRECIPITATION  
RATIO .00 RATIO OF HYDROGRAPH  
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HYDROGRAPH AT STATION STP8

*****																			
DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	1845	0.	1330	0.	0815											
1	0015	2	0.	1900	0.	1345	0.	0830											
1	0030	3	0.	1915	0.	1400	0.	0845											
1	0045	4	0.	1930	0.	1415	0.	0900											
1	0100	5	0.	1945	0.	1430	0.	0915											
1	0115	6	0.	2000	0.	1445	0.	0930											
1	0130	7	12.	2015	0.	1500	0.	0945											
1	0145	8	8.	2030	0.	1515	0.	1000											
1	0200	9	9.	2045	0.	1530	0.	1015											
1	0215	10	14.	2100	0.	1545	0.	1030											
1	0230	11	16.	2115	0.	1600	0.	1045											
1	0245	12	39.	2130	0.	1615	0.	1100											
1	0300	13	13.	2145	0.	1630	0.	1115											
1	0315	14	2.	2200	0.	1645	0.	1130											
1	0330	15	0.	2215	0.	1700	0.	1145											
1	0345	16	0.	2230	0.	1715	0.	1200											
1	0400	17	0.	2245	0.	1730	0.	1215											
1	0415	18	0.	2300	0.	1745	0.	1230											
1	0430	19	0.	2315	0.	1800	0.	1245											
1	0445	20	0.	2330	0.	1815	0.	1300											
1	0500	21	0.	2345	0.	1830	0.	1315											
1	0515	22	0.	0000	0.	1845	0.	1330											
1	0530	23	0.	0015	0.	1900	0.	1345											
1	0545	24	0.	0030	0.	1915	0.	1400											
1	0600	25	0.	0045	0.	1930	0.	1415											
1	0615	26	0.	0100	0.	1945	0.	1430											
1	0630	27	0.	0115	0.	2000	0.	1445											
1	0645	28	0.	0130	0.	2015	0.	1500											
1	0700	29	0.	0145	0.	2030	0.	1515											
1	0715	30	0.	0200	0.	2045	0.	1530											
1	0730	31	0.	0215	0.	2100	0.	1545											
1	0745	32	0.	0230	0.	2115	0.	1600											
1	0800	33	0.	0245	0.	2130	0.	1615											
1	0815	34	0.	0300	0.	2145	0.	1630											
1	0830	35	0.	0315	0.	2200	0.	1645											
1	0845	36	0.	0330	0.	2215	0.	1700											
1	0900	37	0.	0345	0.	2230	0.	1715											
1	0915	38	0.	0400	0.	2245	0.	1730											
1	0930	39	0.	0415	0.	2300	0.	1745											
1	0945	40	0.	0430	0.	2315	0.	1800											
1	1000	41	0.	0445	0.	2330	0.	1815											
1	1015	42	0.	0500	0.	2345	0.	1830											
1	1030	43	0.	0515	0.	0000	0.	1845											
1	1045	44	0.	0530	0.	0015	0.	1900											
1	1100	45	0.	0545	0.	0030	0.	1915											
1	1115	46	0.	0600	0.	0045	0.	1930											
1	1130	47	0.	0615	0.	0100	0.	1945											
1	1145	48	0.	0630	0.	0115	0.	2000											
1	1200	49	0.	0645	0.	0130	0.	2015											
1	1215	50	0.	0700	0.	0145	0.	2030											
1	1230	51	0.	0715	0.	0200	0.	2045											
1	1245	52	0.	0730	0.	0215	0.	2100											
1	1300	53	0.	0745	0.	0230	0.	2115											
1	1315	54	0.	0800	0.	0245	0.	2130											
1	1330	55	0.	0815	0.	0300	0.	2145											
1	1345	56	0.	0830	0.	0315	0.	2200											
1	1400	57	0.	0845	0.	0330	0.	2215											
1	1415	58	0.	0900	0.	0345	0.	2230											
1	1430	59	0.	0915	0.	0400	0.	2245											
1	1445	60	0.	0930	0.	0415	0.	2300											
1	1500	61	0.	0945	0.	0430	0.	2315											
1	1515	62	0.	1000	0.	0445	0.	2330											
1	1530	63	0.	1015	0.	0500	0.	2345											
1	1545	64	0.	1030	0.	0515	0.	0000											
1	1600	65	0.	1045	0.	0530	0.	0015											
1	1615	66	0.	1100	0.	0545	0.	0030											
1	1630	67	0.	1115	0.	0600	0.	0045											
1	1645	68	0.	1130	0.	0615	0.	0100											
1	1700	69	0.	1145	0.	0630	0.	0115											
1	1715	70	0.	1200	0.	0645	0.	0130											
1	1730	71	0.	1215	0.	0700	0.	0145											
1	1745	72	0.	1230	0.	0715	0.	0200											
1	1800	73	0.	1245	0.	0730	0.	0215											
1	1815	74	0.	1300	0.	0745	0.	0230											
1	1830	75	0.	1315	0.	0800	0.	0245											

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+ (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR

(CFS)  
 + 39. 2.75 5. 1. 1. 1.  
 (INCHES) 1.216 1.360 1.742 1.763  
 (AC-FT) 2. 3. 3. 3.

CUMULATIVE AREA = .04 SQ MI

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 183 KK \* LAG9 \*  
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ROUTED LAG TIME LAG9 (1 STEP)

HYDROGRAPH ROUTING DATA

185 RT TATUM OR STRADDLE-STAGGER ROUTING  
 NSTPS 1 NUMBER OF TATUM STEPS  
 NSTDL 2 NUMBER OF ORDINATES TO BE AVERAGED  
 LAG 0 NUMBER OF INTERVALS TO LAG HYDROGRAPH

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HYDROGRAPH AT STATION LAG9

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	1845	76	0.	2	1330	151	0.	3	0815	226	0.					
1	0015	2	0.	1900	77	0.	2	1345	152	0.	3	0830	227	0.					
1	0030	3	0.	1915	78	0.	2	1400	153	0.	3	0845	228	0.					
1	0045	4	0.	1930	79	0.	2	1415	154	0.	3	0900	229	0.					
1	0100	5	0.	1945	80	0.	2	1430	155	0.	3	0915	230	0.					
1	0115	6	0.	2000	81	0.	2	1445	156	0.	3	0930	231	0.					
1	0130	7	6.	2015	82	0.	2	1500	157	0.	3	0945	232	0.					
1	0145	8	10.	2030	83	0.	2	1515	158	0.	3	1000	233	0.					
1	0200	9	8.	2045	84	0.	2	1530	159	0.	3	1015	234	0.					
1	0215	10	12.	2100	85	0.	2	1545	160	0.	3	1030	235	0.					
1	0230	11	15.	2115	86	0.	2	1600	161	0.	3	1045	236	0.					
1	0245	12	28.	2130	87	0.	2	1615	162	0.	3	1100	237	0.					
1	0300	13	26.	2145	88	0.	2	1630	163	0.	3	1115	238	0.					
1	0315	14	7.	2200	89	0.	2	1645	164	0.	3	1130	239	0.					
1	0330	15	1.	2215	90	0.	2	1700	165	0.	3	1145	240	0.					
1	0345	16	0.	2230	91	0.	2	1715	166	0.	3	1200	241	0.					
1	0400	17	0.	2245	92	0.	2	1730	167	0.	3	1215	242	0.					
1	0415	18	0.	2300	93	0.	2	1745	168	0.	3	1230	243	0.					
1	0430	19	0.	2315	94	0.	2	1800	169	0.	3	1245	244	0.					
1	0445	20	0.	2330	95	0.	2	1815	170	0.	3	1300	245	0.					
1	0500	21	0.	2345	96	0.	2	1830	171	0.	3	1315	246	0.					
1	0515	22	0.	0000	97	0.	2	1845	172	0.	3	1330	247	0.					
1	0530	23	0.	0015	98	0.	2	1900	173	0.	3	1345	248	0.					
1	0545	24	0.	0030	99	0.	2	1915	174	0.	3	1400	249	0.					
1	0600	25	0.	0045	100	0.	2	1930	175	0.	3	1415	250	0.					
1	0615	26	0.	0100	101	0.	2	1945	176	0.	3	1430	251	0.					
1	0630	27	0.	0115	102	0.	2	2000	177	0.	3	1445	252	0.					
1	0645	28	0.	0130	103	0.	2	2015	178	0.	3	1500	253	0.					
1	0700	29	0.	0145	104	0.	2	2030	179	0.	3	1515	254	0.					
1	0715	30	0.	0200	105	0.	2	2045	180	0.	3	1530	255	0.					
1	0730	31	0.	0215	106	0.	2	2100	181	0.	3	1545	256	0.					
1	0745	32	0.	0230	107	0.	2	2115	182	0.	3	1600	257	0.					
1	0800	33	0.	0245	108	0.	2	2130	183	0.	3	1615	258	0.					
1	0815	34	0.	0300	109	0.	2	2145	184	0.	3	1630	259	0.					
1	0830	35	0.	0315	110	0.	2	2200	185	0.	3	1645	260	0.					
1	0845	36	0.	0330	111	0.	2	2215	186	0.	3	1700	261	0.					
1	0900	37	0.	0345	112	0.	2	2230	187	0.	3	1715	262	0.					
1	0915	38	0.	0400	113	0.	2	2245	188	0.	3	1730	263	0.					
1	0930	39	0.	0415	114	0.	2	2300	189	0.	3	1745	264	0.					
1	0945	40	0.	0430	115	0.	2	2315	190	0.	3	1800	265	0.					
1	1000	41	0.	0445	116	0.	2	2330	191	0.	3	1815	266	0.					
1	1015	42	0.	0500	117	0.	2	2345	192	0.	3	1830	267	0.					
1	1030	43	0.	0515	118	0.	3	0000	193	0.	3	1845	268	0.					
1	1045	44	0.	0530	119	0.	3	0015	194	0.	3	1900	269	0.					
1	1100	45	0.	0545	120	0.	3	0030	195	0.	3	1915	270	0.					
1	1115	46	0.	0600	121	0.	3	0045	196	0.	3	1930	271	0.					
1	1130	47	0.	0615	122	0.	3	0100	197	0.	3	1945	272	0.					
1	1145	48	0.	0630	123	0.	3	0115	198	0.	3	2000	273	0.					
1	1200	49	0.	0645	124	0.	3	0130	199	0.	3	2015	274	0.					
1	1215	50	0.	0700	125	0.	3	0145	200	0.	3	2030	275	0.					
1	1230	51	0.	0715	126	0.	3	0200	201	0.	3	2045	276	0.					

1	1245	52	0.	*	2	0730	127	0.	*	3	0215	202	0.	*	3	2100	277	0.
1	1300	53	0.	*	2	0745	128	0.	*	3	0230	203	0.	*	3	2115	278	0.
1	1315	54	0.	*	2	0800	129	0.	*	3	0245	204	0.	*	3	2130	279	0.
1	1330	55	0.	*	2	0815	130	0.	*	3	0300	205	0.	*	3	2145	280	0.
1	1345	56	0.	*	2	0830	131	0.	*	3	0315	206	0.	*	3	2200	281	0.
1	1400	57	0.	*	2	0845	132	0.	*	3	0330	207	0.	*	3	2215	282	0.
1	1415	58	0.	*	2	0900	133	0.	*	3	0345	208	0.	*	3	2230	283	0.
1	1430	59	0.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	0.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	0.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	0.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	0.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	0.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	0.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	0.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	0.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	0.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	0.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	0.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	0.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	0.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	0.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	0.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	0.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW  
 6-HR 24-HR 72-HR 74.75-HR  
 + (CFS) (HR)  
 + 28. 2.75 5. 1. 1. 1.  
 (INCHES) 1.216 1.360 1.742 1.763  
 (AC-FT) 2. 3. 3. 3.  
 CUMULATIVE AREA = .04 SQ MI

186 KK \* STP10 \* AREA 3

RUNOFF FROM AREA 3

SUBBASIN RUNOFF DATA

188 BA SUBBASIN CHARACTERISTICS  
 TAREA .11 SUBBASIN AREA  
 SNAP 14.00 NORMAL ANNUAL PRECIPITATION  
 RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP10

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	1.	*	1	1845	76	1.	*	2	1330	151	1.	*	3	0815	226	1.	
1	0015	2	1.	*	1	1900	77	1.	*	2	1345	152	1.	*	3	0830	227	1.	
1	0030	3	1.	*	1	1915	78	1.	*	2	1400	153	1.	*	3	0845	228	1.	
1	0045	4	1.	*	1	1930	79	1.	*	2	1415	154	1.	*	3	0900	229	1.	
1	0100	5	1.	*	1	1945	80	1.	*	2	1430	155	1.	*	3	0915	230	1.	
1	0115	6	12.	*	1	2000	81	1.	*	2	1445	156	1.	*	3	0930	231	1.	
1	0130	7	47.	*	1	2015	82	1.	*	2	1500	157	1.	*	3	0945	232	1.	
1	0145	8	33.	*	1	2030	83	1.	*	2	1515	158	1.	*	3	1000	233	1.	
1	0200	9	39.	*	1	2045	84	1.	*	2	1530	159	1.	*	3	1015	234	1.	
1	0215	10	55.	*	1	2100	85	1.	*	2	1545	160	1.	*	3	1030	235	1.	
1	0230	11	61.	*	1	2115	86	1.	*	2	1600	161	1.	*	3	1045	236	1.	
1	0245	12	141.	*	1	2130	87	1.	*	2	1615	162	1.	*	3	1100	237	1.	
1	0300	13	60.	*	1	2145	88	1.	*	2	1630	163	1.	*	3	1115	238	1.	
1	0315	14	21.	*	1	2200	89	1.	*	2	1645	164	1.	*	3	1130	239	1.	
1	0330	15	7.	*	1	2215	90	1.	*	2	1700	165	1.	*	3	1145	240	1.	
1	0345	16	2.	*	1	2230	91	1.	*	2	1715	166	1.	*	3	1200	241	1.	
1	0400	17	1.	*	1	2245	92	1.	*	2	1730	167	1.	*	3	1215	242	1.	
1	0415	18	1.	*	1	2300	93	1.	*	2	1745	168	1.	*	3	1230	243	1.	
1	0430	19	1.	*	1	2315	94	1.	*	2	1800	169	1.	*	3	1245	244	1.	
1	0445	20	1.	*	1	2330	95	1.	*	2	1815	170	1.	*	3	1300	245	1.	
1	0500	21	1.	*	1	2345	96	1.	*	2	1830	171	1.	*	3	1315	246	1.	

1	0515	22	1.	*	2	0000	97	1.	*	2	1845	172	1.	*	3	1330	247	1.
1	0530	23	1.	*	2	0015	98	1.	*	2	1900	173	1.	*	3	1345	248	1.
1	0545	24	1.	*	2	0030	99	1.	*	2	1915	174	1.	*	3	1400	249	1.
1	0600	25	1.	*	2	0045	100	1.	*	2	1930	175	1.	*	3	1415	250	1.
1	0615	26	1.	*	2	0100	101	1.	*	2	1945	176	1.	*	3	1430	251	1.
1	0630	27	1.	*	2	0115	102	1.	*	2	2000	177	1.	*	3	1445	252	1.
1	0645	28	1.	*	2	0130	103	1.	*	2	2015	178	1.	*	3	1500	253	1.
1	0700	29	1.	*	2	0145	104	1.	*	2	2030	179	1.	*	3	1515	254	1.
1	0715	30	1.	*	2	0200	105	1.	*	2	2045	180	1.	*	3	1530	255	1.
1	0730	31	1.	*	2	0215	106	1.	*	2	2100	181	1.	*	3	1545	256	1.
1	0745	32	1.	*	2	0230	107	1.	*	2	2115	182	1.	*	3	1600	257	1.
1	0800	33	1.	*	2	0245	108	1.	*	2	2130	183	1.	*	3	1615	258	1.
1	0815	34	1.	*	2	0300	109	1.	*	2	2145	184	1.	*	3	1630	259	1.
1	0830	35	1.	*	2	0315	110	1.	*	2	2200	185	1.	*	3	1645	260	1.
1	0845	36	1.	*	2	0330	111	1.	*	2	2215	186	1.	*	3	1700	261	1.
1	0900	37	1.	*	2	0345	112	1.	*	2	2230	187	1.	*	3	1715	262	1.
1	0915	38	1.	*	2	0400	113	1.	*	2	2245	188	1.	*	3	1730	263	1.
1	0930	39	1.	*	2	0415	114	1.	*	2	2300	189	1.	*	3	1745	264	1.
1	0945	40	1.	*	2	0430	115	1.	*	2	2315	190	1.	*	3	1800	265	1.
1	1000	41	1.	*	2	0445	116	1.	*	2	2330	191	1.	*	3	1815	266	1.
1	1015	42	1.	*	2	0500	117	1.	*	2	2345	192	1.	*	3	1830	267	1.
1	1030	43	1.	*	2	0515	118	1.	*	3	0000	193	1.	*	3	1845	268	1.
1	1045	44	1.	*	2	0530	119	1.	*	3	0015	194	1.	*	3	1900	269	1.
1	1100	45	1.	*	2	0545	120	1.	*	3	0030	195	1.	*	3	1915	270	1.
1	1115	46	1.	*	2	0600	121	1.	*	3	0045	196	1.	*	3	1930	271	1.
1	1130	47	1.	*	2	0615	122	1.	*	3	0100	197	1.	*	3	1945	272	1.
1	1145	48	1.	*	2	0630	123	1.	*	3	0115	198	1.	*	3	2000	273	1.
1	1200	49	1.	*	2	0645	124	1.	*	3	0130	199	1.	*	3	2015	274	1.
1	1215	50	1.	*	2	0700	125	1.	*	3	0145	200	1.	*	3	2030	275	1.
1	1230	51	1.	*	2	0715	126	1.	*	3	0200	201	1.	*	3	2045	276	1.
1	1245	52	1.	*	2	0730	127	1.	*	3	0215	202	1.	*	3	2100	277	1.
1	1300	53	1.	*	2	0745	128	1.	*	3	0230	203	1.	*	3	2115	278	1.
1	1315	54	1.	*	2	0800	129	1.	*	3	0245	204	1.	*	3	2130	279	1.
1	1330	55	1.	*	2	0815	130	1.	*	3	0300	205	1.	*	3	2145	280	1.
1	1345	56	1.	*	2	0830	131	1.	*	3	0315	206	1.	*	3	2200	281	1.
1	1400	57	1.	*	2	0845	132	1.	*	3	0330	207	1.	*	3	2215	282	1.
1	1415	58	1.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	1.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	1.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	1.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	1.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	1.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	1.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	1.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	1.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	1.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	1.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	1.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	1.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	1.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	1.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	1.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	1.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	1.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

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+ (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 141.	2.75	20.	6.	2.	2.
	(CFS)				
	(INCHES)	1.654	1.830	2.300	2.327
	(AC-FT)	10.	11.	14.	14.

CUMULATIVE AREA = .11 SQ MI

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*           *
199 KK *   C3 *
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COMBINE 9,10

201 HC HYDROGRAPH COMBINATION  
 ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION C3

SUM OF 2 HYDROGRAPHS

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*****
DA MON HRMN *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *
ORD          *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *   *
+           +           +           +           +           +           +           +
1 0000 1 1. * 1 1845 76 1. * 2 1330 151 1. * 3 0815 226 1.
1 0015 2 1. * 1 1900 77 1. * 2 1345 152 1. * 3 0830 227 1.
1 0030 3 1. * 1 1915 78 1. * 2 1400 153 1. * 3 0845 228 1.
1 0045 4 1. * 1 1930 79 1. * 2 1415 154 1. * 3 0900 229 1.
1 0100 5 1. * 1 1945 80 1. * 2 1430 155 1. * 3 0915 230 1.
1 0115 6 13. * 1 2000 81 1. * 2 1445 156 1. * 3 0930 231 1.
1 0130 7 53. * 1 2015 82 1. * 2 1500 157 1. * 3 0945 232 1.
1 0145 8 43. * 1 2030 83 1. * 2 1515 158 1. * 3 1000 233 1.
1 0200 9 47. * 1 2045 84 1. * 2 1530 159 1. * 3 1015 234 1.
1 0215 10 67. * 1 2100 85 1. * 2 1545 160 1. * 3 1030 235 1.
1 0230 11 76. * 1 2115 86 1. * 2 1600 161 1. * 3 1045 236 1.
1 0245 12 168. * 1 2130 87 1. * 2 1615 162 1. * 3 1100 237 1.
1 0300 13 86. * 1 2145 88 1. * 2 1630 163 1. * 3 1115 238 1.
1 0315 14 28. * 1 2200 89 1. * 2 1645 164 1. * 3 1130 239 1.
1 0330 15 8. * 1 2215 90 1. * 2 1700 165 1. * 3 1145 240 1.
1 0345 16 2. * 1 2230 91 1. * 2 1715 166 1. * 3 1200 241 1.
1 0400 17 1. * 1 2245 92 1. * 2 1730 167 1. * 3 1215 242 1.
1 0415 18 1. * 1 2300 93 1. * 2 1745 168 1. * 3 1230 243 1.
1 0430 19 1. * 1 2315 94 1. * 2 1800 169 1. * 3 1245 244 1.
1 0445 20 1. * 1 2330 95 1. * 2 1815 170 1. * 3 1300 245 1.
1 0500 21 1. * 1 2345 96 1. * 2 1830 171 1. * 3 1315 246 1.
1 0515 22 1. * 2 0000 97 1. * 2 1845 172 1. * 3 1330 247 1.
1 0530 23 1. * 2 0015 98 1. * 2 1900 173 1. * 3 1345 248 1.
1 0545 24 1. * 2 0030 99 1. * 2 1915 174 1. * 3 1400 249 1.
1 0600 25 1. * 2 0045 100 1. * 2 1930 175 1. * 3 1415 250 1.
1 0615 26 1. * 2 0100 101 1. * 2 1945 176 1. * 3 1430 251 1.
1 0630 27 1. * 2 0115 102 1. * 2 2000 177 1. * 3 1445 252 1.
1 0645 28 1. * 2 0130 103 1. * 2 2015 178 1. * 3 1500 253 1.
1 0700 29 1. * 2 0145 104 1. * 2 2030 179 1. * 3 1515 254 1.
1 0715 30 1. * 2 0200 105 1. * 2 2045 180 1. * 3 1530 255 1.
1 0730 31 1. * 2 0215 106 1. * 2 2100 181 1. * 3 1545 256 1.
1 0745 32 1. * 2 0230 107 1. * 2 2115 182 1. * 3 1600 257 1.
1 0800 33 1. * 2 0245 108 1. * 2 2130 183 1. * 3 1615 258 1.
1 0815 34 1. * 2 0300 109 1. * 2 2145 184 1. * 3 1630 259 1.
1 0830 35 1. * 2 0315 110 1. * 2 2200 185 1. * 3 1645 260 1.
1 0845 36 1. * 2 0330 111 1. * 2 2215 186 1. * 3 1700 261 1.
1 0900 37 1. * 2 0345 112 1. * 2 2230 187 1. * 3 1715 262 1.
1 0915 38 1. * 2 0400 113 1. * 2 2245 188 1. * 3 1730 263 1.
1 0930 39 1. * 2 0415 114 1. * 2 2300 189 1. * 3 1745 264 1.
1 0945 40 1. * 2 0430 115 1. * 2 2315 190 1. * 3 1800 265 1.
1 1000 41 1. * 2 0445 116 1. * 2 2330 191 1. * 3 1815 266 1.
1 1015 42 1. * 2 0500 117 1. * 2 2345 192 1. * 3 1830 267 1.
1 1030 43 1. * 2 0515 118 1. * 3 0000 193 1. * 3 1845 268 1.
1 1045 44 1. * 2 0530 119 1. * 3 0015 194 1. * 3 1900 269 1.
1 1100 45 1. * 2 0545 120 1. * 3 0030 195 1. * 3 1915 270 1.
1 1115 46 1. * 2 0600 121 1. * 3 0045 196 1. * 3 1930 271 1.
1 1130 47 1. * 2 0615 122 1. * 3 0100 197 1. * 3 1945 272 1.
1 1145 48 1. * 2 0630 123 1. * 3 0115 198 1. * 3 2000 273 1.
1 1200 49 1. * 2 0645 124 1. * 3 0130 199 1. * 3 2015 274 1.
1 1215 50 1. * 2 0700 125 1. * 3 0145 200 1. * 3 2030 275 1.
1 1230 51 1. * 2 0715 126 1. * 3 0200 201 1. * 3 2045 276 1.
1 1245 52 1. * 2 0730 127 1. * 3 0215 202 1. * 3 2100 277 1.
1 1300 53 1. * 2 0745 128 1. * 3 0230 203 1. * 3 2115 278 1.
1 1315 54 1. * 2 0800 129 1. * 3 0245 204 1. * 3 2130 279 1.
1 1330 55 1. * 2 0815 130 1. * 3 0300 205 1. * 3 2145 280 1.
1 1345 56 1. * 2 0830 131 1. * 3 0315 206 1. * 3 2200 281 1.
1 1400 57 1. * 2 0845 132 1. * 3 0330 207 1. * 3 2215 282 1.
1 1415 58 1. * 2 0900 133 1. * 3 0345 208 1. * 3 2230 283 1.
1 1430 59 1. * 2 0915 134 1. * 3 0400 209 1. * 3 2245 284 1.
1 1445 60 1. * 2 0930 135 1. * 3 0415 210 1. * 3 2300 285 1.
1 1500 61 1. * 2 0945 136 1. * 3 0430 211 1. * 3 2315 286 1.
1 1515 62 1. * 2 1000 137 1. * 3 0445 212 1. * 3 2330 287 1.
1 1530 63 1. * 2 1015 138 1. * 3 0500 213 1. * 3 2345 288 1.
1 1545 64 1. * 2 1030 139 1. * 3 0515 214 1. * 4 0000 289 1.
1 1600 65 1. * 2 1045 140 1. * 3 0530 215 1. * 4 0015 290 1.
1 1615 66 1. * 2 1100 141 1. * 3 0545 216 1. * 4 0030 291 1.
1 1630 67 1. * 2 1115 142 1. * 3 0600 217 1. * 4 0045 292 1.
1 1645 68 1. * 2 1130 143 1. * 3 0615 218 1. * 4 0100 293 1.
1 1700 69 1. * 2 1145 144 1. * 3 0630 219 1. * 4 0115 294 1.
1 1715 70 1. * 2 1200 145 1. * 3 0645 220 1. * 4 0130 295 1.
1 1730 71 1. * 2 1215 146 1. * 3 0700 221 1. * 4 0145 296 1.
1 1745 72 1. * 2 1230 147 1. * 3 0715 222 1. * 4 0200 297 1.
1 1800 73 1. * 2 1245 148 1. * 3 0730 223 1. * 4 0215 298 1.
1 1815 74 1. * 2 1300 149 1. * 3 0745 224 1. * 4 0230 299 1.
1 1830 75 1. * 2 1315 150 1. * 3 0800 225 1. * 4 0245 300 1.
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PEAK FLOW TIME MAXIMUM AVERAGE FLOW
+ (CFS) (HR) 6-HR 24-HR 72-HR 74.75-HR
(CFS)
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+ 168. 2.75 25. 7. 3. 3.  
 (INCHES) 1.547 1.715 2.163 2.189  
 (AC-FT) 12. 14. 17. 18.  
 CUMULATIVE AREA = .15 SQ MI

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 202 KK \* RDBE2 \*  
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DBE2 ROUTING

HYDROGRAPH ROUTING DATA

204 RS STORAGE ROUTING  
 NSTPS 1 NUMBER OF SUBREACHES  
 ITYP ELEV TYPE OF INITIAL CONDITION  
 RSVRIC 118.25 INITIAL CONDITION  
 X .00 WORKING R AND D COEFFICIENT

205 SV STORAGE .0 4.4 5.7 19.0 19.6 24.7 30.5

206 SE ELEVATION 118.25 120.41 122.50 125.00 125.10 126.00 127.00

207 SQ DISCHARGE 0. 0. 2. 4. 10. 23. 32.

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HYDROGRAPH AT STATION RDBE2

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*****																				
* * *																				
* * *																				
*****																				
DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	0000	1	0.	.0	118.3 * 2	0100 101	3.	8.6	123.0 * 3	0200 201	2.	5.3	121.9							
1	0015	2	0.	.0	118.3 * 2	0115 102	3.	8.6	123.0 * 3	0215 202	2.	5.3	121.9							
1	0030	3	0.	.0	118.3 * 2	0130 103	3.	8.5	123.0 * 3	0230 203	2.	5.3	121.9							
1	0045	4	0.	.1	118.3 * 2	0145 104	3.	8.5	123.0 * 3	0245 204	2.	5.3	121.8							
1	0100	5	0.	.1	118.3 * 2	0200 105	3.	8.4	123.0 * 3	0300 205	2.	5.3	121.8							
1	0115	6	0.	.2	118.4 * 2	0215 106	3.	8.4	123.0 * 3	0315 206	2.	5.2	121.8							
1	0130	7	0.	.9	118.7 * 2	0230 107	3.	8.4	123.0 * 3	0330 207	2.	5.2	121.8							
1	0145	8	0.	1.9	119.2 * 2	0245 108	3.	8.3	123.0 * 3	0345 208	2.	5.2	121.7							
1	0200	9	0.	2.8	119.6 * 2	0300 109	3.	8.3	123.0 * 3	0400 209	2.	5.2	121.7							
1	0215	10	0.	4.0	120.2 * 2	0315 110	3.	8.3	123.0 * 3	0415 210	1.	5.2	121.7							
1	0230	11	2.	5.4	122.1 * 2	0330 111	3.	8.2	123.0 * 3	0430 211	1.	5.2	121.7							
1	0245	12	3.	7.9	122.9 * 2	0345 112	3.	8.2	123.0 * 3	0445 212	1.	5.2	121.6							
1	0300	13	3.	10.5	123.4 * 2	0400 113	3.	8.2	123.0 * 3	0500 213	1.	5.2	121.6							
1	0315	14	3.	11.6	123.6 * 2	0415 114	3.	8.1	123.0 * 3	0515 214	1.	5.1	121.6							
1	0330	15	3.	11.9	123.7 * 2	0430 115	3.	8.1	123.0 * 3	0530 215	1.	5.1	121.6							
1	0345	16	3.	12.0	123.7 * 2	0445 116	3.	8.0	122.9 * 3	0545 216	1.	5.1	121.6							
1	0400	17	3.	11.9	123.7 * 2	0500 117	3.	8.0	122.9 * 3	0600 217	1.	5.1	121.6							
1	0415	18	3.	11.9	123.7 * 2	0515 118	3.	8.0	122.9 * 3	0615 218	1.	5.1	121.5							
1	0430	19	3.	11.9	123.7 * 2	0530 119	3.	7.9	122.9 * 3	0630 219	1.	5.1	121.5							
1	0445	20	3.	11.8	123.6 * 2	0545 120	3.	7.9	122.9 * 3	0645 220	1.	5.1	121.5							
1	0500	21	3.	11.8	123.6 * 2	0600 121	3.	7.9	122.9 * 3	0700 221	1.	5.1	121.5							
1	0515	22	3.	11.7	123.6 * 2	0615 122	3.	7.8	122.9 * 3	0715 222	1.	5.1	121.5							
1	0530	23	3.	11.7	123.6 * 2	0630 123	3.	7.8	122.9 * 3	0730 223	1.	5.1	121.5							
1	0545	24	3.	11.6	123.6 * 2	0645 124	3.	7.8	122.9 * 3	0745 224	1.	5.1	121.5							
1	0600	25	3.	11.6	123.6 * 2	0700 125	3.	7.7	122.9 * 3	0800 225	1.	5.1	121.5							
1	0615	26	3.	11.6	123.6 * 2	0715 126	3.	7.7	122.9 * 3	0815 226	1.	5.0	121.4							
1	0630	27	3.	11.5	123.6 * 2	0730 127	3.	7.7	122.9 * 3	0830 227	1.	5.0	121.4							
1	0645	28	3.	11.5	123.6 * 2	0745 128	3.	7.6	122.9 * 3	0845 228	1.	5.0	121.4							
1	0700	29	3.	11.4	123.6 * 2	0800 129	3.	7.6	122.9 * 3	0900 229	1.	5.0	121.4							
1	0715	30	3.	11.4	123.6 * 2	0815 130	3.	7.5	122.9 * 3	0915 230	1.	5.0	121.4							
1	0730	31	3.	11.3	123.6 * 2	0830 131	3.	7.5	122.8 * 3	0930 231	1.	5.0	121.4							
1	0745	32	3.	11.3	123.6 * 2	0845 132	3.	7.5	122.8 * 3	0945 232	1.	5.0	121.4							
1	0800	33	3.	11.3	123.5 * 2	0900 133	3.	7.4	122.8 * 3	1000 233	1.	5.0	121.4							
1	0815	34	3.	11.2	123.5 * 2	0915 134	3.	7.4	122.8 * 3	1015 234	1.	5.0	121.4							
1	0830	35	3.	11.2	123.5 * 2	0930 135	3.	7.4	122.8 * 3	1030 235	1.	5.0	121.4							
1	0845	36	3.	11.1	123.5 * 2	0945 136	3.	7.3	122.8 * 3	1045 236	1.	5.0	121.4							
1	0900	37	3.	11.1	123.5 * 2	1000 137	3.	7.3	122.8 * 3	1100 237	1.	5.0	121.4							
1	0915	38	3.	11.1	123.5 * 2	1015 138	3.	7.3	122.8 * 3	1115 238	1.	5.0	121.3							
1	0930	39	3.	11.0	123.5 * 2	1030 139	3.	7.2	122.8 * 3	1130 239	1.	5.0	121.3							
1	0945	40	3.	11.0	123.5 * 2	1045 140	3.	7.2	122.8 * 3	1145 240	1.	5.0	121.3							
1	1000	41	3.	10.9	123.5 * 2	1100 141	3.	7.2	122.8 * 3	1200 241	1.	5.0	121.3							
1	1015	42	3.	10.9	123.5 * 2	1115 142	3.	7.1	122.8 * 3	1215 242	1.	5.0	121.3							
1	1030	43	3.	10.8	123.5 * 2	1130 143	3.	7.1	122.8 * 3	1230 243	1.	5.0	121.3							
1	1045	44	3.	10.8	123.5 * 2	1145 144	3.	7.1	122.8 * 3	1245 244	1.	5.0	121.3							
1	1100	45	3.	10.8	123.5 * 2	1200 145	3.	7.0	122.8 * 3	1300 245	1.	5.0	121.3							

1	1115	46	3.	10.7	123.4	*	2	1215	146	3.	7.0	122.7	*	3	1315	246	1.	5.0	121.3
1	1130	47	3.	10.7	123.4	*	2	1230	147	3.	7.0	122.7	*	3	1330	247	1.	5.0	121.3
1	1145	48	3.	10.6	123.4	*	2	1245	148	3.	6.9	122.7	*	3	1345	248	1.	5.0	121.3
1	1200	49	3.	10.6	123.4	*	2	1300	149	3.	6.9	122.7	*	3	1400	249	1.	5.0	121.3
1	1215	50	3.	10.6	123.4	*	2	1315	150	3.	6.9	122.7	*	3	1415	250	1.	5.0	121.3
1	1230	51	3.	10.5	123.4	*	2	1330	151	3.	6.8	122.7	*	3	1430	251	1.	5.0	121.3
1	1245	52	3.	10.5	123.4	*	2	1345	152	3.	6.8	122.7	*	3	1445	252	1.	4.9	121.3
1	1300	53	3.	10.4	123.4	*	2	1400	153	3.	6.8	122.7	*	3	1500	253	1.	4.9	121.3
1	1315	54	3.	10.4	123.4	*	2	1415	154	3.	6.7	122.7	*	3	1515	254	1.	4.9	121.3
1	1330	55	3.	10.4	123.4	*	2	1430	155	3.	6.7	122.7	*	3	1530	255	1.	4.9	121.3
1	1345	56	3.	10.3	123.4	*	2	1445	156	3.	6.7	122.7	*	3	1545	256	1.	4.9	121.3
1	1400	57	3.	10.3	123.4	*	2	1500	157	3.	6.6	122.7	*	3	1600	257	1.	4.9	121.3
1	1415	58	3.	10.2	123.4	*	2	1515	158	3.	6.6	122.7	*	3	1615	258	1.	4.9	121.3
1	1430	59	3.	10.2	123.3	*	2	1530	159	3.	6.6	122.7	*	3	1630	259	1.	4.9	121.3
1	1445	60	3.	10.2	123.3	*	2	1545	160	3.	6.5	122.7	*	3	1645	260	1.	4.9	121.3
1	1500	61	3.	10.1	123.3	*	2	1600	161	3.	6.5	122.7	*	3	1700	261	1.	4.9	121.2
1	1515	62	3.	10.1	123.3	*	2	1615	162	3.	6.5	122.6	*	3	1715	262	1.	4.9	121.2
1	1530	63	3.	10.0	123.3	*	2	1630	163	3.	6.4	122.6	*	3	1730	263	1.	4.9	121.2
1	1545	64	3.	10.0	123.3	*	2	1645	164	3.	6.4	122.6	*	3	1745	264	1.	4.9	121.2
1	1600	65	3.	10.0	123.3	*	2	1700	165	3.	6.4	122.6	*	3	1800	265	1.	4.9	121.2
1	1615	66	3.	9.9	123.3	*	2	1715	166	2.	6.3	122.6	*	3	1815	266	1.	4.9	121.2
1	1630	67	3.	9.9	123.3	*	2	1730	167	2.	6.3	122.6	*	3	1830	267	1.	4.9	121.2
1	1645	68	3.	9.8	123.3	*	2	1745	168	2.	6.3	122.6	*	3	1845	268	1.	4.9	121.2
1	1700	69	3.	9.8	123.3	*	2	1800	169	2.	6.2	122.6	*	3	1900	269	1.	4.9	121.2
1	1715	70	3.	9.8	123.3	*	2	1815	170	2.	6.2	122.6	*	3	1915	270	1.	4.9	121.2
1	1730	71	3.	9.7	123.3	*	2	1830	171	2.	6.2	122.6	*	3	1930	271	1.	4.9	121.2
1	1745	72	3.	9.7	123.3	*	2	1845	172	2.	6.1	122.6	*	3	1945	272	1.	4.9	121.2
1	1800	73	3.	9.6	123.2	*	2	1900	173	2.	6.1	122.6	*	3	2000	273	1.	4.9	121.2
1	1815	74	3.	9.6	123.2	*	2	1915	174	2.	6.1	122.6	*	3	2015	274	1.	4.9	121.2
1	1830	75	3.	9.6	123.2	*	2	1930	175	2.	6.0	122.6	*	3	2030	275	1.	4.9	121.2
1	1845	76	3.	9.5	123.2	*	2	1945	176	2.	6.0	122.6	*	3	2045	276	1.	4.9	121.2
1	1900	77	3.	9.5	123.2	*	2	2000	177	2.	6.0	122.6	*	3	2100	277	1.	4.9	121.2
1	1915	78	3.	9.5	123.2	*	2	2015	178	2.	5.9	122.6	*	3	2115	278	1.	4.9	121.2
1	1930	79	3.	9.4	123.2	*	2	2030	179	2.	5.9	122.5	*	3	2130	279	1.	4.9	121.2
1	1945	80	3.	9.4	123.2	*	2	2045	180	2.	5.9	122.5	*	3	2145	280	1.	4.9	121.2
1	2000	81	3.	9.3	123.2	*	2	2100	181	2.	5.8	122.5	*	3	2200	281	1.	4.9	121.2
1	2015	82	3.	9.3	123.2	*	2	2115	182	2.	5.8	122.5	*	3	2215	282	1.	4.9	121.2
1	2030	83	3.	9.3	123.2	*	2	2130	183	2.	5.8	122.5	*	3	2230	283	1.	4.9	121.2
1	2045	84	3.	9.2	123.2	*	2	2145	184	2.	5.7	122.5	*	3	2245	284	1.	4.9	121.2
1	2100	85	3.	9.2	123.2	*	2	2200	185	2.	5.7	122.5	*	3	2300	285	1.	4.9	121.2
1	2115	86	3.	9.2	123.2	*	2	2215	186	2.	5.7	122.5	*	3	2315	286	1.	4.9	121.2
1	2130	87	3.	9.1	123.1	*	2	2230	187	2.	5.6	122.5	*	3	2330	287	1.	4.9	121.2
1	2145	88	3.	9.1	123.1	*	2	2245	188	2.	5.6	122.4	*	3	2345	288	1.	4.9	121.2
1	2200	89	3.	9.0	123.1	*	2	2300	189	2.	5.6	122.4	*	4	0000	289	1.	4.9	121.2
1	2215	90	3.	9.0	123.1	*	2	2315	190	2.	5.6	122.3	*	4	0015	290	1.	4.9	121.2
1	2230	91	3.	9.0	123.1	*	2	2330	191	2.	5.5	122.3	*	4	0030	291	1.	4.9	121.2
1	2245	92	3.	8.9	123.1	*	2	2345	192	2.	5.5	122.2	*	4	0045	292	1.	4.9	121.2
1	2300	93	3.	8.9	123.1	*	3	0000	193	2.	5.5	122.2	*	4	0100	293	1.	4.9	121.2
1	2315	94	3.	8.8	123.1	*	3	0015	194	2.	5.5	122.2	*	4	0115	294	1.	4.9	121.2
1	2330	95	3.	8.8	123.1	*	3	0030	195	2.	5.4	122.1	*	4	0130	295	1.	4.9	121.2
1	2345	96	3.	8.8	123.1	*	3	0045	196	2.	5.4	122.1	*	4	0145	296	1.	4.9	121.2
2	0000	97	3.	8.7	123.1	*	3	0100	197	2.	5.4	122.0	*	4	0200	297	1.	4.9	121.2
2	0015	98	3.	8.7	123.1	*	3	0115	198	2.	5.4	122.0	*	4	0215	298	1.	4.9	121.2
2	0030	99	3.	8.7	123.1	*	3	0130	199	2.	5.4	122.0	*	4	0230	299	1.	4.9	121.2
2	0045	100	3.	8.6	123.1	*	3	0145	200	2.	5.3	121.9	*	4	0245	300	1.	4.9	121.2

PEAK FLOW TIME MAXIMUM AVERAGE FLOW  
 6-HR 24-HR 72-HR 74.75-HR  
 + (CFS) (HR)  
 (CFS)  
 + 3. 3.75 3. 3. 2. 2.  
 (INCHES) .182 .697 1.575 1.580  
 (AC-FT) 1. 6. 13. 13.

PEAK STORAGE TIME MAXIMUM AVERAGE STORAGE  
 6-HR 24-HR 72-HR 74.75-HR  
 + (AC-FT) (HR)  
 12. 3.75 12. 10. 7. 7.

PEAK STAGE TIME MAXIMUM AVERAGE STAGE  
 6-HR 24-HR 72-HR 74.75-HR  
 + (FEET) (HR)  
 123.68 3.75 123.60 123.34 122.44 122.32

CUMULATIVE AREA = .15 SQ MI

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 208 KK \* STP13 \* AREA 4B  
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1	1700	69	0.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	0.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	0.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	0.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	0.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	0.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	0.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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PEAK FLOW TIME MAXIMUM AVERAGE FLOW  
 + (CFS) (HR) 6-HR 24-HR 72-HR 74.75-HR  
 + 24. 2.75 3. 1. 0. 0.  
 (INCHES) 1.349 1.488 1.860 1.881  
 (AC-FT) 2. 2. 2. 2.  
 CUMULATIVE AREA = .02 SQ MI

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 \* \* \*  
 221 KK \* C4 \*  
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COMBINE 12,13

223 HC HYDROGRAPH COMBINATION  
 ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE  
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HYDROGRAPH AT STATION C4  
 SUM OF 2 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	1845	76	3.	*	2	1330	151	3.	*	3	0815	226	1.	
1	0015	2	0.	*	1	1900	77	3.	*	2	1345	152	3.	*	3	0830	227	1.	
1	0030	3	0.	*	1	1915	78	3.	*	2	1400	153	3.	*	3	0845	228	1.	
1	0045	4	0.	*	1	1930	79	3.	*	2	1415	154	3.	*	3	0900	229	1.	
1	0100	5	0.	*	1	1945	80	3.	*	2	1430	155	3.	*	3	0915	230	1.	
1	0115	6	3.	*	1	2000	81	3.	*	2	1445	156	3.	*	3	0930	231	1.	
1	0130	7	8.	*	1	2015	82	3.	*	2	1500	157	3.	*	3	0945	232	1.	
1	0145	8	6.	*	1	2030	83	3.	*	2	1515	158	3.	*	3	1000	233	1.	
1	0200	9	7.	*	1	2045	84	3.	*	2	1530	159	3.	*	3	1015	234	1.	
1	0215	10	9.	*	1	2100	85	3.	*	2	1545	160	3.	*	3	1030	235	1.	
1	0230	11	12.	*	1	2115	86	3.	*	2	1600	161	3.	*	3	1045	236	1.	
1	0245	12	27.	*	1	2130	87	3.	*	2	1615	162	3.	*	3	1100	237	1.	
1	0300	13	13.	*	1	2145	88	3.	*	2	1630	163	3.	*	3	1115	238	1.	
1	0315	14	6.	*	1	2200	89	3.	*	2	1645	164	3.	*	3	1130	239	1.	
1	0330	15	4.	*	1	2215	90	3.	*	2	1700	165	3.	*	3	1145	240	1.	
1	0345	16	3.	*	1	2230	91	3.	*	2	1715	166	3.	*	3	1200	241	1.	
1	0400	17	3.	*	1	2245	92	3.	*	2	1730	167	3.	*	3	1215	242	1.	
1	0415	18	3.	*	1	2300	93	3.	*	2	1745	168	3.	*	3	1230	243	1.	
1	0430	19	3.	*	1	2315	94	3.	*	2	1800	169	3.	*	3	1245	244	1.	
1	0445	20	3.	*	1	2330	95	3.	*	2	1815	170	3.	*	3	1300	245	1.	
1	0500	21	3.	*	1	2345	96	3.	*	2	1830	171	3.	*	3	1315	246	1.	
1	0515	22	3.	*	2	0000	97	3.	*	2	1845	172	3.	*	3	1330	247	1.	
1	0530	23	3.	*	2	0015	98	3.	*	2	1900	173	3.	*	3	1345	248	1.	
1	0545	24	3.	*	2	0030	99	3.	*	2	1915	174	3.	*	3	1400	249	1.	
1	0600	25	3.	*	2	0045	100	3.	*	2	1930	175	3.	*	3	1415	250	1.	
1	0615	26	3.	*	2	0100	101	3.	*	2	1945	176	3.	*	3	1430	251	1.	
1	0630	27	3.	*	2	0115	102	3.	*	2	2000	177	3.	*	3	1445	252	1.	
1	0645	28	3.	*	2	0130	103	3.	*	2	2015	178	3.	*	3	1500	253	1.	
1	0700	29	3.	*	2	0145	104	3.	*	2	2030	179	3.	*	3	1515	254	1.	
1	0715	30	3.	*	2	0200	105	3.	*	2	2045	180	3.	*	3	1530	255	1.	
1	0730	31	3.	*	2	0215	106	3.	*	2	2100	181	3.	*	3	1545	256	1.	
1	0745	32	3.	*	2	0230	107	3.	*	2	2115	182	3.	*	3	1600	257	1.	
1	0800	33	3.	*	2	0245	108	3.	*	2	2130	183	3.	*	3	1615	258	1.	
1	0815	34	3.	*	2	0300	109	3.	*	2	2145	184	3.	*	3	1630	259	1.	
1	0830	35	3.	*	2	0315	110	3.	*	2	2200	185	3.	*	3	1645	260	1.	
1	0845	36	3.	*	2	0330	111	3.	*	2	2215	186	3.	*	3	1700	261	1.	
1	0900	37	3.	*	2	0345	112	3.	*	2	2230	187	3.	*	3	1715	262	1.	
1	0915	38	3.	*	2	0400	113	3.	*	2	2245	188	2.	*	3	1730	263	1.	
1	0930	39	3.	*	2	0415	114	3.	*	2	2300	189	2.	*	3	1745	264	1.	
1	0945	40	3.	*	2	0430	115	3.	*	2	2315	190	2.	*	3	1800	265	1.	
1	1000	41	3.	*	2	0445	116	3.	*	2	2330	191	2.	*	3	1815	266	1.	

1	1015	42	3.	*	2	0500	117	3.	*	2	2345	192	2.	*	3	1830	267	1.
1	1030	43	3.	*	2	0515	118	3.	*	3	0000	193	2.	*	3	1845	268	1.
1	1045	44	3.	*	2	0530	119	3.	*	3	0015	194	2.	*	3	1900	269	1.
1	1100	45	3.	*	2	0545	120	3.	*	3	0030	195	2.	*	3	1915	270	1.
1	1115	46	3.	*	2	0600	121	3.	*	3	0045	196	2.	*	3	1930	271	1.
1	1130	47	3.	*	2	0615	122	3.	*	3	0100	197	2.	*	3	1945	272	1.
1	1145	48	3.	*	2	0630	123	3.	*	3	0115	198	2.	*	3	2000	273	1.
1	1200	49	3.	*	2	0645	124	3.	*	3	0130	199	2.	*	3	2015	274	1.
1	1215	50	3.	*	2	0700	125	3.	*	3	0145	200	2.	*	3	2030	275	1.
1	1230	51	3.	*	2	0715	126	3.	*	3	0200	201	2.	*	3	2045	276	1.
1	1245	52	3.	*	2	0730	127	3.	*	3	0215	202	2.	*	3	2100	277	1.
1	1300	53	3.	*	2	0745	128	3.	*	3	0230	203	2.	*	3	2115	278	1.
1	1315	54	3.	*	2	0800	129	3.	*	3	0245	204	2.	*	3	2130	279	1.
1	1330	55	3.	*	2	0815	130	3.	*	3	0300	205	2.	*	3	2145	280	1.
1	1345	56	3.	*	2	0830	131	3.	*	3	0315	206	2.	*	3	2200	281	1.
1	1400	57	3.	*	2	0845	132	3.	*	3	0330	207	2.	*	3	2215	282	1.
1	1415	58	3.	*	2	0900	133	3.	*	3	0345	208	2.	*	3	2230	283	1.
1	1430	59	3.	*	2	0915	134	3.	*	3	0400	209	2.	*	3	2245	284	1.
1	1445	60	3.	*	2	0930	135	3.	*	3	0415	210	2.	*	3	2300	285	1.
1	1500	61	3.	*	2	0945	136	3.	*	3	0430	211	2.	*	3	2315	286	1.
1	1515	62	3.	*	2	1000	137	3.	*	3	0445	212	2.	*	3	2330	287	1.
1	1530	63	3.	*	2	1015	138	3.	*	3	0500	213	2.	*	3	2345	288	1.
1	1545	64	3.	*	2	1030	139	3.	*	3	0515	214	2.	*	4	0000	289	1.
1	1600	65	3.	*	2	1045	140	3.	*	3	0530	215	2.	*	4	0015	290	1.
1	1615	66	3.	*	2	1100	141	3.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	3.	*	2	1115	142	3.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	3.	*	2	1130	143	3.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	3.	*	2	1145	144	3.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	3.	*	2	1200	145	3.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	3.	*	2	1215	146	3.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	3.	*	2	1230	147	3.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	3.	*	2	1245	148	3.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	3.	*	2	1300	149	3.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	3.	*	2	1315	150	3.	*	3	0800	225	1.	*	4	0245	300	1.

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*****
PEAK FLOW      TIME      MAXIMUM AVERAGE FLOW
+ (CFS)      (HR)
+ 27.  2.75      6.  4.  3.  2.
              (INCHES) .307 .775 1.604 1.621
              (AC-FT)  3.  7.  15.  15.
CUMULATIVE AREA = .17 SQ MI
    
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*****
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*
224 KK * STP15 * AREA 4A
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*
*****
RUNOFF FROM AREA 4A

SUBBASIN RUNOFF DATA

226 BA SUBBASIN CHARACTERISTICS
TAREA .04 SUBBASIN AREA
SNAP 14.50 NORMAL ANNUAL PRECIPITATION
RATIO .00 RATIO OF HYDROGRAPH

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*****
HYDROGRAPH AT STATION STP15
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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	1845	76	0.	*	2	1330	151	0.	*	3	0815	226	0.	
1	0015	2	0.	*	1	1900	77	0.	*	2	1345	152	0.	*	3	0830	227	0.	
1	0030	3	0.	*	1	1915	78	0.	*	2	1400	153	0.	*	3	0845	228	0.	
1	0045	4	0.	*	1	1930	79	0.	*	2	1415	154	0.	*	3	0900	229	0.	
1	0100	5	0.	*	1	1945	80	0.	*	2	1430	155	0.	*	3	0915	230	0.	
1	0115	6	0.	*	1	2000	81	0.	*	2	1445	156	0.	*	3	0930	231	0.	
1	0130	7	0.	*	1	2015	82	0.	*	2	1500	157	0.	*	3	0945	232	0.	
1	0145	8	0.	*	1	2030	83	0.	*	2	1515	158	0.	*	3	1000	233	0.	
1	0200	9	0.	*	1	2045	84	0.	*	2	1530	159	0.	*	3	1015	234	0.	
1	0215	10	0.	*	1	2100	85	0.	*	2	1545	160	0.	*	3	1030	235	0.	
1	0230	11	0.	*	1	2115	86	0.	*	2	1600	161	0.	*	3	1045	236	0.	

1	0245	12	0.	*	1	2130	87	0.	*	2	1615	162	0.	*	3	1100	237	0.
1	0300	13	0.	*	1	2145	88	0.	*	2	1630	163	0.	*	3	1115	238	0.
1	0315	14	0.	*	1	2200	89	0.	*	2	1645	164	0.	*	3	1130	239	0.
1	0330	15	0.	*	1	2215	90	0.	*	2	1700	165	0.	*	3	1145	240	0.
1	0345	16	0.	*	1	2230	91	0.	*	2	1715	166	0.	*	3	1200	241	0.
1	0400	17	0.	*	1	2245	92	0.	*	2	1730	167	0.	*	3	1215	242	0.
1	0415	18	0.	*	1	2300	93	0.	*	2	1745	168	0.	*	3	1230	243	0.
1	0430	19	0.	*	1	2315	94	0.	*	2	1800	169	0.	*	3	1245	244	0.
1	0445	20	0.	*	1	2330	95	0.	*	2	1815	170	0.	*	3	1300	245	0.
1	0500	21	0.	*	1	2345	96	0.	*	2	1830	171	0.	*	3	1315	246	0.
1	0515	22	0.	*	2	0000	97	0.	*	2	1845	172	0.	*	3	1330	247	0.
1	0530	23	0.	*	2	0015	98	0.	*	2	1900	173	0.	*	3	1345	248	0.
1	0545	24	0.	*	2	0030	99	0.	*	2	1915	174	0.	*	3	1400	249	0.
1	0600	25	0.	*	2	0045	100	0.	*	2	1930	175	0.	*	3	1415	250	0.
1	0615	26	0.	*	2	0100	101	0.	*	2	1945	176	0.	*	3	1430	251	0.
1	0630	27	0.	*	2	0115	102	0.	*	2	2000	177	0.	*	3	1445	252	0.
1	0645	28	0.	*	2	0130	103	0.	*	2	2015	178	0.	*	3	1500	253	0.
1	0700	29	0.	*	2	0145	104	0.	*	2	2030	179	0.	*	3	1515	254	0.
1	0715	30	10.	*	2	0200	105	0.	*	2	2045	180	0.	*	3	1530	255	0.
1	0730	31	14.	*	2	0215	106	0.	*	2	2100	181	0.	*	3	1545	256	0.
1	0745	32	7.	*	2	0230	107	0.	*	2	2115	182	0.	*	3	1600	257	0.
1	0800	33	6.	*	2	0245	108	0.	*	2	2130	183	0.	*	3	1615	258	0.
1	0815	34	4.	*	2	0300	109	0.	*	2	2145	184	0.	*	3	1630	259	0.
1	0830	35	3.	*	2	0315	110	0.	*	2	2200	185	0.	*	3	1645	260	0.
1	0845	36	2.	*	2	0330	111	0.	*	2	2215	186	0.	*	3	1700	261	0.
1	0900	37	2.	*	2	0345	112	0.	*	2	2230	187	0.	*	3	1715	262	0.
1	0915	38	2.	*	2	0400	113	0.	*	2	2245	188	0.	*	3	1730	263	0.
1	0930	39	2.	*	2	0415	114	0.	*	2	2300	189	0.	*	3	1745	264	0.
1	0945	40	1.	*	2	0430	115	0.	*	2	2315	190	0.	*	3	1800	265	0.
1	1000	41	1.	*	2	0445	116	0.	*	2	2330	191	0.	*	3	1815	266	0.
1	1015	42	1.	*	2	0500	117	0.	*	2	2345	192	0.	*	3	1830	267	0.
1	1030	43	1.	*	2	0515	118	0.	*	3	0000	193	0.	*	3	1845	268	0.
1	1045	44	1.	*	2	0530	119	0.	*	3	0015	194	0.	*	3	1900	269	0.
1	1100	45	1.	*	2	0545	120	0.	*	3	0030	195	0.	*	3	1915	270	0.
1	1115	46	1.	*	2	0600	121	0.	*	3	0045	196	0.	*	3	1930	271	0.
1	1130	47	0.	*	2	0615	122	0.	*	3	0100	197	0.	*	3	1945	272	0.
1	1145	48	0.	*	2	0630	123	0.	*	3	0115	198	0.	*	3	2000	273	0.
1	1200	49	0.	*	2	0645	124	0.	*	3	0130	199	0.	*	3	2015	274	0.
1	1215	50	0.	*	2	0700	125	0.	*	3	0145	200	0.	*	3	2030	275	0.
1	1230	51	0.	*	2	0715	126	0.	*	3	0200	201	0.	*	3	2045	276	0.
1	1245	52	0.	*	2	0730	127	0.	*	3	0215	202	0.	*	3	2100	277	0.
1	1300	53	0.	*	2	0745	128	0.	*	3	0230	203	0.	*	3	2115	278	0.
1	1315	54	0.	*	2	0800	129	0.	*	3	0245	204	0.	*	3	2130	279	0.
1	1330	55	0.	*	2	0815	130	0.	*	3	0300	205	0.	*	3	2145	280	0.
1	1345	56	0.	*	2	0830	131	0.	*	3	0315	206	0.	*	3	2200	281	0.
1	1400	57	0.	*	2	0845	132	0.	*	3	0330	207	0.	*	3	2215	282	0.
1	1415	58	0.	*	2	0900	133	0.	*	3	0345	208	0.	*	3	2230	283	0.
1	1430	59	0.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	0.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	0.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	0.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	0.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	0.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	0.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	0.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	0.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	0.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	0.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	0.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	0.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	0.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	0.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	0.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	0.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 14.	7.50	2.	1.	0.	0.
	(INCHES)	.626	.770	1.152	1.174
	(AC-FT)	1.	2.	2.	2.

CUMULATIVE AREA = .04 SQ MI

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237 KK \* LAG16 \*

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ROUTED LAG TIME LAG16 (2 STEPS)

HYDROGRAPH ROUTING DATA

239 RT TATUM OR STRADDLE-STAGGER ROUTING  
 NSTPS 2 NUMBER OF TATUM STEPS  
 NSTDL 2 NUMBER OF ORDINATES TO BE AVERAGED  
 LAG 0 NUMBER OF INTERVALS TO LAG HYDROGRAPH

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HYDROGRAPH AT STATION LAG16

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	1845	0.	1330	151	0.	0815	0.	0815	226	0.						
1	0015	2	0.	1900	0.	1345	152	0.	0830	0.	0830	227	0.						
1	0030	3	0.	1915	0.	1400	153	0.	0845	0.	0845	228	0.						
1	0045	4	0.	1930	0.	1415	154	0.	0900	0.	0900	229	0.						
1	0100	5	0.	1945	0.	1430	155	0.	0915	0.	0915	230	0.						
1	0115	6	0.	2000	0.	1445	156	0.	0930	0.	0930	231	0.						
1	0130	7	0.	2015	0.	1500	157	0.	0945	0.	0945	232	0.						
1	0145	8	0.	2030	0.	1515	158	0.	1000	0.	1000	233	0.						
1	0200	9	0.	2045	0.	1530	159	0.	1015	0.	1015	234	0.						
1	0215	10	0.	2100	0.	1545	160	0.	1030	0.	1030	235	0.						
1	0230	11	0.	2115	0.	1600	161	0.	1045	0.	1045	236	0.						
1	0245	12	0.	2130	0.	1615	162	0.	1100	0.	1100	237	0.						
1	0300	13	0.	2145	0.	1630	163	0.	1115	0.	1115	238	0.						
1	0315	14	0.	2200	0.	1645	164	0.	1130	0.	1130	239	0.						
1	0330	15	0.	2215	0.	1700	165	0.	1145	0.	1145	240	0.						
1	0345	16	0.	2230	0.	1715	166	0.	1200	0.	1200	241	0.						
1	0400	17	0.	2245	0.	1730	167	0.	1215	0.	1215	242	0.						
1	0415	18	0.	2300	0.	1745	168	0.	1230	0.	1230	243	0.						
1	0430	19	0.	2315	0.	1800	169	0.	1245	0.	1245	244	0.						
1	0445	20	0.	2330	0.	1815	170	0.	1300	0.	1300	245	0.						
1	0500	21	0.	2345	0.	1830	171	0.	1315	0.	1315	246	0.						
1	0515	22	0.	0000	0.	1845	172	0.	1330	0.	1330	247	0.						
1	0530	23	0.	0015	0.	1900	173	0.	1345	0.	1345	248	0.						
1	0545	24	0.	0030	0.	1915	174	0.	1400	0.	1400	249	0.						
1	0600	25	0.	0045	0.	1930	175	0.	1415	0.	1415	250	0.						
1	0615	26	0.	0100	0.	1945	176	0.	1430	0.	1430	251	0.						
1	0630	27	0.	0115	0.	2000	177	0.	1445	0.	1445	252	0.						
1	0645	28	0.	0130	0.	2015	178	0.	1500	0.	1500	253	0.						
1	0700	29	0.	0145	0.	2030	179	0.	1515	0.	1515	254	0.						
1	0715	30	3.	0200	0.	2045	180	0.	1530	0.	1530	255	0.						
1	0730	31	8.	0215	0.	2100	181	0.	1545	0.	1545	256	0.						
1	0745	32	11.	0230	0.	2115	182	0.	1600	0.	1600	257	0.						
1	0800	33	8.	0245	0.	2130	183	0.	1615	0.	1615	258	0.						
1	0815	34	5.	0300	0.	2145	184	0.	1630	0.	1630	259	0.						
1	0830	35	4.	0315	0.	2200	185	0.	1645	0.	1645	260	0.						
1	0845	36	3.	0330	0.	2215	186	0.	1700	0.	1700	261	0.						
1	0900	37	2.	0345	0.	2230	187	0.	1715	0.	1715	262	0.						
1	0915	38	2.	0400	0.	2245	188	0.	1730	0.	1730	263	0.						
1	0930	39	2.	0415	0.	2300	189	0.	1745	0.	1745	264	0.						
1	0945	40	2.	0430	0.	2315	190	0.	1800	0.	1800	265	0.						
1	1000	41	1.	0445	0.	2330	191	0.	1815	0.	1815	266	0.						
1	1015	42	1.	0500	0.	2345	192	0.	1830	0.	1830	267	0.						
1	1030	43	1.	0515	0.	0000	193	0.	1845	0.	1845	268	0.						
1	1045	44	1.	0530	0.	0015	194	0.	1900	0.	1900	269	0.						
1	1100	45	1.	0545	0.	0030	195	0.	1915	0.	1915	270	0.						
1	1115	46	1.	0600	0.	0045	196	0.	1930	0.	1930	271	0.						
1	1130	47	1.	0615	0.	0100	197	0.	1945	0.	1945	272	0.						
1	1145	48	0.	0630	0.	0115	198	0.	2000	0.	2000	273	0.						
1	1200	49	0.	0645	0.	0130	199	0.	2015	0.	2015	274	0.						
1	1215	50	0.	0700	0.	0145	200	0.	2030	0.	2030	275	0.						
1	1230	51	0.	0715	0.	0200	201	0.	2045	0.	2045	276	0.						
1	1245	52	0.	0730	0.	0215	202	0.	2100	0.	2100	277	0.						
1	1300	53	0.	0745	0.	0230	203	0.	2115	0.	2115	278	0.						
1	1315	54	0.	0800	0.	0245	204	0.	2130	0.	2130	279	0.						
1	1330	55	0.	0815	0.	0300	205	0.	2145	0.	2145	280	0.						
1	1345	56	0.	0830	0.	0315	206	0.	2200	0.	2200	281	0.						
1	1400	57	0.	0845	0.	0330	207	0.	2215	0.	2215	282	0.						
1	1415	58	0.	0900	0.	0345	208	0.	2230	0.	2230	283	0.						
1	1430	59	0.	0915	0.	0400	209	0.	2245	0.	2245	284	0.						
1	1445	60	0.	0930	0.	0415	210	0.	2300	0.	2300	285	0.						
1	1500	61	0.	0945	0.	0430	211	0.	2315	0.	2315	286	0.						
1	1515	62	0.	1000	0.	0445	212	0.	2330	0.	2330	287	0.						
1	1530	63	0.	1015	0.	0500	213	0.	2345	0.	2345	288	0.						
1	1545	64	0.	1030	0.	0515	214	0.	0000	0.	0000	289	0.						
1	1600	65	0.	1045	0.	0530	215	0.	0015	0.	0015	290	0.						
1	1615	66	0.	1100	0.	0545	216	0.	0030	0.	0030	291	0.						
1	1630	67	0.	1115	0.	0600	217	0.	0045	0.	0045	292	0.						
1	1645	68	0.	1130	0.	0615	218	0.	0100	0.	0100	293	0.						
1	1700	69	0.	1145	0.	0630	219	0.	0115	0.	0115	294	0.						

1	1715	70	0.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	0.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	0.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	0.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	0.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	0.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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+ (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 11.	7.75	2.	1.	0.	0.
	(CFS)				
	(INCHES)	.624	.770	1.152	1.174
	(AC-FT)	1.	2.	2.	2.

CUMULATIVE AREA = .04 SQ MI

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240 KK \* STP17 \* AREA 3

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RUNOFF FROM AREA 3

SUBBASIN RUNOFF DATA

242 BA SUBBASIN CHARACTERISTICS  
TAREA .11 SUBBASIN AREA  
SNAP 14.00 NORMAL ANNUAL PRECIPITATION  
RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP17

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	1.	*	1	1845	76	2.	*	2	1330	151	1.	*	3	0815	226	1.	
1	0015	2	1.	*	1	1900	77	2.	*	2	1345	152	1.	*	3	0830	227	1.	
1	0030	3	1.	*	1	1915	78	2.	*	2	1400	153	1.	*	3	0845	228	1.	
1	0045	4	1.	*	1	1930	79	2.	*	2	1415	154	1.	*	3	0900	229	1.	
1	0100	5	1.	*	1	1945	80	2.	*	2	1430	155	1.	*	3	0915	230	1.	
1	0115	6	1.	*	1	2000	81	2.	*	2	1445	156	1.	*	3	0930	231	1.	
1	0130	7	1.	*	1	2015	82	2.	*	2	1500	157	1.	*	3	0945	232	1.	
1	0145	8	1.	*	1	2030	83	2.	*	2	1515	158	1.	*	3	1000	233	1.	
1	0200	9	1.	*	1	2045	84	2.	*	2	1530	159	1.	*	3	1015	234	1.	
1	0215	10	1.	*	1	2100	85	2.	*	2	1545	160	1.	*	3	1030	235	1.	
1	0230	11	1.	*	1	2115	86	2.	*	2	1600	161	1.	*	3	1045	236	1.	
1	0245	12	1.	*	1	2130	87	2.	*	2	1615	162	1.	*	3	1100	237	1.	
1	0300	13	1.	*	1	2145	88	1.	*	2	1630	163	1.	*	3	1115	238	1.	
1	0315	14	1.	*	1	2200	89	1.	*	2	1645	164	1.	*	3	1130	239	1.	
1	0330	15	1.	*	1	2215	90	1.	*	2	1700	165	1.	*	3	1145	240	1.	
1	0345	16	1.	*	1	2230	91	1.	*	2	1715	166	1.	*	3	1200	241	1.	
1	0400	17	1.	*	1	2245	92	1.	*	2	1730	167	1.	*	3	1215	242	1.	
1	0415	18	1.	*	1	2300	93	1.	*	2	1745	168	1.	*	3	1230	243	1.	
1	0430	19	1.	*	1	2315	94	1.	*	2	1800	169	1.	*	3	1245	244	1.	
1	0445	20	1.	*	1	2330	95	1.	*	2	1815	170	1.	*	3	1300	245	1.	
1	0500	21	1.	*	1	2345	96	1.	*	2	1830	171	1.	*	3	1315	246	1.	
1	0515	22	1.	*	2	0000	97	1.	*	2	1845	172	1.	*	3	1330	247	1.	
1	0530	23	1.	*	2	0015	98	1.	*	2	1900	173	1.	*	3	1345	248	1.	
1	0545	24	9.	*	2	0030	99	1.	*	2	1915	174	1.	*	3	1400	249	1.	
1	0600	25	11.	*	2	0045	100	1.	*	2	1930	175	1.	*	3	1415	250	1.	
1	0615	26	12.	*	2	0100	101	1.	*	2	1945	176	1.	*	3	1430	251	1.	
1	0630	27	12.	*	2	0115	102	1.	*	2	2000	177	1.	*	3	1445	252	1.	
1	0645	28	16.	*	2	0130	103	1.	*	2	2015	178	1.	*	3	1500	253	1.	
1	0700	29	17.	*	2	0145	104	1.	*	2	2030	179	1.	*	3	1515	254	1.	
1	0715	30	47.	*	2	0200	105	1.	*	2	2045	180	1.	*	3	1530	255	1.	
1	0730	31	53.	*	2	0215	106	1.	*	2	2100	181	1.	*	3	1545	256	1.	
1	0745	32	32.	*	2	0230	107	1.	*	2	2115	182	1.	*	3	1600	257	1.	
1	0800	33	28.	*	2	0245	108	1.	*	2	2130	183	1.	*	3	1615	258	1.	
1	0815	34	20.	*	2	0300	109	1.	*	2	2145	184	1.	*	3	1630	259	1.	
1	0830	35	18.	*	2	0315	110	1.	*	2	2200	185	1.	*	3	1645	260	1.	
1	0845	36	13.	*	2	0330	111	1.	*	2	2215	186	1.	*	3	1700	261	1.	
1	0900	37	12.	*	2	0345	112	1.	*	2	2230	187	1.	*	3	1715	262	1.	
1	0915	38	10.	*	2	0400	113	1.	*	2	2245	188	1.	*	3	1730	263	1.	
1	0930	39	10.	*	2	0415	114	1.	*	2	2300	189	1.	*	3	1745	264	1.	

1	0945	40	9.	*	2	0430	115	1.	*	2	2315	190	1.	*	3	1800	265	1.
1	1000	41	8.	*	2	0445	116	1.	*	2	2330	191	1.	*	3	1815	266	1.
1	1015	42	8.	*	2	0500	117	1.	*	2	2345	192	1.	*	3	1830	267	1.
1	1030	43	8.	*	2	0515	118	1.	*	3	0000	193	1.	*	3	1845	268	1.
1	1045	44	7.	*	2	0530	119	1.	*	3	0015	194	1.	*	3	1900	269	1.
1	1100	45	7.	*	2	0545	120	1.	*	3	0030	195	1.	*	3	1915	270	1.
1	1115	46	6.	*	2	0600	121	1.	*	3	0045	196	1.	*	3	1930	271	1.
1	1130	47	6.	*	2	0615	122	1.	*	3	0100	197	1.	*	3	1945	272	1.
1	1145	48	6.	*	2	0630	123	1.	*	3	0115	198	1.	*	3	2000	273	1.
1	1200	49	6.	*	2	0645	124	1.	*	3	0130	199	1.	*	3	2015	274	1.
1	1215	50	5.	*	2	0700	125	1.	*	3	0145	200	1.	*	3	2030	275	1.
1	1230	51	5.	*	2	0715	126	1.	*	3	0200	201	1.	*	3	2045	276	1.
1	1245	52	5.	*	2	0730	127	1.	*	3	0215	202	1.	*	3	2100	277	1.
1	1300	53	5.	*	2	0745	128	1.	*	3	0230	203	1.	*	3	2115	278	1.
1	1315	54	5.	*	2	0800	129	1.	*	3	0245	204	1.	*	3	2130	279	1.
1	1330	55	5.	*	2	0815	130	1.	*	3	0300	205	1.	*	3	2145	280	1.
1	1345	56	5.	*	2	0830	131	1.	*	3	0315	206	1.	*	3	2200	281	1.
1	1400	57	5.	*	2	0845	132	1.	*	3	0330	207	1.	*	3	2215	282	1.
1	1415	58	4.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	4.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	4.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	4.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	4.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	4.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	3.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	3.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	3.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	3.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	3.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	3.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	3.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	3.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	3.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	2.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	2.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	2.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW  
 6-HR 24-HR 72-HR 74.75-HR  
 + (CFS) (HR)  
 + 53. 7.50 (CFS)  
 (INCHES) 1.283 1.836 2.343 2.370  
 (AC-FT) 8. 11. 14. 14.  
 CUMULATIVE AREA = .11 SQ MI

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 \* \* \*  
 253 KK \* C5 \*  
 \* \* \*  
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COMBINE 16,17

255 HC HYDROGRAPH COMBINATION  
 ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION C5  
 SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	1.	*	1	1845	76	2.	*	2	1330	151	1.	*	3	0815	226	1.	
1	0015	2	1.	*	1	1900	77	2.	*	2	1345	152	1.	*	3	0830	227	1.	
1	0030	3	1.	*	1	1915	78	2.	*	2	1400	153	1.	*	3	0845	228	1.	
1	0045	4	1.	*	1	1930	79	2.	*	2	1415	154	1.	*	3	0900	229	1.	
1	0100	5	1.	*	1	1945	80	2.	*	2	1430	155	1.	*	3	0915	230	1.	
1	0115	6	1.	*	1	2000	81	2.	*	2	1445	156	1.	*	3	0930	231	1.	
1	0130	7	1.	*	1	2015	82	2.	*	2	1500	157	1.	*	3	0945	232	1.	
1	0145	8	1.	*	1	2030	83	2.	*	2	1515	158	1.	*	3	1000	233	1.	
1	0200	9	1.	*	1	2045	84	2.	*	2	1530	159	1.	*	3	1015	234	1.	
1	0215	10	1.	*	1	2100	85	2.	*	2	1545	160	1.	*	3	1030	235	1.	
1	0230	11	1.	*	1	2115	86	2.	*	2	1600	161	1.	*	3	1045	236	1.	
1	0245	12	1.	*	1	2130	87	2.	*	2	1615	162	1.	*	3	1100	237	1.	

1	0300	13	1.	*	1	2145	88	2.	*	2	1630	163	1.	*	3	1115	238	1.
1	0315	14	1.	*	1	2200	89	2.	*	2	1645	164	1.	*	3	1130	239	1.
1	0330	15	1.	*	1	2215	90	2.	*	2	1700	165	1.	*	3	1145	240	1.
1	0345	16	1.	*	1	2230	91	2.	*	2	1715	166	1.	*	3	1200	241	1.
1	0400	17	1.	*	1	2245	92	2.	*	2	1730	167	1.	*	3	1215	242	1.
1	0415	18	1.	*	1	2300	93	2.	*	2	1745	168	1.	*	3	1230	243	1.
1	0430	19	1.	*	1	2315	94	2.	*	2	1800	169	1.	*	3	1245	244	1.
1	0445	20	1.	*	1	2330	95	2.	*	2	1815	170	1.	*	3	1300	245	1.
1	0500	21	1.	*	1	2345	96	1.	*	2	1830	171	1.	*	3	1315	246	1.
1	0515	22	1.	*	2	0000	97	1.	*	2	1845	172	1.	*	3	1330	247	1.
1	0530	23	1.	*	2	0015	98	1.	*	2	1900	173	1.	*	3	1345	248	1.
1	0545	24	9.	*	2	0030	99	1.	*	2	1915	174	1.	*	3	1400	249	1.
1	0600	25	11.	*	2	0045	100	1.	*	2	1930	175	1.	*	3	1415	250	1.
1	0615	26	12.	*	2	0100	101	1.	*	2	1945	176	1.	*	3	1430	251	1.
1	0630	27	12.	*	2	0115	102	1.	*	2	2000	177	1.	*	3	1445	252	1.
1	0645	28	17.	*	2	0130	103	1.	*	2	2015	178	1.	*	3	1500	253	1.
1	0700	29	18.	*	2	0145	104	1.	*	2	2030	179	1.	*	3	1515	254	1.
1	0715	30	49.	*	2	0200	105	1.	*	2	2045	180	1.	*	3	1530	255	1.
1	0730	31	62.	*	2	0215	106	1.	*	2	2100	181	1.	*	3	1545	256	1.
1	0745	32	43.	*	2	0230	107	1.	*	2	2115	182	1.	*	3	1600	257	1.
1	0800	33	36.	*	2	0245	108	1.	*	2	2130	183	1.	*	3	1615	258	1.
1	0815	34	25.	*	2	0300	109	1.	*	2	2145	184	1.	*	3	1630	259	1.
1	0830	35	22.	*	2	0315	110	1.	*	2	2200	185	1.	*	3	1645	260	1.
1	0845	36	16.	*	2	0330	111	1.	*	2	2215	186	1.	*	3	1700	261	1.
1	0900	37	15.	*	2	0345	112	1.	*	2	2230	187	1.	*	3	1715	262	1.
1	0915	38	12.	*	2	0400	113	1.	*	2	2245	188	1.	*	3	1730	263	1.
1	0930	39	12.	*	2	0415	114	1.	*	2	2300	189	1.	*	3	1745	264	1.
1	0945	40	10.	*	2	0430	115	1.	*	2	2315	190	1.	*	3	1800	265	1.
1	1000	41	10.	*	2	0445	116	1.	*	2	2330	191	1.	*	3	1815	266	1.
1	1015	42	9.	*	2	0500	117	1.	*	2	2345	192	1.	*	3	1830	267	1.
1	1030	43	9.	*	2	0515	118	1.	*	3	0000	193	1.	*	3	1845	268	1.
1	1045	44	8.	*	2	0530	119	1.	*	3	0015	194	1.	*	3	1900	269	1.
1	1100	45	8.	*	2	0545	120	1.	*	3	0030	195	1.	*	3	1915	270	1.
1	1115	46	7.	*	2	0600	121	1.	*	3	0045	196	1.	*	3	1930	271	1.
1	1130	47	6.	*	2	0615	122	1.	*	3	0100	197	1.	*	3	1945	272	1.
1	1145	48	6.	*	2	0630	123	1.	*	3	0115	198	1.	*	3	2000	273	1.
1	1200	49	6.	*	2	0645	124	1.	*	3	0130	199	1.	*	3	2015	274	1.
1	1215	50	6.	*	2	0700	125	1.	*	3	0145	200	1.	*	3	2030	275	1.
1	1230	51	5.	*	2	0715	126	1.	*	3	0200	201	1.	*	3	2045	276	1.
1	1245	52	5.	*	2	0730	127	1.	*	3	0215	202	1.	*	3	2100	277	1.
1	1300	53	5.	*	2	0745	128	1.	*	3	0230	203	1.	*	3	2115	278	1.
1	1315	54	5.	*	2	0800	129	1.	*	3	0245	204	1.	*	3	2130	279	1.
1	1330	55	5.	*	2	0815	130	1.	*	3	0300	205	1.	*	3	2145	280	1.
1	1345	56	5.	*	2	0830	131	1.	*	3	0315	206	1.	*	3	2200	281	1.
1	1400	57	5.	*	2	0845	132	1.	*	3	0330	207	1.	*	3	2215	282	1.
1	1415	58	4.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	4.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	4.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	4.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	4.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	4.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	4.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	4.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	4.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	4.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	3.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	3.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	3.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	3.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	3.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	3.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	3.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	3.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

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PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW				
		6-HR	24-HR	72-HR	74.75-HR	
62.	7.50	18.	6.	3.	3.	
		(INCHES)	1.119	1.575	2.051	2.077
		(AC-FT)	9.	13.	17.	17.

CUMULATIVE AREA = .15 SQ MI

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256 KK * RDBE3 *
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DBE3 ROUTING
    
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1	1545	64	3.	9.4	123.2	* 2	1645	164	3.	6.7	122.7	* 3	1745	264	1.	5.0	121.3
1	1600	65	3.	9.4	123.2	* 2	1700	165	3.	6.7	122.7	* 3	1800	265	1.	5.0	121.3
1	1615	66	3.	9.4	123.2	* 2	1715	166	3.	6.7	122.7	* 3	1815	266	1.	5.0	121.3
1	1630	67	3.	9.4	123.2	* 2	1730	167	3.	6.6	122.7	* 3	1830	267	1.	5.0	121.3
1	1645	68	3.	9.4	123.2	* 2	1745	168	3.	6.6	122.7	* 3	1845	268	1.	5.0	121.3
1	1700	69	3.	9.4	123.2	* 2	1800	169	3.	6.6	122.7	* 3	1900	269	1.	5.0	121.3
1	1715	70	3.	9.5	123.2	* 2	1815	170	3.	6.5	122.7	* 3	1915	270	1.	5.0	121.3
1	1730	71	3.	9.5	123.2	* 2	1830	171	3.	6.5	122.7	* 3	1930	271	1.	5.0	121.3
1	1745	72	3.	9.5	123.2	* 2	1845	172	3.	6.5	122.7	* 3	1945	272	1.	5.0	121.3
1	1800	73	3.	9.5	123.2	* 2	1900	173	3.	6.4	122.6	* 3	2000	273	1.	5.0	121.3
1	1815	74	3.	9.5	123.2	* 2	1915	174	3.	6.4	122.6	* 3	2015	274	1.	5.0	121.3
1	1830	75	3.	9.5	123.2	* 2	1930	175	3.	6.4	122.6	* 3	2030	275	1.	5.0	121.3
1	1845	76	3.	9.4	123.2	* 2	1945	176	2.	6.3	122.6	* 3	2045	276	1.	5.0	121.3
1	1900	77	3.	9.4	123.2	* 2	2000	177	2.	6.3	122.6	* 3	2100	277	1.	5.0	121.3
1	1915	78	3.	9.4	123.2	* 2	2015	178	2.	6.3	122.6	* 3	2115	278	1.	5.0	121.3
1	1930	79	3.	9.4	123.2	* 2	2030	179	2.	6.2	122.6	* 3	2130	279	1.	5.0	121.3
1	1945	80	3.	9.4	123.2	* 2	2045	180	2.	6.2	122.6	* 3	2145	280	1.	5.0	121.3
1	2000	81	3.	9.4	123.2	* 2	2100	181	2.	6.2	122.6	* 3	2200	281	1.	5.0	121.3
1	2015	82	3.	9.4	123.2	* 2	2115	182	2.	6.2	122.6	* 3	2215	282	1.	5.0	121.3
1	2030	83	3.	9.3	123.2	* 2	2130	183	2.	6.1	122.6	* 3	2230	283	1.	5.0	121.3
1	2045	84	3.	9.3	123.2	* 2	2145	184	2.	6.1	122.6	* 3	2245	284	1.	4.9	121.3
1	2100	85	3.	9.3	123.2	* 2	2200	185	2.	6.1	122.6	* 3	2300	285	1.	4.9	121.3
1	2115	86	3.	9.3	123.2	* 2	2215	186	2.	6.0	122.6	* 3	2315	286	1.	4.9	121.3
1	2130	87	3.	9.3	123.2	* 2	2230	187	2.	6.0	122.6	* 3	2330	287	1.	4.9	121.3
1	2145	88	3.	9.3	123.2	* 2	2245	188	2.	6.0	122.6	* 3	2345	288	1.	4.9	121.3
1	2200	89	3.	9.2	123.2	* 2	2300	189	2.	5.9	122.6	* 4	0000	289	1.	4.9	121.3
1	2215	90	3.	9.2	123.2	* 2	2315	190	2.	5.9	122.5	* 4	0015	290	1.	4.9	121.3
1	2230	91	3.	9.2	123.2	* 2	2330	191	2.	5.9	122.5	* 4	0030	291	1.	4.9	121.3
1	2245	92	3.	9.2	123.2	* 2	2345	192	2.	5.8	122.5	* 4	0045	292	1.	4.9	121.3
1	2300	93	3.	9.1	123.1	* 3	0000	193	2.	5.8	122.5	* 4	0100	293	1.	4.9	121.3
1	2315	94	3.	9.1	123.1	* 3	0015	194	2.	5.8	122.5	* 4	0115	294	1.	4.9	121.3
1	2330	95	3.	9.1	123.1	* 3	0030	195	2.	5.7	122.5	* 4	0130	295	1.	4.9	121.3
1	2345	96	3.	9.1	123.1	* 3	0045	196	2.	5.7	122.5	* 4	0145	296	1.	4.9	121.3
2	0000	97	3.	9.0	123.1	* 3	0100	197	2.	5.7	122.5	* 4	0200	297	1.	4.9	121.3
2	0015	98	3.	9.0	123.1	* 3	0115	198	2.	5.7	122.5	* 4	0215	298	1.	4.9	121.3
2	0030	99	3.	8.9	123.1	* 3	0130	199	2.	5.6	122.4	* 4	0230	299	1.	4.9	121.3
2	0045	100	3.	8.9	123.1	* 3	0145	200	2.	5.6	122.4	* 4	0245	300	1.	4.9	121.3

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PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
3.	17.25	3.	3.	2.	2.
	(INCHES)	.170	.669	1.464	1.464
	(AC-FT)	1.	5.	12.	12.

PEAK STORAGE + (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	74.75-HR
9.	17.75	9.	9.	6.	6.

PEAK STAGE + (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	74.75-HR
123.21	17.75	123.20	123.09	122.13	121.99

CUMULATIVE AREA = .15 SQ MI

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 262 KK \* STP20 \* AREA 4B  
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 RUNOFF FROM AREA 4B

SUBBASIN RUNOFF DATA  
 264 BA SUBBASIN CHARACTERISTICS  
 TAREA .02 SUBBASIN AREA  
 SNAP 14.00 NORMAL ANNUAL PRECIPITATION  
 RATIO .00 RATIO OF HYDROGRAPH  
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HYDROGRAPH AT STATION STP20

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CUMULATIVE AREA = .02 SQ MI

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*   *       *
275 KK *   C6 *
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COMBINE 19,20

277 HC HYDROGRAPH COMBINATION  
 ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION C6  
 SUM OF 2 HYDROGRAPHS

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	1845	76	3.	1330	151	3.	0815	226	2.							
1	0015	2	0.	1900	77	3.	1345	152	3.	0830	227	2.							
1	0030	3	0.	1915	78	3.	1400	153	3.	0845	228	2.							
1	0045	4	0.	1930	79	3.	1415	154	3.	0900	229	2.							
1	0100	5	0.	1945	80	3.	1430	155	3.	0915	230	2.							
1	0115	6	0.	2000	81	3.	1445	156	3.	0930	231	1.							
1	0130	7	0.	2015	82	3.	1500	157	3.	0945	232	1.							
1	0145	8	0.	2030	83	3.	1515	158	3.	1000	233	1.							
1	0200	9	0.	2045	84	3.	1530	159	3.	1015	234	1.							
1	0215	10	0.	2100	85	3.	1545	160	3.	1030	235	1.							
1	0230	11	0.	2115	86	3.	1600	161	3.	1045	236	1.							
1	0245	12	0.	2130	87	3.	1615	162	3.	1100	237	1.							
1	0300	13	0.	2145	88	3.	1630	163	3.	1115	238	1.							
1	0315	14	0.	2200	89	3.	1645	164	3.	1130	239	1.							
1	0330	15	0.	2215	90	3.	1700	165	3.	1145	240	1.							
1	0345	16	0.	2230	91	3.	1715	166	3.	1200	241	1.							
1	0400	17	0.	2245	92	3.	1730	167	3.	1215	242	1.							
1	0415	18	0.	2300	93	3.	1745	168	3.	1230	243	1.							
1	0430	19	0.	2315	94	3.	1800	169	3.	1245	244	1.							
1	0445	20	0.	2330	95	3.	1815	170	3.	1300	245	1.							
1	0500	21	1.	2345	96	3.	1830	171	3.	1315	246	1.							
1	0515	22	2.	0000	97	3.	1845	172	3.	1330	247	1.							
1	0530	23	2.	0015	98	3.	1900	173	3.	1345	248	1.							
1	0545	24	2.	0030	99	3.	1915	174	3.	1400	249	1.							
1	0600	25	2.	0045	100	3.	1930	175	3.	1415	250	1.							
1	0615	26	2.	0100	101	3.	1945	176	3.	1430	251	1.							
1	0630	27	2.	0115	102	3.	2000	177	3.	1445	252	1.							
1	0645	28	3.	0130	103	3.	2015	178	3.	1500	253	1.							
1	0700	29	3.	0145	104	3.	2030	179	3.	1515	254	1.							
1	0715	30	8.	0200	105	3.	2045	180	3.	1530	255	1.							
1	0730	31	9.	0215	106	3.	2100	181	3.	1545	256	1.							
1	0745	32	6.	0230	107	3.	2115	182	3.	1600	257	1.							
1	0800	33	7.	0245	108	3.	2130	183	3.	1615	258	1.							
1	0815	34	6.	0300	109	3.	2145	184	3.	1630	259	1.							
1	0830	35	6.	0315	110	3.	2200	185	3.	1645	260	1.							
1	0845	36	5.	0330	111	3.	2215	186	3.	1700	261	1.							
1	0900	37	5.	0345	112	3.	2230	187	3.	1715	262	1.							
1	0915	38	5.	0400	113	3.	2245	188	3.	1730	263	1.							
1	0930	39	4.	0415	114	3.	2300	189	3.	1745	264	1.							
1	0945	40	4.	0430	115	3.	2315	190	3.	1800	265	1.							
1	1000	41	4.	0445	116	3.	2330	191	3.	1815	266	1.							
1	1015	42	4.	0500	117	3.	2345	192	3.	1830	267	1.							
1	1030	43	4.	0515	118	3.	0000	193	3.	1845	268	1.							
1	1045	44	4.	0530	119	3.	0015	194	3.	1900	269	1.							
1	1100	45	4.	0545	120	3.	0030	195	3.	1915	270	1.							
1	1115	46	4.	0600	121	3.	0045	196	3.	1930	271	1.							
1	1130	47	4.	0615	122	3.	0100	197	3.	1945	272	1.							
1	1145	48	4.	0630	123	3.	0115	198	3.	2000	273	1.							
1	1200	49	4.	0645	124	3.	0130	199	3.	2015	274	1.							
1	1215	50	4.	0700	125	3.	0145	200	2.	2030	275	1.							
1	1230	51	4.	0715	126	3.	0200	201	2.	2045	276	1.							
1	1245	52	4.	0730	127	3.	0215	202	2.	2100	277	1.							
1	1300	53	4.	0745	128	3.	0230	203	2.	2115	278	1.							
1	1315	54	4.	0800	129	3.	0245	204	2.	2130	279	1.							
1	1330	55	4.	0815	130	3.	0300	205	2.	2145	280	1.							
1	1345	56	4.	0830	131	3.	0315	206	2.	2200	281	1.							
1	1400	57	4.	0845	132	3.	0330	207	2.	2215	282	1.							
1	1415	58	4.	0900	133	3.	0345	208	2.	2230	283	1.							
1	1430	59	4.	0915	134	3.	0400	209	2.	2245	284	1.							

1	1445	60	4.	*	2	0930	135	3.	*	3	0415	210	2.	*	3	2300	285	1.
1	1500	61	4.	*	2	0945	136	3.	*	3	0430	211	2.	*	3	2315	286	1.
1	1515	62	4.	*	2	1000	137	3.	*	3	0445	212	2.	*	3	2330	287	1.
1	1530	63	4.	*	2	1015	138	3.	*	3	0500	213	2.	*	3	2345	288	1.
1	1545	64	4.	*	2	1030	139	3.	*	3	0515	214	2.	*	4	0000	289	1.
1	1600	65	4.	*	2	1045	140	3.	*	3	0530	215	2.	*	4	0015	290	1.
1	1615	66	4.	*	2	1100	141	3.	*	3	0545	216	2.	*	4	0030	291	1.
1	1630	67	4.	*	2	1115	142	3.	*	3	0600	217	2.	*	4	0045	292	1.
1	1645	68	3.	*	2	1130	143	3.	*	3	0615	218	2.	*	4	0100	293	1.
1	1700	69	3.	*	2	1145	144	3.	*	3	0630	219	2.	*	4	0115	294	1.
1	1715	70	3.	*	2	1200	145	3.	*	3	0645	220	2.	*	4	0130	295	1.
1	1730	71	3.	*	2	1215	146	3.	*	3	0700	221	2.	*	4	0145	296	1.
1	1745	72	3.	*	2	1230	147	3.	*	3	0715	222	2.	*	4	0200	297	1.
1	1800	73	3.	*	2	1245	148	3.	*	3	0730	223	2.	*	4	0215	298	1.
1	1815	74	3.	*	2	1300	149	3.	*	3	0745	224	2.	*	4	0230	299	1.
1	1830	75	3.	*	2	1315	150	3.	*	3	0800	225	2.	*	4	0245	300	1.

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PEAK FLOW      TIME      MAXIMUM AVERAGE FLOW
+ (CFS)        (HR)          6-HR    24-HR    72-HR    74.75-HR
+ 9.  7.50      5.      4.      2.      2.
              (INCHES) .257    .763    1.568    1.571
              (AC-FT)  2.      7.     15.     15.

CUMULATIVE AREA = .17 SQ MI
    
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*          *
278 KK * STP22 * AREA 4A
*          *
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RUNOFF FROM AREA 4A

SUBBASIN RUNOFF DATA

280 BA SUBBASIN CHARACTERISTICS
TAREA .04 SUBBASIN AREA
SNAP 14.50 NORMAL ANNUAL PRECIPITATION
RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP22

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	1845	76	0.	*	2	1330	151	0.	*	3	0815	226	0.	
1	0015	2	0.	*	1	1900	77	0.	*	2	1345	152	0.	*	3	0830	227	0.	
1	0030	3	0.	*	1	1915	78	0.	*	2	1400	153	0.	*	3	0845	228	0.	
1	0045	4	0.	*	1	1930	79	0.	*	2	1415	154	0.	*	3	0900	229	0.	
1	0100	5	0.	*	1	1945	80	0.	*	2	1430	155	0.	*	3	0915	230	0.	
1	0115	6	0.	*	1	2000	81	0.	*	2	1445	156	0.	*	3	0930	231	0.	
1	0130	7	0.	*	1	2015	82	0.	*	2	1500	157	0.	*	3	0945	232	0.	
1	0145	8	1.	*	1	2030	83	0.	*	2	1515	158	0.	*	3	1000	233	0.	
1	0200	9	5.	*	1	2045	84	0.	*	2	1530	159	0.	*	3	1015	234	0.	
1	0215	10	9.	*	1	2100	85	0.	*	2	1545	160	0.	*	3	1030	235	0.	
1	0230	11	10.	*	1	2115	86	0.	*	2	1600	161	0.	*	3	1045	236	0.	
1	0245	12	26.	*	1	2130	87	0.	*	2	1615	162	0.	*	3	1100	237	0.	
1	0300	13	8.	*	1	2145	88	0.	*	2	1630	163	0.	*	3	1115	238	0.	
1	0315	14	1.	*	1	2200	89	0.	*	2	1645	164	0.	*	3	1130	239	0.	
1	0330	15	0.	*	1	2215	90	0.	*	2	1700	165	0.	*	3	1145	240	0.	
1	0345	16	0.	*	1	2230	91	0.	*	2	1715	166	0.	*	3	1200	241	0.	
1	0400	17	0.	*	1	2245	92	0.	*	2	1730	167	0.	*	3	1215	242	0.	
1	0415	18	0.	*	1	2300	93	0.	*	2	1745	168	0.	*	3	1230	243	0.	
1	0430	19	0.	*	1	2315	94	0.	*	2	1800	169	0.	*	3	1245	244	0.	
1	0445	20	0.	*	1	2330	95	0.	*	2	1815	170	0.	*	3	1300	245	0.	
1	0500	21	0.	*	1	2345	96	0.	*	2	1830	171	0.	*	3	1315	246	0.	
1	0515	22	0.	*	2	0000	97	0.	*	2	1845	172	0.	*	3	1330	247	0.	
1	0530	23	0.	*	2	0015	98	0.	*	2	1900	173	0.	*	3	1345	248	0.	
1	0545	24	0.	*	2	0030	99	0.	*	2	1915	174	0.	*	3	1400	249	0.	
1	0600	25	0.	*	2	0045	100	0.	*	2	1930	175	0.	*	3	1415	250	0.	
1	0615	26	0.	*	2	0100	101	0.	*	2	1945	176	0.	*	3	1430	251	0.	
1	0630	27	0.	*	2	0115	102	0.	*	2	2000	177	0.	*	3	1445	252	0.	
1	0645	28	0.	*	2	0130	103	0.	*	2	2015	178	0.	*	3	1500	253	0.	
1	0700	29	0.	*	2	0145	104	0.	*	2	2030	179	0.	*	3	1515	254	0.	

1	0715	30	0.	*	2	0200	105	0.	*	2	2045	180	0.	*	3	1530	255	0.
1	0730	31	0.	*	2	0215	106	0.	*	2	2100	181	0.	*	3	1545	256	0.
1	0745	32	0.	*	2	0230	107	0.	*	2	2115	182	0.	*	3	1600	257	0.
1	0800	33	0.	*	2	0245	108	0.	*	2	2130	183	0.	*	3	1615	258	0.
1	0815	34	0.	*	2	0300	109	0.	*	2	2145	184	0.	*	3	1630	259	0.
1	0830	35	0.	*	2	0315	110	0.	*	2	2200	185	0.	*	3	1645	260	0.
1	0845	36	0.	*	2	0330	111	0.	*	2	2215	186	0.	*	3	1700	261	0.
1	0900	37	0.	*	2	0345	112	0.	*	2	2230	187	0.	*	3	1715	262	0.
1	0915	38	0.	*	2	0400	113	0.	*	2	2245	188	0.	*	3	1730	263	0.
1	0930	39	0.	*	2	0415	114	0.	*	2	2300	189	0.	*	3	1745	264	0.
1	0945	40	0.	*	2	0430	115	0.	*	2	2315	190	0.	*	3	1800	265	0.
1	1000	41	0.	*	2	0445	116	0.	*	2	2330	191	0.	*	3	1815	266	0.
1	1015	42	0.	*	2	0500	117	0.	*	2	2345	192	0.	*	3	1830	267	0.
1	1030	43	0.	*	2	0515	118	0.	*	3	0000	193	0.	*	3	1845	268	0.
1	1045	44	0.	*	2	0530	119	0.	*	3	0015	194	0.	*	3	1900	269	0.
1	1100	45	0.	*	2	0545	120	0.	*	3	0030	195	0.	*	3	1915	270	0.
1	1115	46	0.	*	2	0600	121	0.	*	3	0045	196	0.	*	3	1930	271	0.
1	1130	47	0.	*	2	0615	122	0.	*	3	0100	197	0.	*	3	1945	272	0.
1	1145	48	0.	*	2	0630	123	0.	*	3	0115	198	0.	*	3	2000	273	0.
1	1200	49	0.	*	2	0645	124	0.	*	3	0130	199	0.	*	3	2015	274	0.
1	1215	50	0.	*	2	0700	125	0.	*	3	0145	200	0.	*	3	2030	275	0.
1	1230	51	0.	*	2	0715	126	0.	*	3	0200	201	0.	*	3	2045	276	0.
1	1245	52	0.	*	2	0730	127	0.	*	3	0215	202	0.	*	3	2100	277	0.
1	1300	53	0.	*	2	0745	128	0.	*	3	0230	203	0.	*	3	2115	278	0.
1	1315	54	0.	*	2	0800	129	0.	*	3	0245	204	0.	*	3	2130	279	0.
1	1330	55	0.	*	2	0815	130	0.	*	3	0300	205	0.	*	3	2145	280	0.
1	1345	56	0.	*	2	0830	131	0.	*	3	0315	206	0.	*	3	2200	281	0.
1	1400	57	0.	*	2	0845	132	0.	*	3	0330	207	0.	*	3	2215	282	0.
1	1415	58	0.	*	2	0900	133	0.	*	3	0345	208	0.	*	3	2230	283	0.
1	1430	59	0.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	0.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	0.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	0.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	0.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	0.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	0.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	0.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	0.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	0.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	0.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	0.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	0.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	0.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	0.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	0.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	0.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 26.	2.75	3.	1.	0.	0.
	(INCHES)	.676	.820	1.201	1.223
	(AC-FT)	1.	2.	2.	2.

CUMULATIVE AREA = .04 SQ MI

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291 KK * LAG23 *
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ROUTED LAG TIME LAG23 (1 STEP)

HYDROGRAPH ROUTING DATA

293 RT TATUM OR STRADDLE-STAGGER ROUTING  
 NSTPS 1 NUMBER OF TATUM STEPS  
 NSTDL 2 NUMBER OF ORDINATES TO BE AVERAGED  
 LAG 0 NUMBER OF INTERVALS TO LAG HYDROGRAPH

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HYDROGRAPH AT STATION LAG23

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
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 \* \*  
 294 KK \* STP24 \* AREA 3  
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RUNOFF FROM AREA 3

SUBBASIN RUNOFF DATA

296 BA SUBBASIN CHARACTERISTICS  
 TAREA .11 SUBBASIN AREA  
 SNAP 14.00 NORMAL ANNUAL PRECIPITATION  
 RATIO .00 RATIO OF HYDROGRAPH

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 HYDROGRAPH AT STATION STP24  
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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	1.	1845	76	1.	2	1330	151	1.	3	0815	226	1.					
1	0015	2	1.	1900	77	1.	2	1345	152	1.	3	0830	227	1.					
1	0030	3	1.	1915	78	1.	2	1400	153	1.	3	0845	228	1.					
1	0045	4	1.	1930	79	1.	2	1415	154	1.	3	0900	229	1.					
1	0100	5	1.	1945	80	1.	2	1430	155	1.	3	0915	230	1.					
1	0115	6	1.	2000	81	1.	2	1445	156	1.	3	0930	231	1.					
1	0130	7	1.	2015	82	1.	2	1500	157	1.	3	0945	232	1.					
1	0145	8	16.	2030	83	1.	2	1515	158	1.	3	1000	233	1.					
1	0200	9	23.	2045	84	1.	2	1530	159	1.	3	1015	234	1.					
1	0215	10	36.	2100	85	1.	2	1545	160	1.	3	1030	235	1.					
1	0230	11	40.	2115	86	1.	2	1600	161	1.	3	1045	236	1.					
1	0245	12	95.	2130	87	1.	2	1615	162	1.	3	1100	237	1.					
1	0300	13	40.	2145	88	1.	2	1630	163	1.	3	1115	238	1.					
1	0315	14	14.	2200	89	1.	2	1645	164	1.	3	1130	239	1.					
1	0330	15	5.	2215	90	1.	2	1700	165	1.	3	1145	240	1.					
1	0345	16	1.	2230	91	1.	2	1715	166	1.	3	1200	241	1.					
1	0400	17	1.	2245	92	1.	2	1730	167	1.	3	1215	242	1.					
1	0415	18	1.	2300	93	1.	2	1745	168	1.	3	1230	243	1.					
1	0430	19	1.	2315	94	1.	2	1800	169	1.	3	1245	244	1.					
1	0445	20	1.	2330	95	1.	2	1815	170	1.	3	1300	245	1.					
1	0500	21	1.	2345	96	1.	2	1830	171	1.	3	1315	246	1.					
1	0515	22	1.	0000	97	1.	2	1845	172	1.	3	1330	247	1.					
1	0530	23	1.	0015	98	1.	2	1900	173	1.	3	1345	248	1.					
1	0545	24	1.	0030	99	1.	2	1915	174	1.	3	1400	249	1.					
1	0600	25	1.	0045	100	1.	2	1930	175	1.	3	1415	250	1.					
1	0615	26	1.	0100	101	1.	2	1945	176	1.	3	1430	251	1.					
1	0630	27	1.	0115	102	1.	2	2000	177	1.	3	1445	252	1.					
1	0645	28	1.	0130	103	1.	2	2015	178	1.	3	1500	253	1.					
1	0700	29	1.	0145	104	1.	2	2030	179	1.	3	1515	254	1.					
1	0715	30	1.	0200	105	1.	2	2045	180	1.	3	1530	255	1.					
1	0730	31	1.	0215	106	1.	2	2100	181	1.	3	1545	256	1.					
1	0745	32	1.	0230	107	1.	2	2115	182	1.	3	1600	257	1.					
1	0800	33	1.	0245	108	1.	2	2130	183	1.	3	1615	258	1.					
1	0815	34	1.	0300	109	1.	2	2145	184	1.	3	1630	259	1.					
1	0830	35	1.	0315	110	1.	2	2200	185	1.	3	1645	260	1.					
1	0845	36	1.	0330	111	1.	2	2215	186	1.	3	1700	261	1.					
1	0900	37	1.	0345	112	1.	2	2230	187	1.	3	1715	262	1.					
1	0915	38	1.	0400	113	1.	2	2245	188	1.	3	1730	263	1.					
1	0930	39	1.	0415	114	1.	2	2300	189	1.	3	1745	264	1.					
1	0945	40	1.	0430	115	1.	2	2315	190	1.	3	1800	265	1.					
1	1000	41	1.	0445	116	1.	2	2330	191	1.	3	1815	266	1.					
1	1015	42	1.	0500	117	1.	2	2345	192	1.	3	1830	267	1.					
1	1030	43	1.	0515	118	1.	3	0000	193	1.	3	1845	268	1.					
1	1045	44	1.	0530	119	1.	3	0015	194	1.	3	1900	269	1.					
1	1100	45	1.	0545	120	1.	3	0030	195	1.	3	1915	270	1.					
1	1115	46	1.	0600	121	1.	3	0045	196	1.	3	1930	271	1.					
1	1130	47	1.	0615	122	1.	3	0100	197	1.	3	1945	272	1.					
1	1145	48	1.	0630	123	1.	3	0115	198	1.	3	2000	273	1.					
1	1200	49	1.	0645	124	1.	3	0130	199	1.	3	2015	274	1.					
1	1215	50	1.	0700	125	1.	3	0145	200	1.	3	2030	275	1.					
1	1230	51	1.	0715	126	1.	3	0200	201	1.	3	2045	276	1.					
1	1245	52	1.	0730	127	1.	3	0215	202	1.	3	2100	277	1.					
1	1300	53	1.	0745	128	1.	3	0230	203	1.	3	2115	278	1.					
1	1315	54	1.	0800	129	1.	3	0245	204	1.	3	2130	279	1.					
1	1330	55	1.	0815	130	1.	3	0300	205	1.	3	2145	280	1.					
1	1345	56	1.	0830	131	1.	3	0315	206	1.	3	2200	281	1.					
1	1400	57	1.	0845	132	1.	3	0330	207	1.	3	2215	282	1.					



1	1415	58	1.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	1.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	1.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	1.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	1.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	1.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	1.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	1.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	1.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	1.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	1.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	1.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	1.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	1.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	1.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	1.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	1.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	1.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW  
+ (CFS) (HR) 6-HR 24-HR 72-HR 74.75-HR  
+ 95. 2.75 12. 3. 2. 2.  
(INCHES) .958 1.134 1.604 1.631  
(AC-FT) 6. 7. 10. 10.  
CUMULATIVE AREA = .11 SQ MI

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*           *
* 307 KK * C7 *
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COMBINE 23,24

309 HC HYDROGRAPH COMBINATION  
ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION C7  
SUM OF 2 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	1.	*	1	1845	76	1.	*	2	1330	151	1.	*	3	0815	226	1.	
1	0015	2	1.	*	1	1900	77	1.	*	2	1345	152	1.	*	3	0830	227	1.	
1	0030	3	1.	*	1	1915	78	1.	*	2	1400	153	1.	*	3	0845	228	1.	
1	0045	4	1.	*	1	1930	79	1.	*	2	1415	154	1.	*	3	0900	229	1.	
1	0100	5	1.	*	1	1945	80	1.	*	2	1430	155	1.	*	3	0915	230	1.	
1	0115	6	1.	*	1	2000	81	1.	*	2	1445	156	1.	*	3	0930	231	1.	
1	0130	7	1.	*	1	2015	82	1.	*	2	1500	157	1.	*	3	0945	232	1.	
1	0145	8	17.	*	1	2030	83	1.	*	2	1515	158	1.	*	3	1000	233	1.	
1	0200	9	26.	*	1	2045	84	1.	*	2	1530	159	1.	*	3	1015	234	1.	
1	0215	10	43.	*	1	2100	85	1.	*	2	1545	160	1.	*	3	1030	235	1.	
1	0230	11	50.	*	1	2115	86	1.	*	2	1600	161	1.	*	3	1045	236	1.	
1	0245	12	113.	*	1	2130	87	1.	*	2	1615	162	1.	*	3	1100	237	1.	
1	0300	13	57.	*	1	2145	88	1.	*	2	1630	163	1.	*	3	1115	238	1.	
1	0315	14	19.	*	1	2200	89	1.	*	2	1645	164	1.	*	3	1130	239	1.	
1	0330	15	6.	*	1	2215	90	1.	*	2	1700	165	1.	*	3	1145	240	1.	
1	0345	16	2.	*	1	2230	91	1.	*	2	1715	166	1.	*	3	1200	241	1.	
1	0400	17	1.	*	1	2245	92	1.	*	2	1730	167	1.	*	3	1215	242	1.	
1	0415	18	1.	*	1	2300	93	1.	*	2	1745	168	1.	*	3	1230	243	1.	
1	0430	19	1.	*	1	2315	94	1.	*	2	1800	169	1.	*	3	1245	244	1.	
1	0445	20	1.	*	1	2330	95	1.	*	2	1815	170	1.	*	3	1300	245	1.	
1	0500	21	1.	*	1	2345	96	1.	*	2	1830	171	1.	*	3	1315	246	1.	
1	0515	22	1.	*	2	0000	97	1.	*	2	1845	172	1.	*	3	1330	247	1.	
1	0530	23	1.	*	2	0015	98	1.	*	2	1900	173	1.	*	3	1345	248	1.	
1	0545	24	1.	*	2	0030	99	1.	*	2	1915	174	1.	*	3	1400	249	1.	
1	0600	25	1.	*	2	0045	100	1.	*	2	1930	175	1.	*	3	1415	250	1.	
1	0615	26	1.	*	2	0100	101	1.	*	2	1945	176	1.	*	3	1430	251	1.	
1	0630	27	1.	*	2	0115	102	1.	*	2	2000	177	1.	*	3	1445	252	1.	
1	0645	28	1.	*	2	0130	103	1.	*	2	2015	178	1.	*	3	1500	253	1.	
1	0700	29	1.	*	2	0145	104	1.	*	2	2030	179	1.	*	3	1515	254	1.	
1	0715	30	1.	*	2	0200	105	1.	*	2	2045	180	1.	*	3	1530	255	1.	

1	0730	31	1.	*	2	0215	106	1.	*	2	2100	181	1.	*	3	1545	256	1.
1	0745	32	1.	*	2	0230	107	1.	*	2	2115	182	1.	*	3	1600	257	1.
1	0800	33	1.	*	2	0245	108	1.	*	2	2130	183	1.	*	3	1615	258	1.
1	0815	34	1.	*	2	0300	109	1.	*	2	2145	184	1.	*	3	1630	259	1.
1	0830	35	1.	*	2	0315	110	1.	*	2	2200	185	1.	*	3	1645	260	1.
1	0845	36	1.	*	2	0330	111	1.	*	2	2215	186	1.	*	3	1700	261	1.
1	0900	37	1.	*	2	0345	112	1.	*	2	2230	187	1.	*	3	1715	262	1.
1	0915	38	1.	*	2	0400	113	1.	*	2	2245	188	1.	*	3	1730	263	1.
1	0930	39	1.	*	2	0415	114	1.	*	2	2300	189	1.	*	3	1745	264	1.
1	0945	40	1.	*	2	0430	115	1.	*	2	2315	190	1.	*	3	1800	265	1.
1	1000	41	1.	*	2	0445	116	1.	*	2	2330	191	1.	*	3	1815	266	1.
1	1015	42	1.	*	2	0500	117	1.	*	2	2345	192	1.	*	3	1830	267	1.
1	1030	43	1.	*	2	0515	118	1.	*	3	0000	193	1.	*	3	1845	268	1.
1	1045	44	1.	*	2	0530	119	1.	*	3	0015	194	1.	*	3	1900	269	1.
1	1100	45	1.	*	2	0545	120	1.	*	3	0030	195	1.	*	3	1915	270	1.
1	1115	46	1.	*	2	0600	121	1.	*	3	0045	196	1.	*	3	1930	271	1.
1	1130	47	1.	*	2	0615	122	1.	*	3	0100	197	1.	*	3	1945	272	1.
1	1145	48	1.	*	2	0630	123	1.	*	3	0115	198	1.	*	3	2000	273	1.
1	1200	49	1.	*	2	0645	124	1.	*	3	0130	199	1.	*	3	2015	274	1.
1	1215	50	1.	*	2	0700	125	1.	*	3	0145	200	1.	*	3	2030	275	1.
1	1230	51	1.	*	2	0715	126	1.	*	3	0200	201	1.	*	3	2045	276	1.
1	1245	52	1.	*	2	0730	127	1.	*	3	0215	202	1.	*	3	2100	277	1.
1	1300	53	1.	*	2	0745	128	1.	*	3	0230	203	1.	*	3	2115	278	1.
1	1315	54	1.	*	2	0800	129	1.	*	3	0245	204	1.	*	3	2130	279	1.
1	1330	55	1.	*	2	0815	130	1.	*	3	0300	205	1.	*	3	2145	280	1.
1	1345	56	1.	*	2	0830	131	1.	*	3	0315	206	1.	*	3	2200	281	1.
1	1400	57	1.	*	2	0845	132	1.	*	3	0330	207	1.	*	3	2215	282	1.
1	1415	58	1.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	1.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	1.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	1.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	1.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	1.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	1.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	1.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	1.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	1.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	1.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	1.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	1.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	1.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	1.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	1.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	1.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	1.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

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PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 113.	2.75	14.	4.	2.	2.
	(INCHES)	.889	1.057	1.505	1.531
	(AC-FT)	7.	9.	12.	12.

CUMULATIVE AREA = .15 SQ MI

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310 KK * RDBE4 *
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DBE4 ROUTING  
HYDROGRAPH ROUTING DATA

312 RS	STORAGE ROUTING								
	NSTPS	1	NUMBER OF SUBREACHES						
	ITYP		ELEV TYPE OF INITIAL CONDITION						
	RSVRC	118.25	INITIAL CONDITION						
	X	.00	WORKING R AND D COEFFICIENT						
313 SV	STORAGE	.0	4.4	5.7	19.0	19.6	24.7	30.5	
314 SE	ELEVATION	118.25	120.41	122.50	125.00	125.10	126.00	127.00	
315 SQ	DISCHARGE	0.	0.	2.	4.	10.	23.	32.	

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1	2015	82	1.	5.1	121.6	* 2	2115	182	1.	4.9	121.2	* 3	2215	282	1.	4.9	121.2
1	2030	83	1.	5.1	121.5	* 2	2130	183	1.	4.9	121.2	* 3	2230	283	1.	4.9	121.2
1	2045	84	1.	5.1	121.5	* 2	2145	184	1.	4.9	121.2	* 3	2245	284	1.	4.9	121.2
1	2100	85	1.	5.1	121.5	* 2	2200	185	1.	4.9	121.2	* 3	2300	285	1.	4.9	121.2
1	2115	86	1.	5.1	121.5	* 2	2215	186	1.	4.9	121.2	* 3	2315	286	1.	4.9	121.2
1	2130	87	1.	5.1	121.5	* 2	2230	187	1.	4.9	121.2	* 3	2330	287	1.	4.9	121.2
1	2145	88	1.	5.1	121.5	* 2	2245	188	1.	4.9	121.2	* 3	2345	288	1.	4.9	121.2
1	2200	89	1.	5.1	121.5	* 2	2300	189	1.	4.9	121.2	* 4	0000	289	1.	4.9	121.2
1	2215	90	1.	5.1	121.5	* 2	2315	190	1.	4.9	121.2	* 4	0015	290	1.	4.9	121.2
1	2230	91	1.	5.0	121.4	* 2	2330	191	1.	4.9	121.2	* 4	0030	291	1.	4.9	121.2
1	2245	92	1.	5.0	121.4	* 2	2345	192	1.	4.9	121.2	* 4	0045	292	1.	4.9	121.2
1	2300	93	1.	5.0	121.4	* 3	0000	193	1.	4.9	121.2	* 4	0100	293	1.	4.9	121.2
1	2315	94	1.	5.0	121.4	* 3	0015	194	1.	4.9	121.2	* 4	0115	294	1.	4.9	121.2
1	2330	95	1.	5.0	121.4	* 3	0030	195	1.	4.9	121.2	* 4	0130	295	1.	4.9	121.2
1	2345	96	1.	5.0	121.4	* 3	0045	196	1.	4.9	121.2	* 4	0145	296	1.	4.9	121.2
2	0000	97	1.	5.0	121.4	* 3	0100	197	1.	4.9	121.2	* 4	0200	297	1.	4.9	121.2
2	0015	98	1.	5.0	121.4	* 3	0115	198	1.	4.9	121.2	* 4	0215	298	1.	4.9	121.2
2	0030	99	1.	5.0	121.4	* 3	0130	199	1.	4.9	121.2	* 4	0230	299	1.	4.9	121.2
2	0045	100	1.	5.0	121.4	* 3	0145	200	1.	4.9	121.2	* 4	0245	300	1.	4.9	121.2

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

			6-HR	24-HR	72-HR	74.75-HR
+	(CFS)	(HR)				
+	3.	3.75	3.	2.	1.	1.
	(INCHES)		.155	.465	.923	.923
	(AC-FT)		1.	4.	7.	7.

PEAK STORAGE TIME MAXIMUM AVERAGE STORAGE

			6-HR	24-HR	72-HR	74.75-HR
+	(AC-FT)	(HR)				
+	7.	3.75	6.	6.	5.	5.

PEAK STAGE TIME MAXIMUM AVERAGE STAGE

			6-HR	24-HR	72-HR	74.75-HR
+	(FEET)	(HR)				
+	122.71	3.75	122.65	122.05	121.49	121.38

CUMULATIVE AREA = .15 SQ MI

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 316 KK \* STP27 \* AREA 4B  
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RUNOFF FROM AREA 4B

SUBBASIN RUNOFF DATA

318 BA SUBBASIN CHARACTERISTICS  
 TAREA .02 SUBBASIN AREA  
 SNAP 14.00 NORMAL ANNUAL PRECIPITATION  
 RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP27

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	* 1	1845	76	0.	* 2	1330	151	0.	* 3	0815	226	0.				
1	0015	2	0.	* 1	1900	77	0.	* 2	1345	152	0.	* 3	0830	227	0.				
1	0030	3	0.	* 1	1915	78	0.	* 2	1400	153	0.	* 3	0845	228	0.				
1	0045	4	0.	* 1	1930	79	0.	* 2	1415	154	0.	* 3	0900	229	0.				
1	0100	5	0.	* 1	1945	80	0.	* 2	1430	155	0.	* 3	0915	230	0.				
1	0115	6	0.	* 1	2000	81	0.	* 2	1445	156	0.	* 3	0930	231	0.				
1	0130	7	3.	* 1	2015	82	0.	* 2	1500	157	0.	* 3	0945	232	0.				
1	0145	8	3.	* 1	2030	83	0.	* 2	1515	158	0.	* 3	1000	233	0.				
1	0200	9	4.	* 1	2045	84	0.	* 2	1530	159	0.	* 3	1015	234	0.				
1	0215	10	6.	* 1	2100	85	0.	* 2	1545	160	0.	* 3	1030	235	0.				
1	0230	11	7.	* 1	2115	86	0.	* 2	1600	161	0.	* 3	1045	236	0.				
1	0245	12	16.	* 1	2130	87	0.	* 2	1615	162	0.	* 3	1100	237	0.				
1	0300	13	7.	* 1	2145	88	0.	* 2	1630	163	0.	* 3	1115	238	0.				
1	0315	14	2.	* 1	2200	89	0.	* 2	1645	164	0.	* 3	1130	239	0.				
1	0330	15	1.	* 1	2215	90	0.	* 2	1700	165	0.	* 3	1145	240	0.				
1	0345	16	0.	* 1	2230	91	0.	* 2	1715	166	0.	* 3	1200	241	0.				

1	0400	17	0.	*	1	2245	92	0.	*	2	1730	167	0.	*	3	1215	242	0.
1	0415	18	0.	*	1	2300	93	0.	*	2	1745	168	0.	*	3	1230	243	0.
1	0430	19	0.	*	1	2315	94	0.	*	2	1800	169	0.	*	3	1245	244	0.
1	0445	20	0.	*	1	2330	95	0.	*	2	1815	170	0.	*	3	1300	245	0.
1	0500	21	0.	*	1	2345	96	0.	*	2	1830	171	0.	*	3	1315	246	0.
1	0515	22	0.	*	2	0000	97	0.	*	2	1845	172	0.	*	3	1330	247	0.
1	0530	23	0.	*	2	0015	98	0.	*	2	1900	173	0.	*	3	1345	248	0.
1	0545	24	0.	*	2	0030	99	0.	*	2	1915	174	0.	*	3	1400	249	0.
1	0600	25	0.	*	2	0045	100	0.	*	2	1930	175	0.	*	3	1415	250	0.
1	0615	26	0.	*	2	0100	101	0.	*	2	1945	176	0.	*	3	1430	251	0.
1	0630	27	0.	*	2	0115	102	0.	*	2	2000	177	0.	*	3	1445	252	0.
1	0645	28	0.	*	2	0130	103	0.	*	2	2015	178	0.	*	3	1500	253	0.
1	0700	29	0.	*	2	0145	104	0.	*	2	2030	179	0.	*	3	1515	254	0.
1	0715	30	0.	*	2	0200	105	0.	*	2	2045	180	0.	*	3	1530	255	0.
1	0730	31	0.	*	2	0215	106	0.	*	2	2100	181	0.	*	3	1545	256	0.
1	0745	32	0.	*	2	0230	107	0.	*	2	2115	182	0.	*	3	1600	257	0.
1	0800	33	0.	*	2	0245	108	0.	*	2	2130	183	0.	*	3	1615	258	0.
1	0815	34	0.	*	2	0300	109	0.	*	2	2145	184	0.	*	3	1630	259	0.
1	0830	35	0.	*	2	0315	110	0.	*	2	2200	185	0.	*	3	1645	260	0.
1	0845	36	0.	*	2	0330	111	0.	*	2	2215	186	0.	*	3	1700	261	0.
1	0900	37	0.	*	2	0345	112	0.	*	2	2230	187	0.	*	3	1715	262	0.
1	0915	38	0.	*	2	0400	113	0.	*	2	2245	188	0.	*	3	1730	263	0.
1	0930	39	0.	*	2	0415	114	0.	*	2	2300	189	0.	*	3	1745	264	0.
1	0945	40	0.	*	2	0430	115	0.	*	2	2315	190	0.	*	3	1800	265	0.
1	1000	41	0.	*	2	0445	116	0.	*	2	2330	191	0.	*	3	1815	266	0.
1	1015	42	0.	*	2	0500	117	0.	*	2	2345	192	0.	*	3	1830	267	0.
1	1030	43	0.	*	2	0515	118	0.	*	3	0000	193	0.	*	3	1845	268	0.
1	1045	44	0.	*	2	0530	119	0.	*	3	0015	194	0.	*	3	1900	269	0.
1	1100	45	0.	*	2	0545	120	0.	*	3	0030	195	0.	*	3	1915	270	0.
1	1115	46	0.	*	2	0600	121	0.	*	3	0045	196	0.	*	3	1930	271	0.
1	1130	47	0.	*	2	0615	122	0.	*	3	0100	197	0.	*	3	1945	272	0.
1	1145	48	0.	*	2	0630	123	0.	*	3	0115	198	0.	*	3	2000	273	0.
1	1200	49	0.	*	2	0645	124	0.	*	3	0130	199	0.	*	3	2015	274	0.
1	1215	50	0.	*	2	0700	125	0.	*	3	0145	200	0.	*	3	2030	275	0.
1	1230	51	0.	*	2	0715	126	0.	*	3	0200	201	0.	*	3	2045	276	0.
1	1245	52	0.	*	2	0730	127	0.	*	3	0215	202	0.	*	3	2100	277	0.
1	1300	53	0.	*	2	0745	128	0.	*	3	0230	203	0.	*	3	2115	278	0.
1	1315	54	0.	*	2	0800	129	0.	*	3	0245	204	0.	*	3	2130	279	0.
1	1330	55	0.	*	2	0815	130	0.	*	3	0300	205	0.	*	3	2145	280	0.
1	1345	56	0.	*	2	0830	131	0.	*	3	0315	206	0.	*	3	2200	281	0.
1	1400	57	0.	*	2	0845	132	0.	*	3	0330	207	0.	*	3	2215	282	0.
1	1415	58	0.	*	2	0900	133	0.	*	3	0345	208	0.	*	3	2230	283	0.
1	1430	59	0.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	0.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	0.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	0.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	0.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	0.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	0.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	0.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	0.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	0.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	0.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	0.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	0.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	0.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	0.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	0.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	0.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 16.	2.75	2.	1.	0.	0.
	(INCHES)	.820	.960	1.332	1.353
	(AC-FT)	1.	1.	2.	2.

CUMULATIVE AREA = .02 SQ MI

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 329 KK \* C8 \*  
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COMBINE 26,27

331 HC HYDROGRAPH COMBINATION  
 ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE



1	0745	32	3.	*	2	0230	107	1.	*	2	2115	182	1.	*	3	1600	257	1.
1	0800	33	3.	*	2	0245	108	1.	*	2	2130	183	1.	*	3	1615	258	1.
1	0815	34	3.	*	2	0300	109	1.	*	2	2145	184	1.	*	3	1630	259	1.
1	0830	35	3.	*	2	0315	110	1.	*	2	2200	185	1.	*	3	1645	260	1.
1	0845	36	3.	*	2	0330	111	1.	*	2	2215	186	1.	*	3	1700	261	1.
1	0900	37	3.	*	2	0345	112	1.	*	2	2230	187	1.	*	3	1715	262	1.
1	0915	38	3.	*	2	0400	113	1.	*	2	2245	188	1.	*	3	1730	263	1.
1	0930	39	3.	*	2	0415	114	1.	*	2	2300	189	1.	*	3	1745	264	1.
1	0945	40	3.	*	2	0430	115	1.	*	2	2315	190	1.	*	3	1800	265	1.
1	1000	41	3.	*	2	0445	116	1.	*	2	2330	191	1.	*	3	1815	266	1.
1	1015	42	3.	*	2	0500	117	1.	*	2	2345	192	1.	*	3	1830	267	1.
1	1030	43	3.	*	2	0515	118	1.	*	3	0000	193	1.	*	3	1845	268	1.
1	1045	44	3.	*	2	0530	119	1.	*	3	0015	194	1.	*	3	1900	269	1.
1	1100	45	3.	*	2	0545	120	1.	*	3	0030	195	1.	*	3	1915	270	1.
1	1115	46	3.	*	2	0600	121	1.	*	3	0045	196	1.	*	3	1930	271	1.
1	1130	47	3.	*	2	0615	122	1.	*	3	0100	197	1.	*	3	1945	272	1.
1	1145	48	3.	*	2	0630	123	1.	*	3	0115	198	1.	*	3	2000	273	1.
1	1200	49	3.	*	2	0645	124	1.	*	3	0130	199	1.	*	3	2015	274	1.
1	1215	50	3.	*	2	0700	125	1.	*	3	0145	200	1.	*	3	2030	275	1.
1	1230	51	3.	*	2	0715	126	1.	*	3	0200	201	1.	*	3	2045	276	1.
1	1245	52	3.	*	2	0730	127	1.	*	3	0215	202	1.	*	3	2100	277	1.
1	1300	53	2.	*	2	0745	128	1.	*	3	0230	203	1.	*	3	2115	278	1.
1	1315	54	2.	*	2	0800	129	1.	*	3	0245	204	1.	*	3	2130	279	1.
1	1330	55	2.	*	2	0815	130	1.	*	3	0300	205	1.	*	3	2145	280	1.
1	1345	56	2.	*	2	0830	131	1.	*	3	0315	206	1.	*	3	2200	281	1.
1	1400	57	2.	*	2	0845	132	1.	*	3	0330	207	1.	*	3	2215	282	1.
1	1415	58	2.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	2.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	2.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	2.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	2.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	2.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	2.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	2.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	2.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	2.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	2.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	2.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	2.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	2.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	2.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	2.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	2.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	2.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

+ (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 16.	2.75	4.	2.	2.	1.
	(INCHES)	.213	.519	.967	.982
	(AC-FT)	2.	5.	9.	9.

CUMULATIVE AREA = .17 SQ MI

RUNOFF SUMMARY  
FLOW IN CUBIC FEET PER SECOND  
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK TIME OF FLOW	AVERAGE FLOW FOR MAXIMUM PERIOD				BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
			6-HOUR	24-HOUR	72-HOUR				
HYDROGRAPH AT	STP1	22.	7.50	6.	2.	1.	.04		
ROUTED TO	LAG1	21.	7.50	6.	2.	1.	.04		
HYDROGRAPH AT	STP3	82.	7.50	27.	11.	4.	.11		
2 COMBINED AT	C1	102.	7.50	32.	13.	5.	.15		
ROUTED TO	RD BE1	8.	16.75	7.	4.	3.	.15		
						125.06	16.75		
HYDROGRAPH AT	STP4	14.	7.50	5.	2.	1.	.02		
2 COMBINED AT	C2	17.	7.50	8.	6.	4.	.17		

@ 24HR/100 YR STORM  
MAX WS @  
EAST BASIN

+	HYDROGRAPH AT								
	STP8	39.	2.75	5.	1.	1.		.04	
+	ROUTED TO								
	LAG9	28.	2.75	5.	1.	1.		.04	
+	HYDROGRAPH AT								
	STP10	141.	2.75	20.	6.	2.		.11	
+	2 COMBINED AT								
	C3	168.	2.75	25.	7.	3.		.15	
+	ROUTED TO								
	RDBE2	3.	3.75	3.	3.	2.		.15	
+							123.68		3.75
+	HYDROGRAPH AT								
	STP13	24.	2.75	3.	1.	0.		.02	
+	2 COMBINED AT								
	C4	27.	2.75	6.	4.	3.		.17	
+	HYDROGRAPH AT								
	STP15	14.	7.50	2.	1.	0.		.04	
+	ROUTED TO								
	LAG16	11.	7.75	2.	1.	0.		.04	
+	HYDROGRAPH AT								
	STP17	53.	7.50	16.	6.	2.		.11	
+	2 COMBINED AT								
	C5	62.	7.50	18.	6.	3.		.15	
+	ROUTED TO								
	RDBE3	3.	17.25	3.	3.	2.		.15	
+							123.21		17.75
+	HYDROGRAPH AT								
	STP20	9.	7.50	3.	1.	0.		.02	
+	2 COMBINED AT								
	C6	9.	7.50	5.	4.	2.		.17	
+	HYDROGRAPH AT								
	STP22	26.	2.75	3.	1.	0.		.04	
+	ROUTED TO								
	LAG23	18.	2.75	3.	1.	0.		.04	
+	HYDROGRAPH AT								
	STP24	95.	2.75	12.	3.	2.		.11	
+	2 COMBINED AT								
	C7	113.	2.75	14.	4.	2.		.15	
+	ROUTED TO								
	RDBE4	3.	3.75	3.	2.	1.		.15	
+							122.71		3.75
+	HYDROGRAPH AT								
	STP27	16.	2.75	2.	1.	0.		.02	
+	2 COMBINED AT								
	C8	16.	2.75	4.	2.	2.		.17	

@ 3HR/100YR STORM  
 MAX PEAK OUTFLOW  
 @ EAST BASIN

\*\*\* NORMAL END OF HEC-1 \*\*\*



**APPENDIX E**

**HEC-1 Runs – West Side**

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*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *          * U.S. ARMY CORPS OF ENGINEERS *
*   JUN 1998 *                                * HYDROLOGIC ENGINEERING CENTER *
*   VERSION 4.1 *                            *   609 SECOND STREET *
* * * * * DAVIS, CALIFORNIA 95616 *
* RUN DATE 10OCT12 TIME 15:56:59 *          *   (916) 756-1104 *
*****

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X X XXXXXXXX XXXXX X
X X X X X XX
X X X X X
XXXXXXX XXXX X XXXXX X
X X X X X
X X X X X
X X XXXXXXXX XXXXX XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

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LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1 ID TUSCANY MEADOWS - (X-REF 201002)
2 ID *****
3 ID WEST SIDE BASIN
4 ID *****
5 ID 24-HR 100-YR STORM
6 ID *****
7 ID STEP 1
8 ID FLOOD HYDROGRAPH FOR AREA 2A(SKY & BLACK DIAMOND) (34.5 AC TRIB TO DET
9 ID 0.054 SQ MI BASIN
10 ID *****
11 ID STEP 2
12 ID ROUTE RUNOFF FROM AREA 2A USING TATUM METHOD - 1 STEP LAG TIME
13 ID *****
14 ID STEP 3
15 ID FLOOD HYDROGRAPH FOR AREA 1(TUSCANY WEST) (82.1 AC TRIB TO DET BASIN W
16 ID 0.128 SQ MI BASIN
17 ID *****
18 ID STEP 4
19 ID FLOOD HYDROGRAPH FOR AREA 2B(CHEVRON) (11.6 AC TRIB TO DET BASIN WEST)
20 ID 0.018 SQ MI BASIN
21 ID *****
22 ID STEP 5
23 ID COMBINE HYDROGRAPHS FROM STEPS 2 THRU 4
24 ID *****
25 ID STEP 6
26 ID ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 5 THRU 2'X 3'
27 ID (TYPE C INLET GRATE)AND 8" SUBDRAIN W/7.7" ORIFICE PLATE
28 ID W/10" ORIFICE PLATE IN FRONT OF 30" OUTFALL PIPE.
29 ID *****
30 ID 3-HR 100-YR STORM
31 ID *****
32 ID STEP 7
33 ID FLOOD HYDROGRAPH FOR AREA 2A(SKY & BLACK DIAMOND) (34.5 AC TRIB TO DET
34 ID 0.054 SQ MI BASIN
35 ID *****
36 ID STEP 8
37 ID FLOOD HYDROGRAPH FOR AREA 1(TUSCANY WEST) (82.1 AC TRIB TO DET BASIN W
38 ID 0.128 SQ MI BASIN
39 ID *****
40 ID STEP 9
41 ID FLOOD HYDROGRAPH FOR AREA 2B(CHEVRON) (11.6 AC TRIB TO DET BASIN WEST)
42 ID 0.018 SQ MI BASIN
43 ID *****
44 ID STEP 10
45 ID COMBINE HYDROGRAPHS FROM STEPS 7 THRU 9
46 ID *****
47 ID STEP 11
48 ID ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 10 THRU 2'X 3'
49 ID (TYPE C INLET GRATE)AND 8" SUBDRAIN W/7.7" ORIFICE PLATE
50 ID W/10" ORIFICE PLATE IN FRONT OF 30" OUTFALL PIPE.

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51 ID \*\*\*\*\*  
 52 ID 24-HR 10-YR STORM  
 53 ID \*\*\*\*\*  
 54 ID STEP 12  
 55 ID FLOOD HYDROGRAPH FOR AREA 2A(SKY & BLACK DIAMOND) (34.5 AC TRIB TO DET  
 1 HEC-1 INPUT PAGE 2

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

56 ID 0.054 SQ MI BASIN  
 57 ID \*\*\*\*\*  
 58 ID STEP 13  
 59 ID ROUTE RUNOFF FROM AREA 2A USING TATUM METHOD - 1 STEP LAG TIME  
 60 ID \*\*\*\*\*  
 61 ID STEP 14  
 62 ID FLOOD HYDROGRAPH FOR AREA 1(TUSCANY WEST) (82.1 AC TRIB TO DET BASIN W  
 63 ID 0.128 SQ MI BASIN  
 64 ID \*\*\*\*\*  
 65 ID STEP 15  
 66 ID FLOOD HYDROGRAPH FOR AREA 2B(CHEVRON) (11.6 AC TRIB TO DET BASIN WEST)  
 67 ID 0.018 SQ MI BASIN  
 68 ID \*\*\*\*\*  
 69 ID STEP 16  
 70 ID COMBINE HYDROGRAPHS FROM STEPS 13 THRU 15  
 71 ID \*\*\*\*\*  
 72 ID STEP 17  
 73 ID ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 16 THRU 2'X 3'  
 74 ID (TYPE C INLET GRATE)AND 8" SUBDRAIN W/7.7" ORIFICE PLATE  
 75 ID W/10" ORIFICE PLATE IN FRONT OF 30" OUTFALL PIPE.  
 76 ID \*\*\*\*\*  
 77 ID 3-HR 10-YR STORM  
 78 ID \*\*\*\*\*  
 79 ID STEP 18  
 80 ID FLOOD HYDROGRAPH FOR AREA 2A(SKY & BLACK DIAMOND) (34.5 AC TRIB TO DET  
 81 ID 0.054 SQ MI BASIN  
 82 ID \*\*\*\*\*  
 83 ID STEP 19  
 84 ID ROUTE RUNOFF FROM AREA 2A USING TATUM METHOD - 1 STEP LAG TIME  
 85 ID \*\*\*\*\*  
 86 ID STEP 20  
 87 ID FLOOD HYDROGRAPH FOR AREA 1(TUSCANY WEST) (82.1 AC TRIB TO DET BASIN W  
 88 ID 0.128 SQ MI BASIN  
 89 ID \*\*\*\*\*  
 90 ID STEP 21  
 91 ID FLOOD HYDROGRAPH FOR AREA 2B(CHEVRON) (11.6 AC TRIB TO DET BASIN WEST)  
 92 ID 0.018 SQ MI BASIN  
 93 ID \*\*\*\*\*  
 94 ID STEP 22  
 95 ID COMBINE HYDROGRAPHS FROM STEPS 16 THRU 18  
 96 ID \*\*\*\*\*  
 97 ID STEP 23  
 98 ID ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 22 THRU 2'X 3'  
 99 ID (TYPE C INLET GRATE)AND 8" SUBDRAIN W/7.7" ORIFICE PLATE  
 100 ID W/10" ORIFICE PLATE IN FRONT OF 30" OUTFALL PIPE.  
 101 ID \*\*\*\*\*  
 102 IO 1  
 103 IT 15 300  
 \* \*\*\*\*\* 100YR/24HR \*\*\*\*\*

1 \* STEP 1 HEC-1 INPUT PAGE 3

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

104 KK STP1 AREA 2A  
 105 KM RUNOFF FROM AREA 2A  
 106 BA .054 14.5  
 107 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 108 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 1.85  
 109 QI 4.04 4.92 5.06 6.37 6.58 6.62 6.62 9.47 9.92 28.91  
 110 QI 31.93 16.98 14.49 10.13 9.51 6.80 6.39 5.53 5.41 4.61  
 111 QI 4.49 4.20 4.16 3.64 3.55 3.02 2.94 2.92 2.92 2.66  
 112 QI 2.62 2.61 2.61 2.35 2.31 2.30 2.30 2.05 2.00 2.00  
 113 QI 2.00 1.74 1.70 1.69 1.69 1.69 1.69 1.43 1.39 1.38  
 114 QI 1.38 1.12 1.08 1.07 1.07 0.81 0.77 0.76 0.76 0.76  
 115 QI 0.76 0.76 0.76 0.76 0.76 0.76 0.76 0.50 0.46 0.45  
 116 QI 0.45 0.45 0.45 0.45 0.45 0.30 0.28  
 \* STEP 2  
 117 KK LAG1  
 118 KM ROUTED LAG TIME LAG1 (1 STEP)  
 119 RT 1 2 0  
 \* STEP 3  
 120 KK STP3 AREA 1  
 121 KM RUNOFF FROM AREA 1  
 122 BA .128 14.0  
 123 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64

124 QI 0.64 0.64 0.64 0.64 2.89 7.19 8.47 10.02 10.63 12.26  
 125 QI 12.74 13.88 14.25 16.77 17.50 17.81 17.99 23.27 24.71 59.94  
 126 QI 69.92 45.67 40.55 30.96 26.80 20.51 18.59 16.44 15.66 13.95  
 127 QI 13.44 12.76 12.51 11.47 11.17 10.10 9.76 9.63 9.55 9.05  
 128 QI 8.92 8.86 8.83 8.34 8.21 8.15 8.12 7.63 7.50 7.44  
 129 QI 7.40 6.92 6.79 6.73 6.69 6.68 6.68 6.21 6.08 6.02  
 130 QI 5.98 5.50 5.36 5.31 5.27 4.79 4.65 4.60 4.56 4.55  
 131 QI 4.55 4.55 4.55 4.55 4.55 4.55 4.55 4.07 3.94 3.89  
 132 QI 3.85 3.84 3.84 3.84 3.84 1.71 1.12

\* STEP 4

133 KK STP4 AREA 2B  
 134 KM RUNOFF FROM AREA 2B  
 135 BA .018 14.0  
 136 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 137 QI 0.09 0.09 0.39 1.13 1.31 1.47 1.51 1.67 1.70 1.94  
 138 QI 1.99 2.16 2.20 2.58 2.67 2.71 2.72 3.52 3.70 9.09  
 139 QI 10.32 6.53 5.77 4.23 3.80 2.95 2.74 2.44 2.36 2.12  
 140 QI 2.06 1.96 1.94 1.78 1.75 1.59 1.55 1.53 1.53 1.45  
 141 QI 1.44 1.43 1.43 1.35 1.34 1.33 1.33 1.25 1.24 1.23  
 142 QI 1.23 1.15 1.14 1.13 1.13 1.13 1.13 1.05 1.04 1.03  
 143 QI 1.03 0.95 0.94 0.93 0.93 0.85 0.84 0.83 0.83 0.83  
 144 QI 0.83 0.83 0.83 0.83 0.83 0.83 0.83 0.75 0.74 0.73  
 145 QI 0.73 0.73 0.73 0.73 0.73 0.26 0.16

\* STEP 5

1 HEC-1 INPUT PAGE 4

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

146 KK C1  
 147 KM COMBINE 2,3,4  
 148 HC 3

\* STEP 6

149 KK RDBW1  
 150 KM DBW1 ROUTING  
 151 RS 1 ELEV 113.75  
 152 SV 0 4.465 5.684 10.927 11.459 24.699 30.477  
 153 SE 113.75 115.91 118 119.0 119.1 121.5 122.5  
 154 SQ 0 0 2.23 2.71 8.92 9.82 10.17

\* \*\*\*\*\* 100YR/3HR \*\*\*\*\*  
 \* STEP 7

155 KK STP7 AREA 2A  
 156 KM RUNOFF FROM AREA 2A  
 157 BA .054 14.5  
 158 QI 0.27 0.27 0.27 0.27 0.27 1.08 18.27 11.55 13.58 20.83  
 159 QI 23.06 57.11 19.79 3.55 0.59 0.27 0.27 0.27 0.27 0.27  
 160 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 161 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 162 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 163 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 164 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 165 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 166 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 167 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27

\* STEP 8

168 KK STP8 AREA 1  
 169 KM RUNOFF FROM AREA 1  
 170 BA .128 14.0  
 171 QI 0.64 0.64 0.64 0.64 0.64 10.28 38.06 28.70 33.16 47.87  
 172 QI 53.23 117.27 57.10 22.09 12.00 4.86 1.32 0.67 0.64 0.64  
 173 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 174 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 175 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 176 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 177 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 178 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 179 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 180 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64

\* STEP 9

181 KK STP9 AREA 2B  
 182 KM RUNOFF FROM AREA 2B  
 183 BA .018 14.0  
 184 QI 0.09 0.09 0.09 0.09 0.09 2.24 6.04 4.34 5.03 7.08  
 185 QI 7.79 17.59 7.80 2.74 1.12 0.28 0.10 0.09 0.09 0.09  
 186 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 187 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 188 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 189 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 190 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09

1 HEC-1 INPUT PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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191  QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09
192  QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09
193  QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09
*   STEP 10

194  KK C2
195  KM COMBINE 7,8,9
196  HC 3
*   STEP 11

197  KK RDBW2
198  KM DBW2 ROUTING
199  RS 1 ELEV 113.75
200  SV 0 4.465 5.684 10.927 11.459 24.699 30.477
201  SE 113.75 115.91 118 119.0 119.1 121.5 122.5
202  SQ 0 0 2.23 2.71 8.92 9.82 10.17
* ***** 10YR/24HR *****
*   STEP 12

203  KK STP12 AREA 2A
204  KM RUNOFF FROM AREA 2A
205  BA .054 14.5
206  QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27
207  QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27
208  QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 1.94 17.79
209  QI 20.34 10.40 8.74 5.82 5.40 3.59 3.31 2.74 2.66 2.12
210  QI 2.04 1.85 1.82 1.47 1.41 1.05 1.00 0.99 0.99 0.81
211  QI 0.79 0.78 0.78 0.61 0.58 0.57 0.57 0.40 0.37 0.37
212  QI 0.37 0.29 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27
213  QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27
214  QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27
215  QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27
*   STEP 13

216  KK LAG13
217  KM ROUTED LAG TIME LAG13 (1 STEP)
218  RT 1 2 0
*   STEP 14

219  KK STP14 AREA 1
220  KM RUNOFF FROM AREA 1
221  BA .128 14.0
222  QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64
223  QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64
224  QI 0.64 0.64 2.19 7.83 9.45 10.19 10.64 14.26 15.24 38.83
225  QI 45.52 29.27 25.85 19.42 16.64 12.42 11.14 9.69 9.17 8.03
226  QI 7.68 7.23 7.06 6.37 6.17 5.45 5.22 5.13 5.08 4.75
227  QI 4.66 4.62 4.60 4.27 4.18 4.14 4.12 3.79 3.71 3.67
228  QI 3.64 3.32 3.23 3.19 3.17 3.16 3.16 2.84 2.75 2.72
229  QI 2.69 2.37 2.28 2.24 2.21 1.89 1.80 1.76 1.74 1.73
230  QI 1.73 1.73 1.73 1.73 1.73 1.73 1.73 1.41 1.32 1.29
231  QI 1.26 1.25 1.25 1.25 1.25 0.84 0.73
*   STEP 15

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1 HEC-1 INPUT PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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232  KK STP15 AREA 2B
233  KM RUNOFF FROM AREA 2B
234  BA .018 14.0
235  QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09
236  QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.61
237  QI 1.04 1.26 1.34 1.60 1.66 1.69 1.70 2.24 2.36 5.96
238  QI 6.79 4.25 3.74 2.71 2.42 1.85 1.71 1.51 1.46 1.29
239  QI 1.26 1.19 1.17 1.07 1.05 0.94 0.91 0.90 0.90 0.85
240  QI 0.84 0.83 0.83 0.78 0.77 0.77 0.76 0.72 0.70 0.70
241  QI 0.70 0.65 0.64 0.63 0.63 0.63 0.63 0.58 0.57 0.57
242  QI 0.56 0.51 0.50 0.50 0.50 0.45 0.44 0.43 0.43 0.43
243  QI 0.43 0.43 0.43 0.43 0.43 0.43 0.43 0.38 0.37 0.36
244  QI 0.36 0.36 0.36 0.36 0.36 0.16 0.12
*   STEP 16

245  KK C3
246  KM COMBINE 13,14,15
247  HC 3
*   STEP 17

248  KK RDBW3
249  KM DBW3 ROUTING
250  RS 1 ELEV 113.75
251  SV 0 4.465 5.684 10.927 11.459 24.699 30.477
252  SE 113.75 115.91 118 119.0 119.1 121.5 122.5
253  SQ 0 0 2.23 2.71 8.92 9.82 10.17
* ***** 10YR/3HR *****
*   STEP 18 - 10YR/3HR

254  KK STP18 AREA 2A

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255 KM RUNOFF FROM AREA 2A  
 256 BA .054 14.5  
 257 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 3.77 7.83 13.34  
 258 QI 14.91 38.28 12.66 2.36 0.46 0.27 0.27 0.27 0.27 0.27 0.27  
 259 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 260 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 261 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 262 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 263 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 264 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 265 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27  
 266 QI 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27 0.27

\* STEP 19

267 KK LAG19  
 268 KM ROUTED LAG TIME LAG19 (1 STEP)  
 269 RT 1 2 0

\* STEP 20

1 HEC-1 INPUT PAGE 7

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

270 KK STP20 AREA 1  
 271 KM RUNOFF FROM AREA 1  
 272 BA .128 14.0  
 273 QI 0.64 0.64 0.64 0.64 0.64 0.64 8.05 13.61 19.27 30.24  
 274 QI 34.89 79.23 37.95 14.88 8.22 3.44 1.08 0.66 0.64 0.64  
 275 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 276 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 277 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 278 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 279 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 280 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 281 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64  
 282 QI 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64 0.64

\* STEP 21

283 KK STP21 AREA 2B  
 284 KM RUNOFF FROM AREA 2B  
 285 BA .018 14.0  
 286 QI 0.09 0.09 0.09 0.09 0.09 0.09 2.03 2.34 3.10 4.66  
 287 QI 5.23 11.96 5.24 1.87 0.78 0.21 0.10 0.09 0.09 0.09  
 288 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 289 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 290 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 291 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 292 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 293 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 294 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09  
 295 QI 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09 0.09

\* STEP 22

296 KK C4  
 297 KM COMBINE 19,20,21  
 298 HC 3

\* STEP 23

299 KK RDBW4  
 300 KM DBW4 ROUTING  
 301 RS 1 ELEV 113.75  
 302 SV 0 4.465 5.684 10.927 11.459 24.699 30.477  
 303 SE 113.75 115.91 118 119.0 119.1 121.5 122.5  
 304 SQ 0 0 2.23 2.71 8.92 9.82 10.17  
 305 ZZ

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*****
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* JUN 1998 *
* VERSION 4.1 *
* RUN DATE 10OCT12 TIME 15:56:59 *
*****
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
* DAVIS, CALIFORNIA 95616 *
* (916) 756-1104 *
*****
    
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TUSCANY MEADOWS - (X-REF 201002)  
 \*\*\*\*\*  
 WEST SIDE BASIN  
 \*\*\*\*\*  
 24-HR 100-YR STORM  
 \*\*\*\*\*  
 STEP 1  
 FLOOD HYDROGRAPH FOR AREA 2A(SKY & BLACK DIAMOND) (34.5 AC TRIB TO DET  
 0.054 SQ MI BASIN

\*\*\*\*\*  
STEP 2  
ROUTE RUNOFF FROM AREA 2A USING TATUM METHOD - 1 STEP LAG TIME  
\*\*\*\*\*  
STEP 3  
FLOOD HYDROGRAPH FOR AREA 1(TUSCANY WEST) (82.1 AC TRIB TO DET BASIN W  
0.128 SQ MI BASIN  
\*\*\*\*\*  
STEP 4  
FLOOD HYDROGRAPH FOR AREA 2B(CHEVRON) (11.6 AC TRIB TO DET BASIN WEST)  
0.018 SQ MI BASIN  
\*\*\*\*\*  
STEP 5  
COMBINE HYDROGRAPHS FROM STEPS 2 THRU 4  
\*\*\*\*\*  
STEP 6  
ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 5 THRU 2'X 3'  
(TYPE C INLET GRATE)AND 8" SUBDRAIN W/7.7" ORIFICE PLATE  
W/10" ORIFICE PLATE IN FRONT OF 30" OUTFALL PIPE.  
\*\*\*\*\*  
3-HR 100-YR STORM  
\*\*\*\*\*  
STEP 7  
FLOOD HYDROGRAPH FOR AREA 2A(SKY & BLACK DIAMOND) (34.5 AC TRIB TO DET  
0.054 SQ MI BASIN  
\*\*\*\*\*  
STEP 8  
FLOOD HYDROGRAPH FOR AREA 1(TUSCANY WEST) (82.1 AC TRIB TO DET BASIN W  
0.128 SQ MI BASIN  
\*\*\*\*\*  
STEP 9  
FLOOD HYDROGRAPH FOR AREA 2B(CHEVRON) (11.6 AC TRIB TO DET BASIN WEST)  
0.018 SQ MI BASIN  
\*\*\*\*\*  
STEP 10  
COMBINE HYDROGRAPHS FROM STEPS 7 THRU 9  
\*\*\*\*\*  
STEP 11  
ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 10 THRU 2'X 3'  
(TYPE C INLET GRATE)AND 8" SUBDRAIN W/7.7" ORIFICE PLATE  
W/10" ORIFICE PLATE IN FRONT OF 30" OUTFALL PIPE.  
\*\*\*\*\*  
24-HR 10-YR STORM  
\*\*\*\*\*  
STEP 12  
FLOOD HYDROGRAPH FOR AREA 2A(SKY & BLACK DIAMOND) (34.5 AC TRIB TO DET  
0.054 SQ MI BASIN  
\*\*\*\*\*  
STEP 13  
ROUTE RUNOFF FROM AREA 2A USING TATUM METHOD - 1 STEP LAG TIME  
\*\*\*\*\*  
STEP 14  
FLOOD HYDROGRAPH FOR AREA 1(TUSCANY WEST) (82.1 AC TRIB TO DET BASIN W  
0.128 SQ MI BASIN  
\*\*\*\*\*  
STEP 15  
FLOOD HYDROGRAPH FOR AREA 2B(CHEVRON) (11.6 AC TRIB TO DET BASIN WEST)  
0.018 SQ MI BASIN  
\*\*\*\*\*  
STEP 16  
COMBINE HYDROGRAPHS FROM STEPS 13 THRU 15  
\*\*\*\*\*  
STEP 17  
ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 16 THRU 2'X 3'  
(TYPE C INLET GRATE)AND 8" SUBDRAIN W/7.7" ORIFICE PLATE  
W/10" ORIFICE PLATE IN FRONT OF 30" OUTFALL PIPE.  
\*\*\*\*\*  
3-HR 10-YR STORM  
\*\*\*\*\*  
STEP 18  
FLOOD HYDROGRAPH FOR AREA 2A(SKY & BLACK DIAMOND) (34.5 AC TRIB TO DET  
0.054 SQ MI BASIN  
\*\*\*\*\*  
STEP 19  
ROUTE RUNOFF FROM AREA 2A USING TATUM METHOD - 1 STEP LAG TIME  
\*\*\*\*\*  
STEP 20  
FLOOD HYDROGRAPH FOR AREA 1(TUSCANY WEST) (82.1 AC TRIB TO DET BASIN W  
0.128 SQ MI BASIN  
\*\*\*\*\*  
STEP 21  
FLOOD HYDROGRAPH FOR AREA 2B(CHEVRON) (11.6 AC TRIB TO DET BASIN WEST)  
0.018 SQ MI BASIN  
\*\*\*\*\*  
STEP 22  
COMBINE HYDROGRAPHS FROM STEPS 16 THRU 18  
\*\*\*\*\*  
STEP 23

ROUTE COMBINED FLOOD HYDROGRAPH IN STEP 22 THRU 2' X 3'  
 (TYPE C INLET GRATE) AND 8" SUBDRAIN W/7.7" ORIFICE PLATE  
 W/10" ORIFICE PLATE IN FRONT OF 30" OUTFALL PIPE.

102 IO OUTPUT CONTROL VARIABLES  
 IPRNT 1 PRINT CONTROL  
 IPLOT 0 PLOT CONTROL  
 QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA  
 NMIN 15 MINUTES IN COMPUTATION INTERVAL  
 IDATE 1 0 STARTING DATE  
 ITIME 0000 STARTING TIME  
 NQ 300 NUMBER OF HYDROGRAPH ORDINATES  
 NDDATE 4 0 ENDING DATE  
 NDTIME 0245 ENDING TIME  
 ICENT 19 CENTURY MARK

COMPUTATION INTERVAL .25 HOURS  
 TOTAL TIME BASE 74.75 HOURS

ENGLISH UNITS  
 DRAINAGE AREA SQUARE MILES  
 PRECIPITATION DEPTH INCHES  
 LENGTH, ELEVATION FEET  
 FLOW CUBIC FEET PER SECOND  
 STORAGE VOLUME ACRE-FEET  
 SURFACE AREA ACRES  
 TEMPERATURE DEGREES FAHRENHEIT

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\*\*\*\*\*  
 \* \*  
 104 KK \* STP1 \* AREA 2A  
 \* \*  
 \*\*\*\*\*

RUNOFF FROM AREA 2A

SUBBASIN RUNOFF DATA

106 BA SUBBASIN CHARACTERISTICS  
 TAREA .05 SUBBASIN AREA  
 SNAP 14.50 NORMAL ANNUAL PRECIPITATION  
 RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP1

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	* 1	1845	76	1.	* 2	1330	151	0.	* 3	0815	226	0.				
1	0015	2	0.	* 1	1900	77	1.	* 2	1345	152	0.	* 3	0830	227	0.				
1	0030	3	0.	* 1	1915	78	1.	* 2	1400	153	0.	* 3	0845	228	0.				
1	0045	4	0.	* 1	1930	79	1.	* 2	1415	154	0.	* 3	0900	229	0.				
1	0100	5	0.	* 1	1945	80	1.	* 2	1430	155	0.	* 3	0915	230	0.				
1	0115	6	0.	* 1	2000	81	1.	* 2	1445	156	0.	* 3	0930	231	0.				
1	0130	7	0.	* 1	2015	82	1.	* 2	1500	157	0.	* 3	0945	232	0.				
1	0145	8	0.	* 1	2030	83	1.	* 2	1515	158	0.	* 3	1000	233	0.				
1	0200	9	0.	* 1	2045	84	1.	* 2	1530	159	0.	* 3	1015	234	0.				
1	0215	10	0.	* 1	2100	85	1.	* 2	1545	160	0.	* 3	1030	235	0.				
1	0230	11	0.	* 1	2115	86	1.	* 2	1600	161	0.	* 3	1045	236	0.				
1	0245	12	0.	* 1	2130	87	1.	* 2	1615	162	0.	* 3	1100	237	0.				
1	0300	13	0.	* 1	2145	88	1.	* 2	1630	163	0.	* 3	1115	238	0.				
1	0315	14	0.	* 1	2200	89	0.	* 2	1645	164	0.	* 3	1130	239	0.				
1	0330	15	0.	* 1	2215	90	0.	* 2	1700	165	0.	* 3	1145	240	0.				
1	0345	16	0.	* 1	2230	91	0.	* 2	1715	166	0.	* 3	1200	241	0.				
1	0400	17	0.	* 1	2245	92	0.	* 2	1730	167	0.	* 3	1215	242	0.				
1	0415	18	0.	* 1	2300	93	0.	* 2	1745	168	0.	* 3	1230	243	0.				
1	0430	19	0.	* 1	2315	94	0.	* 2	1800	169	0.	* 3	1245	244	0.				
1	0445	20	2.	* 1	2330	95	0.	* 2	1815	170	0.	* 3	1300	245	0.				
1	0500	21	4.	* 1	2345	96	0.	* 2	1830	171	0.	* 3	1315	246	0.				
1	0515	22	5.	* 2	0000	97	0.	* 2	1845	172	0.	* 3	1330	247	0.				
1	0530	23	5.	* 2	0015	98	0.	* 2	1900	173	0.	* 3	1345	248	0.				
1	0545	24	6.	* 2	0030	99	0.	* 2	1915	174	0.	* 3	1400	249	0.				
1	0600	25	7.	* 2	0045	100	0.	* 2	1930	175	0.	* 3	1415	250	0.				
1	0615	26	7.	* 2	0100	101	0.	* 2	1945	176	0.	* 3	1430	251	0.				
1	0630	27	7.	* 2	0115	102	0.	* 2	2000	177	0.	* 3	1445	252	0.				
1	0645	28	9.	* 2	0130	103	0.	* 2	2015	178	0.	* 3	1500	253	0.				



1	0700	29	10.	*	2	0145	104	0.	*	2	2030	179	0.	*	3	1515	254	0.
1	0715	30	29.	*	2	0200	105	0.	*	2	2045	180	0.	*	3	1530	255	0.
1	0730	31	32.	*	2	0215	106	0.	*	2	2100	181	0.	*	3	1545	256	0.
1	0745	32	17.	*	2	0230	107	0.	*	2	2115	182	0.	*	3	1600	257	0.
1	0800	33	14.	*	2	0245	108	0.	*	2	2130	183	0.	*	3	1615	258	0.
1	0815	34	10.	*	2	0300	109	0.	*	2	2145	184	0.	*	3	1630	259	0.
1	0830	35	10.	*	2	0315	110	0.	*	2	2200	185	0.	*	3	1645	260	0.
1	0845	36	7.	*	2	0330	111	0.	*	2	2215	186	0.	*	3	1700	261	0.
1	0900	37	6.	*	2	0345	112	0.	*	2	2230	187	0.	*	3	1715	262	0.
1	0915	38	6.	*	2	0400	113	0.	*	2	2245	188	0.	*	3	1730	263	0.
1	0930	39	5.	*	2	0415	114	0.	*	2	2300	189	0.	*	3	1745	264	0.
1	0945	40	5.	*	2	0430	115	0.	*	2	2315	190	0.	*	3	1800	265	0.
1	1000	41	4.	*	2	0445	116	0.	*	2	2330	191	0.	*	3	1815	266	0.
1	1015	42	4.	*	2	0500	117	0.	*	2	2345	192	0.	*	3	1830	267	0.
1	1030	43	4.	*	2	0515	118	0.	*	3	0000	193	0.	*	3	1845	268	0.
1	1045	44	4.	*	2	0530	119	0.	*	3	0015	194	0.	*	3	1900	269	0.
1	1100	45	4.	*	2	0545	120	0.	*	3	0030	195	0.	*	3	1915	270	0.
1	1115	46	3.	*	2	0600	121	0.	*	3	0045	196	0.	*	3	1930	271	0.
1	1130	47	3.	*	2	0615	122	0.	*	3	0100	197	0.	*	3	1945	272	0.
1	1145	48	3.	*	2	0630	123	0.	*	3	0115	198	0.	*	3	2000	273	0.
1	1200	49	3.	*	2	0645	124	0.	*	3	0130	199	0.	*	3	2015	274	0.
1	1215	50	3.	*	2	0700	125	0.	*	3	0145	200	0.	*	3	2030	275	0.
1	1230	51	3.	*	2	0715	126	0.	*	3	0200	201	0.	*	3	2045	276	0.
1	1245	52	3.	*	2	0730	127	0.	*	3	0215	202	0.	*	3	2100	277	0.
1	1300	53	3.	*	2	0745	128	0.	*	3	0230	203	0.	*	3	2115	278	0.
1	1315	54	2.	*	2	0800	129	0.	*	3	0245	204	0.	*	3	2130	279	0.
1	1330	55	2.	*	2	0815	130	0.	*	3	0300	205	0.	*	3	2145	280	0.
1	1345	56	2.	*	2	0830	131	0.	*	3	0315	206	0.	*	3	2200	281	0.
1	1400	57	2.	*	2	0845	132	0.	*	3	0330	207	0.	*	3	2215	282	0.
1	1415	58	2.	*	2	0900	133	0.	*	3	0345	208	0.	*	3	2230	283	0.
1	1430	59	2.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	2.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	2.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	2.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	2.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	2.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	2.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	2.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	2.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	1.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	1.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	1.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	1.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	1.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	1.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	1.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	1.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW  
+ (CFS) (HR) 6-HR 24-HR 72-HR 74.75-HR  
+ 32. 7.50 9. 3. 1. 1.  
(INCHES) 1.553 2.155 2.540 2.561  
(AC-FT) 4. 6. 7. 7.  
CUMULATIVE AREA = .05 SQ MI

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\* \*  
117 KK \* LAG1 \*  
\* \*  
\*\*\*\*\*

ROUTED LAG TIME LAG1 (1 STEP)

HYDROGRAPH ROUTING DATA

119 RT TATUM OR STRADDLE-STAGGER ROUTING  
NSTPS 1 NUMBER OF TATUM STEPS  
NSTDL 2 NUMBER OF ORDINATES TO BE AVERAGED  
LAG 0 NUMBER OF INTERVALS TO LAG HYDROGRAPH

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HYDROGRAPH AT STATION LAG1

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CUMULATIVE AREA = .05 SQ MI

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*           *
*   STP3   *   AREA 1
*           *
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RUNOFF FROM AREA 1

SUBBASIN RUNOFF DATA

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122 BA   SUBBASIN CHARACTERISTICS
        TAREA   .13 SUBBASIN AREA
        SNAP   14.00 NORMAL ANNUAL PRECIPITATION
        RATIO  .00 RATIO OF HYDROGRAPH
    
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HYDROGRAPH AT STATION STP3

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	1	1845	76	5	2	1330	151	1	3	0815	226	1					
1	0015	2	1	1900	77	5	2	1345	152	1	3	0830	227	1					
1	0030	3	1	1915	78	5	2	1400	153	1	3	0845	228	1					
1	0045	4	1	1930	79	5	2	1415	154	1	3	0900	229	1					
1	0100	5	1	1945	80	5	2	1430	155	1	3	0915	230	1					
1	0115	6	1	2000	81	5	2	1445	156	1	3	0930	231	1					
1	0130	7	1	2015	82	5	2	1500	157	1	3	0945	232	1					
1	0145	8	1	2030	83	5	2	1515	158	1	3	1000	233	1					
1	0200	9	1	2045	84	5	2	1530	159	1	3	1015	234	1					
1	0215	10	1	2100	85	5	2	1545	160	1	3	1030	235	1					
1	0230	11	1	2115	86	5	2	1600	161	1	3	1045	236	1					
1	0245	12	1	2130	87	5	2	1615	162	1	3	1100	237	1					
1	0300	13	1	2145	88	4	2	1630	163	1	3	1115	238	1					
1	0315	14	1	2200	89	4	2	1645	164	1	3	1130	239	1					
1	0330	15	3	2215	90	4	2	1700	165	1	3	1145	240	1					
1	0345	16	7	2230	91	4	2	1715	166	1	3	1200	241	1					
1	0400	17	8	2245	92	4	2	1730	167	1	3	1215	242	1					
1	0415	18	10	2300	93	4	2	1745	168	1	3	1230	243	1					
1	0430	19	11	2315	94	4	2	1800	169	1	3	1245	244	1					
1	0445	20	12	2330	95	4	2	1815	170	1	3	1300	245	1					
1	0500	21	13	2345	96	2	2	1830	171	1	3	1315	246	1					
1	0515	22	14	2000	97	1	2	1845	172	1	3	1330	247	1					
1	0530	23	14	20015	98	1	2	1900	173	1	3	1345	248	1					
1	0545	24	17	20030	99	1	2	1915	174	1	3	1400	249	1					
1	0600	25	18	20045	100	1	2	1930	175	1	3	1415	250	1					
1	0615	26	18	20100	101	1	2	1945	176	1	3	1430	251	1					
1	0630	27	18	20115	102	1	2	2000	177	1	3	1445	252	1					
1	0645	28	23	20130	103	1	2	2015	178	1	3	1500	253	1					
1	0700	29	25	20145	104	1	2	2030	179	1	3	1515	254	1					
1	0715	30	60	20200	105	1	2	2045	180	1	3	1530	255	1					
1	0730	31	70	20215	106	1	2	2100	181	1	3	1545	256	1					
1	0745	32	46	20230	107	1	2	2115	182	1	3	1600	257	1					
1	0800	33	41	20245	108	1	2	2130	183	1	3	1615	258	1					
1	0815	34	31	20300	109	1	2	2145	184	1	3	1630	259	1					
1	0830	35	27	20315	110	1	2	2200	185	1	3	1645	260	1					
1	0845	36	21	20330	111	1	2	2215	186	1	3	1700	261	1					
1	0900	37	19	20345	112	1	2	2230	187	1	3	1715	262	1					
1	0915	38	16	20400	113	1	2	2245	188	1	3	1730	263	1					
1	0930	39	16	20415	114	1	2	2300	189	1	3	1745	264	1					
1	0945	40	14	20430	115	1	2	2315	190	1	3	1800	265	1					
1	1000	41	13	20445	116	1	2	2330	191	1	3	1815	266	1					
1	1015	42	13	20500	117	1	2	2345	192	1	3	1830	267	1					
1	1030	43	13	20515	118	1	3	0000	193	1	3	1845	268	1					
1	1045	44	11	20530	119	1	3	0015	194	1	3	1900	269	1					
1	1100	45	11	20545	120	1	3	0030	195	1	3	1915	270	1					
1	1115	46	10	20600	121	1	3	0045	196	1	3	1930	271	1					
1	1130	47	10	20615	122	1	3	0100	197	1	3	1945	272	1					
1	1145	48	10	20630	123	1	3	0115	198	1	3	2000	273	1					
1	1200	49	10	20645	124	1	3	0130	199	1	3	2015	274	1					
1	1215	50	9	20700	125	1	3	0145	200	1	3	2030	275	1					
1	1230	51	9	20715	126	1	3	0200	201	1	3	2045	276	1					
1	1245	52	9	20730	127	1	3	0215	202	1	3	2100	277	1					
1	1300	53	9	20745	128	1	3	0230	203	1	3	2115	278	1					
1	1315	54	8	20800	129	1	3	0245	204	1	3	2130	279	1					
1	1330	55	8	20815	130	1	3	0300	205	1	3	2145	280	1					
1	1345	56	8	20830	131	1	3	0315	206	1	3	2200	281	1					

1	1400	57	8.	*	2	0845	132	1.	*	3	0330	207	1.	*	3	2215	282	1.
1	1415	58	8.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	8.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	7.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	7.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	7.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	7.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	7.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	7.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	7.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	7.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	6.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	6.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	6.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	6.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	6.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	5.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	5.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	5.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

(CFS)	(HR)	6-HR	24-HR	72-HR	74.75-HR
70.	7.50	24.	10.	4.	4.
(INCHES)		1.721	2.898	3.546	3.568
(AC-FT)		12.	20.	24.	24.

CUMULATIVE AREA = .13 SQ MI

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 \* \* \*  
 133 KK \* STP4 \* AREA 2B  
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RUNOFF FROM AREA 2B

SUBBASIN RUNOFF DATA

135 BA SUBBASIN CHARACTERISTICS  
 TAREA .02 SUBBASIN AREA  
 SNAP 14.00 NORMAL ANNUAL PRECIPITATION  
 RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP4

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	1845	76	1.	*	2	1330	151	0.	*	3	0815	226	0.	
1	0015	2	0.	*	1	1900	77	1.	*	2	1345	152	0.	*	3	0830	227	0.	
1	0030	3	0.	*	1	1915	78	1.	*	2	1400	153	0.	*	3	0845	228	0.	
1	0045	4	0.	*	1	1930	79	1.	*	2	1415	154	0.	*	3	0900	229	0.	
1	0100	5	0.	*	1	1945	80	1.	*	2	1430	155	0.	*	3	0915	230	0.	
1	0115	6	0.	*	1	2000	81	1.	*	2	1445	156	0.	*	3	0930	231	0.	
1	0130	7	0.	*	1	2015	82	1.	*	2	1500	157	0.	*	3	0945	232	0.	
1	0145	8	0.	*	1	2030	83	1.	*	2	1515	158	0.	*	3	1000	233	0.	
1	0200	9	0.	*	1	2045	84	1.	*	2	1530	159	0.	*	3	1015	234	0.	
1	0215	10	0.	*	1	2100	85	1.	*	2	1545	160	0.	*	3	1030	235	0.	
1	0230	11	0.	*	1	2115	86	1.	*	2	1600	161	0.	*	3	1045	236	0.	
1	0245	12	0.	*	1	2130	87	1.	*	2	1615	162	0.	*	3	1100	237	0.	
1	0300	13	0.	*	1	2145	88	1.	*	2	1630	163	0.	*	3	1115	238	0.	
1	0315	14	1.	*	1	2200	89	1.	*	2	1645	164	0.	*	3	1130	239	0.	
1	0330	15	1.	*	1	2215	90	1.	*	2	1700	165	0.	*	3	1145	240	0.	
1	0345	16	1.	*	1	2230	91	1.	*	2	1715	166	0.	*	3	1200	241	0.	
1	0400	17	2.	*	1	2245	92	1.	*	2	1730	167	0.	*	3	1215	242	0.	
1	0415	18	2.	*	1	2300	93	1.	*	2	1745	168	0.	*	3	1230	243	0.	
1	0430	19	2.	*	1	2315	94	1.	*	2	1800	169	0.	*	3	1245	244	0.	
1	0445	20	2.	*	1	2330	95	1.	*	2	1815	170	0.	*	3	1300	245	0.	
1	0500	21	2.	*	1	2345	96	0.	*	2	1830	171	0.	*	3	1315	246	0.	
1	0515	22	2.	*	2	0000	97	0.	*	2	1845	172	0.	*	3	1330	247	0.	
1	0530	23	2.	*	2	0015	98	0.	*	2	1900	173	0.	*	3	1345	248	0.	
1	0545	24	3.	*	2	0030	99	0.	*	2	1915	174	0.	*	3	1400	249	0.	
1	0600	25	3.	*	2	0045	100	0.	*	2	1930	175	0.	*	3	1415	250	0.	
1	0615	26	3.	*	2	0100	101	0.	*	2	1945	176	0.	*	3	1430	251	0.	

1	0630	27	3.	*	2	0115	102	0.	*	2	2000	177	0.	*	3	1445	252	0.
1	0645	28	4.	*	2	0130	103	0.	*	2	2015	178	0.	*	3	1500	253	0.
1	0700	29	4.	*	2	0145	104	0.	*	2	2030	179	0.	*	3	1515	254	0.
1	0715	30	9.	*	2	0200	105	0.	*	2	2045	180	0.	*	3	1530	255	0.
1	0730	31	10.	*	2	0215	106	0.	*	2	2100	181	0.	*	3	1545	256	0.
1	0745	32	7.	*	2	0230	107	0.	*	2	2115	182	0.	*	3	1600	257	0.
1	0800	33	6.	*	2	0245	108	0.	*	2	2130	183	0.	*	3	1615	258	0.
1	0815	34	4.	*	2	0300	109	0.	*	2	2145	184	0.	*	3	1630	259	0.
1	0830	35	4.	*	2	0315	110	0.	*	2	2200	185	0.	*	3	1645	260	0.
1	0845	36	3.	*	2	0330	111	0.	*	2	2215	186	0.	*	3	1700	261	0.
1	0900	37	3.	*	2	0345	112	0.	*	2	2230	187	0.	*	3	1715	262	0.
1	0915	38	2.	*	2	0400	113	0.	*	2	2245	188	0.	*	3	1730	263	0.
1	0930	39	2.	*	2	0415	114	0.	*	2	2300	189	0.	*	3	1745	264	0.
1	0945	40	2.	*	2	0430	115	0.	*	2	2315	190	0.	*	3	1800	265	0.
1	1000	41	2.	*	2	0445	116	0.	*	2	2330	191	0.	*	3	1815	266	0.
1	1015	42	2.	*	2	0500	117	0.	*	2	2345	192	0.	*	3	1830	267	0.
1	1030	43	2.	*	2	0515	118	0.	*	3	0000	193	0.	*	3	1845	268	0.
1	1045	44	2.	*	2	0530	119	0.	*	3	0015	194	0.	*	3	1900	269	0.
1	1100	45	2.	*	2	0545	120	0.	*	3	0030	195	0.	*	3	1915	270	0.
1	1115	46	2.	*	2	0600	121	0.	*	3	0045	196	0.	*	3	1930	271	0.
1	1130	47	2.	*	2	0615	122	0.	*	3	0100	197	0.	*	3	1945	272	0.
1	1145	48	2.	*	2	0630	123	0.	*	3	0115	198	0.	*	3	2000	273	0.
1	1200	49	2.	*	2	0645	124	0.	*	3	0130	199	0.	*	3	2015	274	0.
1	1215	50	1.	*	2	0700	125	0.	*	3	0145	200	0.	*	3	2030	275	0.
1	1230	51	1.	*	2	0715	126	0.	*	3	0200	201	0.	*	3	2045	276	0.
1	1245	52	1.	*	2	0730	127	0.	*	3	0215	202	0.	*	3	2100	277	0.
1	1300	53	1.	*	2	0745	128	0.	*	3	0230	203	0.	*	3	2115	278	0.
1	1315	54	1.	*	2	0800	129	0.	*	3	0245	204	0.	*	3	2130	279	0.
1	1330	55	1.	*	2	0815	130	0.	*	3	0300	205	0.	*	3	2145	280	0.
1	1345	56	1.	*	2	0830	131	0.	*	3	0315	206	0.	*	3	2200	281	0.
1	1400	57	1.	*	2	0845	132	0.	*	3	0330	207	0.	*	3	2215	282	0.
1	1415	58	1.	*	2	0900	133	0.	*	3	0345	208	0.	*	3	2230	283	0.
1	1430	59	1.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	1.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	1.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	1.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	1.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	1.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	1.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	1.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	1.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	1.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	1.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	1.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	1.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	1.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	1.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	1.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	1.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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PEAK FLOW      TIME      MAXIMUM AVERAGE FLOW
+ (CFS)      (HR)
+ 10. 7.50      (CFS)
              (INCHES) 1.817 3.275 3.936 3.958
              (AC-FT) 2. 3. 4. 4.
CUMULATIVE AREA = .02 SQ MI
    
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*          *
146 KK * C1 *
*          *
*          *
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COMBINE 2,3,4

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148 HC      HYDROGRAPH COMBINATION
ICOMP      3 NUMBER OF HYDROGRAPHS TO COMBINE
    
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HYDROGRAPH AT STATION C1  
SUM OF 3 HYDROGRAPHS

DA MON HRMN ORD FLOW \* DA MON HRMN ORD FLOW \* DA MON HRMN ORD FLOW \* DA MON HRMN ORD FLOW











1 1815 74 0. \* 2 1300 149 0. \* 3 0745 224 0. \* 4 0230 299 0.  
 1 1830 75 0. \* 2 1315 150 0. \* 3 0800 225 0. \* 4 0245 300 0.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW  
 + (CFS) (HR) 6-HR 24-HR 72-HR 74.75-HR  
 + 57. 2.75 7. 2. 1. 1.  
 (INCHES) 1.242 1.382 1.754 1.775  
 (AC-FT) 4. 4. 5. 5.  
 CUMULATIVE AREA = .05 SQ MI

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 168 KK \* STP8 \* AREA 1  
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RUNOFF FROM AREA 1

SUBBASIN RUNOFF DATA

170 BA SUBBASIN CHARACTERISTICS  
 TAREA .13 SUBBASIN AREA  
 SNAP 14.00 NORMAL ANNUAL PRECIPITATION  
 RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP8

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	1.	1845	1	0000	1	1.	1845	1	0000	1	1.	1845	1	0000	1	1.	1845
1	0015	2	1.	1900	1	0015	2	1.	1900	1	0015	2	1.	1900	1	0015	2	1.	1900
1	0030	3	1.	1915	1	0030	3	1.	1915	1	0030	3	1.	1915	1	0030	3	1.	1915
1	0045	4	1.	1930	1	0045	4	1.	1930	1	0045	4	1.	1930	1	0045	4	1.	1930
1	0100	5	1.	1945	1	0100	5	1.	1945	1	0100	5	1.	1945	1	0100	5	1.	1945
1	0115	6	10.	2000	1	0115	6	10.	2000	1	0115	6	10.	2000	1	0115	6	10.	2000
1	0130	7	38.	2015	1	0130	7	38.	2015	1	0130	7	38.	2015	1	0130	7	38.	2015
1	0145	8	29.	2030	1	0145	8	29.	2030	1	0145	8	29.	2030	1	0145	8	29.	2030
1	0200	9	33.	2045	1	0200	9	33.	2045	1	0200	9	33.	2045	1	0200	9	33.	2045
1	0215	10	48.	2100	1	0215	10	48.	2100	1	0215	10	48.	2100	1	0215	10	48.	2100
1	0230	11	53.	2115	1	0230	11	53.	2115	1	0230	11	53.	2115	1	0230	11	53.	2115
1	0245	12	117.	2130	1	0245	12	117.	2130	1	0245	12	117.	2130	1	0245	12	117.	2130
1	0300	13	57.	2145	1	0300	13	57.	2145	1	0300	13	57.	2145	1	0300	13	57.	2145
1	0315	14	22.	2200	1	0315	14	22.	2200	1	0315	14	22.	2200	1	0315	14	22.	2200
1	0330	15	12.	2215	1	0330	15	12.	2215	1	0330	15	12.	2215	1	0330	15	12.	2215
1	0345	16	5.	2230	1	0345	16	5.	2230	1	0345	16	5.	2230	1	0345	16	5.	2230
1	0400	17	1.	2245	1	0400	17	1.	2245	1	0400	17	1.	2245	1	0400	17	1.	2245
1	0415	18	1.	2300	1	0415	18	1.	2300	1	0415	18	1.	2300	1	0415	18	1.	2300
1	0430	19	1.	2315	1	0430	19	1.	2315	1	0430	19	1.	2315	1	0430	19	1.	2315
1	0445	20	1.	2330	1	0445	20	1.	2330	1	0445	20	1.	2330	1	0445	20	1.	2330
1	0500	21	1.	2345	1	0500	21	1.	2345	1	0500	21	1.	2345	1	0500	21	1.	2345
1	0515	22	1.	0000	1	0515	22	1.	0000	1	0515	22	1.	0000	1	0515	22	1.	0000
1	0530	23	1.	0015	1	0530	23	1.	0015	1	0530	23	1.	0015	1	0530	23	1.	0015
1	0545	24	1.	0030	1	0545	24	1.	0030	1	0545	24	1.	0030	1	0545	24	1.	0030
1	0600	25	1.	0045	1	0600	25	1.	0045	1	0600	25	1.	0045	1	0600	25	1.	0045
1	0615	26	1.	0100	1	0615	26	1.	0100	1	0615	26	1.	0100	1	0615	26	1.	0100
1	0630	27	1.	0115	1	0630	27	1.	0115	1	0630	27	1.	0115	1	0630	27	1.	0115
1	0645	28	1.	0130	1	0645	28	1.	0130	1	0645	28	1.	0130	1	0645	28	1.	0130
1	0700	29	1.	0145	1	0700	29	1.	0145	1	0700	29	1.	0145	1	0700	29	1.	0145
1	0715	30	1.	0200	1	0715	30	1.	0200	1	0715	30	1.	0200	1	0715	30	1.	0200
1	0730	31	1.	0215	1	0730	31	1.	0215	1	0730	31	1.	0215	1	0730	31	1.	0215
1	0745	32	1.	0230	1	0745	32	1.	0230	1	0745	32	1.	0230	1	0745	32	1.	0230
1	0800	33	1.	0245	1	0800	33	1.	0245	1	0800	33	1.	0245	1	0800	33	1.	0245
1	0815	34	1.	0300	1	0815	34	1.	0300	1	0815	34	1.	0300	1	0815	34	1.	0300
1	0830	35	1.	0315	1	0830	35	1.	0315	1	0830	35	1.	0315	1	0830	35	1.	0315
1	0845	36	1.	0330	1	0845	36	1.	0330	1	0845	36	1.	0330	1	0845	36	1.	0330
1	0900	37	1.	0345	1	0900	37	1.	0345	1	0900	37	1.	0345	1	0900	37	1.	0345
1	0915	38	1.	0400	1	0915	38	1.	0400	1	0915	38	1.	0400	1	0915	38	1.	0400
1	0930	39	1.	0415	1	0930	39	1.	0415	1	0930	39	1.	0415	1	0930	39	1.	0415
1	0945	40	1.	0430	1	0945	40	1.	0430	1	0945	40	1.	0430	1	0945	40	1.	0430
1	1000	41	1.	0445	1	1000	41	1.	0445	1	1000	41	1.	0445	1	1000	41	1.	0445
1	1015	42	1.	0500	1	1015	42	1.	0500	1	1015	42	1.	0500	1	1015	42	1.	0500
1	1030	43	1.	0515	1	1030	43	1.	0515	1	1030	43	1.	0515	1	1030	43	1.	0515

1	1045	44	1.	*	2	0530	119	1.	*	3	0015	194	1.	*	3	1900	269	1.
1	1100	45	1.	*	2	0545	120	1.	*	3	0030	195	1.	*	3	1915	270	1.
1	1115	46	1.	*	2	0600	121	1.	*	3	0045	196	1.	*	3	1930	271	1.
1	1130	47	1.	*	2	0615	122	1.	*	3	0100	197	1.	*	3	1945	272	1.
1	1145	48	1.	*	2	0630	123	1.	*	3	0115	198	1.	*	3	2000	273	1.
1	1200	49	1.	*	2	0645	124	1.	*	3	0130	199	1.	*	3	2015	274	1.
1	1215	50	1.	*	2	0700	125	1.	*	3	0145	200	1.	*	3	2030	275	1.
1	1230	51	1.	*	2	0715	126	1.	*	3	0200	201	1.	*	3	2045	276	1.
1	1245	52	1.	*	2	0730	127	1.	*	3	0215	202	1.	*	3	2100	277	1.
1	1300	53	1.	*	2	0745	128	1.	*	3	0230	203	1.	*	3	2115	278	1.
1	1315	54	1.	*	2	0800	129	1.	*	3	0245	204	1.	*	3	2130	279	1.
1	1330	55	1.	*	2	0815	130	1.	*	3	0300	205	1.	*	3	2145	280	1.
1	1345	56	1.	*	2	0830	131	1.	*	3	0315	206	1.	*	3	2200	281	1.
1	1400	57	1.	*	2	0845	132	1.	*	3	0330	207	1.	*	3	2215	282	1.
1	1415	58	1.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	1.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	1.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	1.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	1.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	1.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	1.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	1.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	1.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	1.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	1.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	1.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	1.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	1.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	1.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	1.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	1.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	1.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

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*****
PEAK FLOW      TIME      MAXIMUM AVERAGE FLOW
+ (CFS)      (HR)      6-HR      24-HR      72-HR      74.75-HR
+ 117.      2.75      18.      5.      2.      2.
              (INCHES) 1.312   1.452   1.824   1.845
              (AC-FT)  9.      10.     12.     13.
CUMULATIVE AREA = .13 SQ MI
    
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181 KK * STP9 * AREA 2B
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RUNOFF FROM AREA 2B

SUBBASIN RUNOFF DATA

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183 BA SUBBASIN CHARACTERISTICS
TAREA .02 SUBBASIN AREA
SNAP 14.00 NORMAL ANNUAL PRECIPITATION
RATIO .00 RATIO OF HYDROGRAPH
    
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HYDROGRAPH AT STATION STP9

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	1845	76	0.	*	2	1330	151	0.	*	3	0815	226	0.	
1	0015	2	0.	*	1	1900	77	0.	*	2	1345	152	0.	*	3	0830	227	0.	
1	0030	3	0.	*	1	1915	78	0.	*	2	1400	153	0.	*	3	0845	228	0.	
1	0045	4	0.	*	1	1930	79	0.	*	2	1415	154	0.	*	3	0900	229	0.	
1	0100	5	0.	*	1	1945	80	0.	*	2	1430	155	0.	*	3	0915	230	0.	
1	0115	6	2.	*	1	2000	81	0.	*	2	1445	156	0.	*	3	0930	231	0.	
1	0130	7	6.	*	1	2015	82	0.	*	2	1500	157	0.	*	3	0945	232	0.	
1	0145	8	4.	*	1	2030	83	0.	*	2	1515	158	0.	*	3	1000	233	0.	
1	0200	9	5.	*	1	2045	84	0.	*	2	1530	159	0.	*	3	1015	234	0.	
1	0215	10	7.	*	1	2100	85	0.	*	2	1545	160	0.	*	3	1030	235	0.	
1	0230	11	8.	*	1	2115	86	0.	*	2	1600	161	0.	*	3	1045	236	0.	
1	0245	12	18.	*	1	2130	87	0.	*	2	1615	162	0.	*	3	1100	237	0.	
1	0300	13	8.	*	1	2145	88	0.	*	2	1630	163	0.	*	3	1115	238	0.	

1	0315	14	3.	*	1	2200	89	0.	*	2	1645	164	0.	*	3	1130	239	0.
1	0330	15	1.	*	1	2215	90	0.	*	2	1700	165	0.	*	3	1145	240	0.
1	0345	16	0.	*	1	2230	91	0.	*	2	1715	166	0.	*	3	1200	241	0.
1	0400	17	0.	*	1	2245	92	0.	*	2	1730	167	0.	*	3	1215	242	0.
1	0415	18	0.	*	1	2300	93	0.	*	2	1745	168	0.	*	3	1230	243	0.
1	0430	19	0.	*	1	2315	94	0.	*	2	1800	169	0.	*	3	1245	244	0.
1	0445	20	0.	*	1	2330	95	0.	*	2	1815	170	0.	*	3	1300	245	0.
1	0500	21	0.	*	1	2345	96	0.	*	2	1830	171	0.	*	3	1315	246	0.
1	0515	22	0.	*	2	0000	97	0.	*	2	1845	172	0.	*	3	1330	247	0.
1	0530	23	0.	*	2	0015	98	0.	*	2	1900	173	0.	*	3	1345	248	0.
1	0545	24	0.	*	2	0030	99	0.	*	2	1915	174	0.	*	3	1400	249	0.
1	0600	25	0.	*	2	0045	100	0.	*	2	1930	175	0.	*	3	1415	250	0.
1	0615	26	0.	*	2	0100	101	0.	*	2	1945	176	0.	*	3	1430	251	0.
1	0630	27	0.	*	2	0115	102	0.	*	2	2000	177	0.	*	3	1445	252	0.
1	0645	28	0.	*	2	0130	103	0.	*	2	2015	178	0.	*	3	1500	253	0.
1	0700	29	0.	*	2	0145	104	0.	*	2	2030	179	0.	*	3	1515	254	0.
1	0715	30	0.	*	2	0200	105	0.	*	2	2045	180	0.	*	3	1530	255	0.
1	0730	31	0.	*	2	0215	106	0.	*	2	2100	181	0.	*	3	1545	256	0.
1	0745	32	0.	*	2	0230	107	0.	*	2	2115	182	0.	*	3	1600	257	0.
1	0800	33	0.	*	2	0245	108	0.	*	2	2130	183	0.	*	3	1615	258	0.
1	0815	34	0.	*	2	0300	109	0.	*	2	2145	184	0.	*	3	1630	259	0.
1	0830	35	0.	*	2	0315	110	0.	*	2	2200	185	0.	*	3	1645	260	0.
1	0845	36	0.	*	2	0330	111	0.	*	2	2215	186	0.	*	3	1700	261	0.
1	0900	37	0.	*	2	0345	112	0.	*	2	2230	187	0.	*	3	1715	262	0.
1	0915	38	0.	*	2	0400	113	0.	*	2	2245	188	0.	*	3	1730	263	0.
1	0930	39	0.	*	2	0415	114	0.	*	2	2300	189	0.	*	3	1745	264	0.
1	0945	40	0.	*	2	0430	115	0.	*	2	2315	190	0.	*	3	1800	265	0.
1	1000	41	0.	*	2	0445	116	0.	*	2	2330	191	0.	*	3	1815	266	0.
1	1015	42	0.	*	2	0500	117	0.	*	2	2345	192	0.	*	3	1830	267	0.
1	1030	43	0.	*	2	0515	118	0.	*	3	0000	193	0.	*	3	1845	268	0.
1	1045	44	0.	*	2	0530	119	0.	*	3	0015	194	0.	*	3	1900	269	0.
1	1100	45	0.	*	2	0545	120	0.	*	3	0030	195	0.	*	3	1915	270	0.
1	1115	46	0.	*	2	0600	121	0.	*	3	0045	196	0.	*	3	1930	271	0.
1	1130	47	0.	*	2	0615	122	0.	*	3	0100	197	0.	*	3	1945	272	0.
1	1145	48	0.	*	2	0630	123	0.	*	3	0115	198	0.	*	3	2000	273	0.
1	1200	49	0.	*	2	0645	124	0.	*	3	0130	199	0.	*	3	2015	274	0.
1	1215	50	0.	*	2	0700	125	0.	*	3	0145	200	0.	*	3	2030	275	0.
1	1230	51	0.	*	2	0715	126	0.	*	3	0200	201	0.	*	3	2045	276	0.
1	1245	52	0.	*	2	0730	127	0.	*	3	0215	202	0.	*	3	2100	277	0.
1	1300	53	0.	*	2	0745	128	0.	*	3	0230	203	0.	*	3	2115	278	0.
1	1315	54	0.	*	2	0800	129	0.	*	3	0245	204	0.	*	3	2130	279	0.
1	1330	55	0.	*	2	0815	130	0.	*	3	0300	205	0.	*	3	2145	280	0.
1	1345	56	0.	*	2	0830	131	0.	*	3	0315	206	0.	*	3	2200	281	0.
1	1400	57	0.	*	2	0845	132	0.	*	3	0330	207	0.	*	3	2215	282	0.
1	1415	58	0.	*	2	0900	133	0.	*	3	0345	208	0.	*	3	2230	283	0.
1	1430	59	0.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	0.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	0.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	0.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	0.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	0.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	0.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	0.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	0.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	0.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	0.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	0.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	0.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	0.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	0.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	0.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	0.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 18.	2.75	3.	1.	0.	0.
	(INCHES)	1.361	1.500	1.872	1.893
	(AC-FT)	1.	1.	2.	2.
CUMULATIVE AREA = .02 SQ MI					

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194 KK * C2 *
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COMBINE 7,8,9
    
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1 1830 75 1. \* 2 1315 150 1. \* 3 0800 225 1. \* 4 0245 300 1.

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*****
PEAK FLOW TIME MAXIMUM AVERAGE FLOW
+ (CFS) (HR) 6-HR 24-HR 72-HR 74.75-HR
+ 192. 2.75 (CFS) 28. 8. 3. 3.
(INCHES) 1.298 1.437 1.809 1.831
(AC-FT) 14. 15. 19. 20.
CUMULATIVE AREA = .20 SQ MI
    
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197 KK * RDBW2 *
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DBW2 ROUTING

HYDROGRAPH ROUTING DATA

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199 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP ELEV TYPE OF INITIAL CONDITION
RSVRIC 113.75 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

200 SV STORAGE .0 4.5 5.7 10.9 11.5 24.7 30.5
201 SE ELEVATION 113.75 115.91 118.00 119.00 119.10 121.50 122.50
202 SQ DISCHARGE 0. 0. 2. 3. 9. 10. 10.
    
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HYDROGRAPH AT STATION RDBW2

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* *
DA MON HRMN ORD OUTFLOW STORAGE STAGE * DA MON HRMN ORD OUTFLOW STORAGE STAGE * DA MON HRMN ORD OUTFLOW STORAGE STAGE
* * * * *
1 0000 1 0. .0 113.8 * 2 0100 101 2. 8.6 118.6 * 3 0200 201 2. 5.8 118.0
1 0015 2 0. .0 113.8 * 2 0115 102 2. 8.6 118.6 * 3 0215 202 2. 5.8 118.0
1 0030 3 0. .0 113.8 * 2 0130 103 2. 8.6 118.5 * 3 0230 203 2. 5.7 118.0
1 0045 4 0. .1 113.8 * 2 0145 104 2. 8.5 118.5 * 3 0245 204 2. 5.7 118.0
1 0100 5 0. .1 113.8 * 2 0200 105 2. 8.5 118.5 * 3 0300 205 2. 5.7 118.0
1 0115 6 0. .2 113.9 * 2 0215 106 2. 8.5 118.5 * 3 0315 206 2. 5.7 118.0
1 0130 7 0. 1.0 114.2 * 2 0230 107 2. 8.4 118.5 * 3 0330 207 2. 5.6 117.9
1 0145 8 0. 2.1 114.8 * 2 0245 108 2. 8.4 118.5 * 3 0345 208 2. 5.6 117.9
1 0200 9 0. 3.1 115.3 * 2 0300 109 2. 8.4 118.5 * 3 0400 209 2. 5.6 117.9
1 0215 10 0. 4.4 115.9 * 2 0315 110 2. 8.3 118.5 * 3 0415 210 2. 5.6 117.8
1 0230 11 2. 6.1 118.1 * 2 0330 111 2. 8.3 118.5 * 3 0430 211 2. 5.6 117.8
1 0245 12 3. 8.9 118.6 * 2 0345 112 2. 8.3 118.5 * 3 0445 212 2. 5.5 117.7
1 0300 13 9. 11.6 119.1 * 2 0400 113 2. 8.2 118.5 * 3 0500 213 2. 5.5 117.7
1 0315 14 9. 12.6 119.3 * 2 0415 114 2. 8.2 118.5 * 3 0515 214 2. 5.5 117.7
1 0330 15 9. 12.8 119.3 * 2 0430 115 2. 8.2 118.5 * 3 0530 215 2. 5.5 117.6
1 0345 16 9. 12.8 119.4 * 2 0445 116 2. 8.2 118.5 * 3 0545 216 2. 5.5 117.6
1 0400 17 9. 12.7 119.3 * 2 0500 117 2. 8.1 118.5 * 3 0600 217 2. 5.4 117.6
1 0415 18 9. 12.6 119.3 * 2 0515 118 2. 8.1 118.5 * 3 0615 218 2. 5.4 117.6
1 0430 19 9. 12.4 119.3 * 2 0530 119 2. 8.1 118.5 * 3 0630 219 2. 5.4 117.5
1 0445 20 9. 12.2 119.2 * 2 0545 120 2. 8.0 118.4 * 3 0645 220 2. 5.4 117.5
1 0500 21 9. 12.1 119.2 * 2 0600 121 2. 8.0 118.4 * 3 0700 221 2. 5.4 117.5
1 0515 22 9. 11.9 119.2 * 2 0615 122 2. 8.0 118.4 * 3 0715 222 2. 5.4 117.5
1 0530 23 9. 11.8 119.2 * 2 0630 123 2. 7.9 118.4 * 3 0730 223 2. 5.4 117.4
1 0545 24 9. 11.6 119.1 * 2 0645 124 2. 7.9 118.4 * 3 0745 224 2. 5.3 117.4
1 0600 25 9. 11.4 119.1 * 2 0700 125 2. 7.9 118.4 * 3 0800 225 2. 5.3 117.4
1 0615 26 7. 11.3 119.1 * 2 0715 126 2. 7.9 118.4 * 3 0815 226 2. 5.3 117.4
1 0630 27 6. 11.2 119.0 * 2 0730 127 2. 7.8 118.4 * 3 0830 227 2. 5.3 117.4
1 0645 28 5. 11.1 119.0 * 2 0745 128 2. 7.8 118.4 * 3 0845 228 2. 5.3 117.3
1 0700 29 4. 11.0 119.0 * 2 0800 129 2. 7.8 118.4 * 3 0900 229 2. 5.3 117.3
1 0715 30 3. 11.0 119.0 * 2 0815 130 2. 7.7 118.4 * 3 0915 230 1. 5.3 117.3
1 0730 31 3. 10.9 119.0 * 2 0830 131 2. 7.7 118.4 * 3 0930 231 1. 5.3 117.3
1 0745 32 3. 10.9 119.0 * 2 0845 132 2. 7.7 118.4 * 3 0945 232 1. 5.3 117.3
1 0800 33 3. 10.9 119.0 * 2 0900 133 2. 7.7 118.4 * 3 1000 233 1. 5.2 117.3
1 0815 34 3. 10.8 119.0 * 2 0915 134 2. 7.6 118.4 * 3 1015 234 1. 5.2 117.2
1 0830 35 3. 10.8 119.0 * 2 0930 135 2. 7.6 118.4 * 3 1030 235 1. 5.2 117.2
1 0845 36 3. 10.8 119.0 * 2 0945 136 2. 7.6 118.4 * 3 1045 236 1. 5.2 117.2
1 0900 37 3. 10.7 119.0 * 2 1000 137 2. 7.5 118.4 * 3 1100 237 1. 5.2 117.2
    
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 203 KK \* STP12 \* AREA 2A  
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RUNOFF FROM AREA 2A

SUBBASIN RUNOFF DATA

205 BA SUBBASIN CHARACTERISTICS  
 TAREA .05 SUBBASIN AREA  
 SNAP 14.50 NORMAL ANNUAL PRECIPITATION  
 RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP12

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	* 1	1845	76	0.	* 2	1330 151	0.	* 3	0815 226	0.						
1	0015	2	0.	* 1	1900	77	0.	* 2	1345 152	0.	* 3	0830 227	0.						
1	0030	3	0.	* 1	1915	78	0.	* 2	1400 153	0.	* 3	0845 228	0.						
1	0045	4	0.	* 1	1930	79	0.	* 2	1415 154	0.	* 3	0900 229	0.						
1	0100	5	0.	* 1	1945	80	0.	* 2	1430 155	0.	* 3	0915 230	0.						
1	0115	6	0.	* 1	2000	81	0.	* 2	1445 156	0.	* 3	0930 231	0.						
1	0130	7	0.	* 1	2015	82	0.	* 2	1500 157	0.	* 3	0945 232	0.						
1	0145	8	0.	* 1	2030	83	0.	* 2	1515 158	0.	* 3	1000 233	0.						
1	0200	9	0.	* 1	2045	84	0.	* 2	1530 159	0.	* 3	1015 234	0.						
1	0215	10	0.	* 1	2100	85	0.	* 2	1545 160	0.	* 3	1030 235	0.						
1	0230	11	0.	* 1	2115	86	0.	* 2	1600 161	0.	* 3	1045 236	0.						
1	0245	12	0.	* 1	2130	87	0.	* 2	1615 162	0.	* 3	1100 237	0.						
1	0300	13	0.	* 1	2145	88	0.	* 2	1630 163	0.	* 3	1115 238	0.						
1	0315	14	0.	* 1	2200	89	0.	* 2	1645 164	0.	* 3	1130 239	0.						
1	0330	15	0.	* 1	2215	90	0.	* 2	1700 165	0.	* 3	1145 240	0.						
1	0345	16	0.	* 1	2230	91	0.	* 2	1715 166	0.	* 3	1200 241	0.						
1	0400	17	0.	* 1	2245	92	0.	* 2	1730 167	0.	* 3	1215 242	0.						
1	0415	18	0.	* 1	2300	93	0.	* 2	1745 168	0.	* 3	1230 243	0.						
1	0430	19	0.	* 1	2315	94	0.	* 2	1800 169	0.	* 3	1245 244	0.						
1	0445	20	0.	* 1	2330	95	0.	* 2	1815 170	0.	* 3	1300 245	0.						
1	0500	21	0.	* 1	2345	96	0.	* 2	1830 171	0.	* 3	1315 246	0.						
1	0515	22	0.	* 2	0000	97	0.	* 2	1845 172	0.	* 3	1330 247	0.						
1	0530	23	0.	* 2	0015	98	0.	* 2	1900 173	0.	* 3	1345 248	0.						
1	0545	24	0.	* 2	0030	99	0.	* 2	1915 174	0.	* 3	1400 249	0.						
1	0600	25	0.	* 2	0045	100	0.	* 2	1930 175	0.	* 3	1415 250	0.						
1	0615	26	0.	* 2	0100	101	0.	* 2	1945 176	0.	* 3	1430 251	0.						
1	0630	27	0.	* 2	0115	102	0.	* 2	2000 177	0.	* 3	1445 252	0.						
1	0645	28	0.	* 2	0130	103	0.	* 2	2015 178	0.	* 3	1500 253	0.						
1	0700	29	2.	* 2	0145	104	0.	* 2	2030 179	0.	* 3	1515 254	0.						
1	0715	30	18.	* 2	0200	105	0.	* 2	2045 180	0.	* 3	1530 255	0.						
1	0730	31	20.	* 2	0215	106	0.	* 2	2100 181	0.	* 3	1545 256	0.						
1	0745	32	10.	* 2	0230	107	0.	* 2	2115 182	0.	* 3	1600 257	0.						
1	0800	33	9.	* 2	0245	108	0.	* 2	2130 183	0.	* 3	1615 258	0.						
1	0815	34	6.	* 2	0300	109	0.	* 2	2145 184	0.	* 3	1630 259	0.						
1	0830	35	5.	* 2	0315	110	0.	* 2	2200 185	0.	* 3	1645 260	0.						
1	0845	36	4.	* 2	0330	111	0.	* 2	2215 186	0.	* 3	1700 261	0.						
1	0900	37	3.	* 2	0345	112	0.	* 2	2230 187	0.	* 3	1715 262	0.						
1	0915	38	3.	* 2	0400	113	0.	* 2	2245 188	0.	* 3	1730 263	0.						
1	0930	39	3.	* 2	0415	114	0.	* 2	2300 189	0.	* 3	1745 264	0.						
1	0945	40	2.	* 2	0430	115	0.	* 2	2315 190	0.	* 3	1800 265	0.						
1	1000	41	2.	* 2	0445	116	0.	* 2	2330 191	0.	* 3	1815 266	0.						
1	1015	42	2.	* 2	0500	117	0.	* 2	2345 192	0.	* 3	1830 267	0.						
1	1030	43	2.	* 2	0515	118	0.	* 3	0000 193	0.	* 3	1845 268	0.						
1	1045	44	1.	* 2	0530	119	0.	* 3	0015 194	0.	* 3	1900 269	0.						
1	1100	45	1.	* 2	0545	120	0.	* 3	0030 195	0.	* 3	1915 270	0.						
1	1115	46	1.	* 2	0600	121	0.	* 3	0045 196	0.	* 3	1930 271	0.						
1	1130	47	1.	* 2	0615	122	0.	* 3	0100 197	0.	* 3	1945 272	0.						
1	1145	48	1.	* 2	0630	123	0.	* 3	0115 198	0.	* 3	2000 273	0.						
1	1200	49	1.	* 2	0645	124	0.	* 3	0130 199	0.	* 3	2015 274	0.						
1	1215	50	1.	* 2	0700	125	0.	* 3	0145 200	0.	* 3	2030 275	0.						
1	1230	51	1.	* 2	0715	126	0.	* 3	0200 201	0.	* 3	2045 276	0.						
1	1245	52	1.	* 2	0730	127	0.	* 3	0215 202	0.	* 3	2100 277	0.						
1	1300	53	1.	* 2	0745	128	0.	* 3	0230 203	0.	* 3	2115 278	0.						
1	1315	54	1.	* 2	0800	129	0.	* 3	0245 204	0.	* 3	2130 279	0.						
1	1330	55	1.	* 2	0815	130	0.	* 3	0300 205	0.	* 3	2145 280	0.						
1	1345	56	1.	* 2	0830	131	0.	* 3	0315 206	0.	* 3	2200 281	0.						
1	1400	57	1.	* 2	0845	132	0.	* 3	0330 207	0.	* 3	2215 282	0.						
1	1415	58	0.	* 2	0900	133	0.	* 3	0345 208	0.	* 3	2230 283	0.						
1	1430	59	0.	* 2	0915	134	0.	* 3	0400 209	0.	* 3	2245 284	0.						
1	1445	60	0.	* 2	0930	135	0.	* 3	0415 210	0.	* 3	2300 285	0.						



1	1500	61	0.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	0.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	0.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	0.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	0.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	0.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	0.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	0.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	0.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	0.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	0.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	0.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	0.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	0.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	0.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW				
		6-HR	24-HR	72-HR	74.75-HR	
+ 20.	7.50	4.	1.	1.	1.	
		(INCHES)	.714	.872	1.244	1.265
		(AC-FT)	2.	3.	4.	4.

CUMULATIVE AREA = .05 SQ MI

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216 KK * LAG13 *
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ROUTED LAG TIME LAG13 (1 STEP)

HYDROGRAPH ROUTING DATA

218 RT TATUM OR STRADDLE-STAGGER ROUTING  
 NSTPS 1 NUMBER OF TATUM STEPS  
 NSTDL 2 NUMBER OF ORDINATES TO BE AVERAGED  
 LAG 0 NUMBER OF INTERVALS TO LAG HYDROGRAPH

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HYDROGRAPH AT STATION LAG13

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	1845	76	0.	*	2	1330	151	0.	*	3	0815	226	0.	
1	0015	2	0.	*	1	1900	77	0.	*	2	1345	152	0.	*	3	0830	227	0.	
1	0030	3	0.	*	1	1915	78	0.	*	2	1400	153	0.	*	3	0845	228	0.	
1	0045	4	0.	*	1	1930	79	0.	*	2	1415	154	0.	*	3	0900	229	0.	
1	0100	5	0.	*	1	1945	80	0.	*	2	1430	155	0.	*	3	0915	230	0.	
1	0115	6	0.	*	1	2000	81	0.	*	2	1445	156	0.	*	3	0930	231	0.	
1	0130	7	0.	*	1	2015	82	0.	*	2	1500	157	0.	*	3	0945	232	0.	
1	0145	8	0.	*	1	2030	83	0.	*	2	1515	158	0.	*	3	1000	233	0.	
1	0200	9	0.	*	1	2045	84	0.	*	2	1530	159	0.	*	3	1015	234	0.	
1	0215	10	0.	*	1	2100	85	0.	*	2	1545	160	0.	*	3	1030	235	0.	
1	0230	11	0.	*	1	2115	86	0.	*	2	1600	161	0.	*	3	1045	236	0.	
1	0245	12	0.	*	1	2130	87	0.	*	2	1615	162	0.	*	3	1100	237	0.	
1	0300	13	0.	*	1	2145	88	0.	*	2	1630	163	0.	*	3	1115	238	0.	
1	0315	14	0.	*	1	2200	89	0.	*	2	1645	164	0.	*	3	1130	239	0.	
1	0330	15	0.	*	1	2215	90	0.	*	2	1700	165	0.	*	3	1145	240	0.	
1	0345	16	0.	*	1	2230	91	0.	*	2	1715	166	0.	*	3	1200	241	0.	
1	0400	17	0.	*	1	2245	92	0.	*	2	1730	167	0.	*	3	1215	242	0.	
1	0415	18	0.	*	1	2300	93	0.	*	2	1745	168	0.	*	3	1230	243	0.	
1	0430	19	0.	*	1	2315	94	0.	*	2	1800	169	0.	*	3	1245	244	0.	
1	0445	20	0.	*	1	2330	95	0.	*	2	1815	170	0.	*	3	1300	245	0.	
1	0500	21	0.	*	1	2345	96	0.	*	2	1830	171	0.	*	3	1315	246	0.	
1	0515	22	0.	*	2	0000	97	0.	*	2	1845	172	0.	*	3	1330	247	0.	
1	0530	23	0.	*	2	0015	98	0.	*	2	1900	173	0.	*	3	1345	248	0.	
1	0545	24	0.	*	2	0030	99	0.	*	2	1915	174	0.	*	3	1400	249	0.	
1	0600	25	0.	*	2	0045	100	0.	*	2	1930	175	0.	*	3	1415	250	0.	
1	0615	26	0.	*	2	0100	101	0.	*	2	1945	176	0.	*	3	1430	251	0.	
1	0630	27	0.	*	2	0115	102	0.	*	2	2000	177	0.	*	3	1445	252	0.	
1	0645	28	0.	*	2	0130	103	0.	*	2	2015	178	0.	*	3	1500	253	0.	
1	0700	29	1.	*	2	0145	104	0.	*	2	2030	179	0.	*	3	1515	254	0.	
1	0715	30	10.	*	2	0200	105	0.	*	2	2045	180	0.	*	3	1530	255	0.	

1	0730	31	19.	*	2	0215	106	0.	*	2	2100	181	0.	*	3	1545	256	0.
1	0745	32	15.	*	2	0230	107	0.	*	2	2115	182	0.	*	3	1600	257	0.
1	0800	33	10.	*	2	0245	108	0.	*	2	2130	183	0.	*	3	1615	258	0.
1	0815	34	7.	*	2	0300	109	0.	*	2	2145	184	0.	*	3	1630	259	0.
1	0830	35	6.	*	2	0315	110	0.	*	2	2200	185	0.	*	3	1645	260	0.
1	0845	36	4.	*	2	0330	111	0.	*	2	2215	186	0.	*	3	1700	261	0.
1	0900	37	3.	*	2	0345	112	0.	*	2	2230	187	0.	*	3	1715	262	0.
1	0915	38	3.	*	2	0400	113	0.	*	2	2245	188	0.	*	3	1730	263	0.
1	0930	39	3.	*	2	0415	114	0.	*	2	2300	189	0.	*	3	1745	264	0.
1	0945	40	2.	*	2	0430	115	0.	*	2	2315	190	0.	*	3	1800	265	0.
1	1000	41	2.	*	2	0445	116	0.	*	2	2330	191	0.	*	3	1815	266	0.
1	1015	42	2.	*	2	0500	117	0.	*	2	2345	192	0.	*	3	1830	267	0.
1	1030	43	2.	*	2	0515	118	0.	*	3	0000	193	0.	*	3	1845	268	0.
1	1045	44	2.	*	2	0530	119	0.	*	3	0015	194	0.	*	3	1900	269	0.
1	1100	45	1.	*	2	0545	120	0.	*	3	0030	195	0.	*	3	1915	270	0.
1	1115	46	1.	*	2	0600	121	0.	*	3	0045	196	0.	*	3	1930	271	0.
1	1130	47	1.	*	2	0615	122	0.	*	3	0100	197	0.	*	3	1945	272	0.
1	1145	48	1.	*	2	0630	123	0.	*	3	0115	198	0.	*	3	2000	273	0.
1	1200	49	1.	*	2	0645	124	0.	*	3	0130	199	0.	*	3	2015	274	0.
1	1215	50	1.	*	2	0700	125	0.	*	3	0145	200	0.	*	3	2030	275	0.
1	1230	51	1.	*	2	0715	126	0.	*	3	0200	201	0.	*	3	2045	276	0.
1	1245	52	1.	*	2	0730	127	0.	*	3	0215	202	0.	*	3	2100	277	0.
1	1300	53	1.	*	2	0745	128	0.	*	3	0230	203	0.	*	3	2115	278	0.
1	1315	54	1.	*	2	0800	129	0.	*	3	0245	204	0.	*	3	2130	279	0.
1	1330	55	1.	*	2	0815	130	0.	*	3	0300	205	0.	*	3	2145	280	0.
1	1345	56	1.	*	2	0830	131	0.	*	3	0315	206	0.	*	3	2200	281	0.
1	1400	57	1.	*	2	0845	132	0.	*	3	0330	207	0.	*	3	2215	282	0.
1	1415	58	0.	*	2	0900	133	0.	*	3	0345	208	0.	*	3	2230	283	0.
1	1430	59	0.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	0.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	0.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	0.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	0.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	0.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	0.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	0.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	0.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	0.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	0.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	0.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	0.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	0.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	0.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	0.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	0.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

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PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 19.	7.50	4.	1.	1.	1.
	(INCHES)	.713	.872	1.244	1.265
	(AC-FT)	2.	3.	4.	4.

CUMULATIVE AREA = .05 SQ MI

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*          *
219 KK * STP14 * AREA 1
*          *
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RUNOFF FROM AREA 1

SUBBASIN RUNOFF DATA

221 BA SUBBASIN CHARACTERISTICS
TAREA .13 SUBBASIN AREA
SNAP 14.00 NORMAL ANNUAL PRECIPITATION
RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP14

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DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
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1	1430	59	1.	*	2	0915	134	0.	*	3	0400	209	0.	*	3	2245	284	0.
1	1445	60	1.	*	2	0930	135	0.	*	3	0415	210	0.	*	3	2300	285	0.
1	1500	61	1.	*	2	0945	136	0.	*	3	0430	211	0.	*	3	2315	286	0.
1	1515	62	1.	*	2	1000	137	0.	*	3	0445	212	0.	*	3	2330	287	0.
1	1530	63	1.	*	2	1015	138	0.	*	3	0500	213	0.	*	3	2345	288	0.
1	1545	64	1.	*	2	1030	139	0.	*	3	0515	214	0.	*	4	0000	289	0.
1	1600	65	1.	*	2	1045	140	0.	*	3	0530	215	0.	*	4	0015	290	0.
1	1615	66	1.	*	2	1100	141	0.	*	3	0545	216	0.	*	4	0030	291	0.
1	1630	67	1.	*	2	1115	142	0.	*	3	0600	217	0.	*	4	0045	292	0.
1	1645	68	1.	*	2	1130	143	0.	*	3	0615	218	0.	*	4	0100	293	0.
1	1700	69	1.	*	2	1145	144	0.	*	3	0630	219	0.	*	4	0115	294	0.
1	1715	70	1.	*	2	1200	145	0.	*	3	0645	220	0.	*	4	0130	295	0.
1	1730	71	1.	*	2	1215	146	0.	*	3	0700	221	0.	*	4	0145	296	0.
1	1745	72	1.	*	2	1230	147	0.	*	3	0715	222	0.	*	4	0200	297	0.
1	1800	73	1.	*	2	1245	148	0.	*	3	0730	223	0.	*	4	0215	298	0.
1	1815	74	1.	*	2	1300	149	0.	*	3	0745	224	0.	*	4	0230	299	0.
1	1830	75	1.	*	2	1315	150	0.	*	3	0800	225	0.	*	4	0245	300	0.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW  
 6-HR 24-HR 72-HR 74.75-HR  
 + (CFS) (HR)  
 + 7. 7.50 (CFS)  
 (INCHES) 1.147 1.861 2.352 2.373  
 (AC-FT) 1. 2. 2. 2.  
 CUMULATIVE AREA = .02 SQ MI

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 \* \* \*  
 245 KK \* C3 \*  
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COMBINE 13,14,15

247 HC HYDROGRAPH COMBINATION  
 ICOMP 3 NUMBER OF HYDROGRAPHS TO COMBINE

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HYDROGRAPH AT STATION C3  
 SUM OF 3 HYDROGRAPHS

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	1.	*	1	1845	76	3.	*	2	1330	151	1.	*	3	0815	226	1.	
1	0015	2	1.	*	1	1900	77	3.	*	2	1345	152	1.	*	3	0830	227	1.	
1	0030	3	1.	*	1	1915	78	2.	*	2	1400	153	1.	*	3	0845	228	1.	
1	0045	4	1.	*	1	1930	79	2.	*	2	1415	154	1.	*	3	0900	229	1.	
1	0100	5	1.	*	1	1945	80	2.	*	2	1430	155	1.	*	3	0915	230	1.	
1	0115	6	1.	*	1	2000	81	2.	*	2	1445	156	1.	*	3	0930	231	1.	
1	0130	7	1.	*	1	2015	82	2.	*	2	1500	157	1.	*	3	0945	232	1.	
1	0145	8	1.	*	1	2030	83	2.	*	2	1515	158	1.	*	3	1000	233	1.	
1	0200	9	1.	*	1	2045	84	2.	*	2	1530	159	1.	*	3	1015	234	1.	
1	0215	10	1.	*	1	2100	85	2.	*	2	1545	160	1.	*	3	1030	235	1.	
1	0230	11	1.	*	1	2115	86	2.	*	2	1600	161	1.	*	3	1045	236	1.	
1	0245	12	1.	*	1	2130	87	2.	*	2	1615	162	1.	*	3	1100	237	1.	
1	0300	13	1.	*	1	2145	88	2.	*	2	1630	163	1.	*	3	1115	238	1.	
1	0315	14	1.	*	1	2200	89	2.	*	2	1645	164	1.	*	3	1130	239	1.	
1	0330	15	1.	*	1	2215	90	2.	*	2	1700	165	1.	*	3	1145	240	1.	
1	0345	16	1.	*	1	2230	91	2.	*	2	1715	166	1.	*	3	1200	241	1.	
1	0400	17	1.	*	1	2245	92	2.	*	2	1730	167	1.	*	3	1215	242	1.	
1	0415	18	1.	*	1	2300	93	2.	*	2	1745	168	1.	*	3	1230	243	1.	
1	0430	19	1.	*	1	2315	94	2.	*	2	1800	169	1.	*	3	1245	244	1.	
1	0445	20	2.	*	1	2330	95	2.	*	2	1815	170	1.	*	3	1300	245	1.	
1	0500	21	2.	*	1	2345	96	1.	*	2	1830	171	1.	*	3	1315	246	1.	
1	0515	22	2.	*	2	0000	97	1.	*	2	1845	172	1.	*	3	1330	247	1.	
1	0530	23	4.	*	2	0015	98	1.	*	2	1900	173	1.	*	3	1345	248	1.	
1	0545	24	10.	*	2	0030	99	1.	*	2	1915	174	1.	*	3	1400	249	1.	
1	0600	25	11.	*	2	0045	100	1.	*	2	1930	175	1.	*	3	1415	250	1.	
1	0615	26	12.	*	2	0100	101	1.	*	2	1945	176	1.	*	3	1430	251	1.	
1	0630	27	13.	*	2	0115	102	1.	*	2	2000	177	1.	*	3	1445	252	1.	
1	0645	28	17.	*	2	0130	103	1.	*	2	2015	178	1.	*	3	1500	253	1.	
1	0700	29	19.	*	2	0145	104	1.	*	2	2030	179	1.	*	3	1515	254	1.	
1	0715	30	55.	*	2	0200	105	1.	*	2	2045	180	1.	*	3	1530	255	1.	
1	0730	31	71.	*	2	0215	106	1.	*	2	2100	181	1.	*	3	1545	256	1.	

1	0745	32	49.	*	2	0230	107	1.	*	2	2115	182	1.	*	3	1600	257	1.
1	0800	33	39.	*	2	0245	108	1.	*	2	2130	183	1.	*	3	1615	258	1.
1	0815	34	29.	*	2	0300	109	1.	*	2	2145	184	1.	*	3	1630	259	1.
1	0830	35	25.	*	2	0315	110	1.	*	2	2200	185	1.	*	3	1645	260	1.
1	0845	36	19.	*	2	0330	111	1.	*	2	2215	186	1.	*	3	1700	261	1.
1	0900	37	16.	*	2	0345	112	1.	*	2	2230	187	1.	*	3	1715	262	1.
1	0915	38	14.	*	2	0400	113	1.	*	2	2245	188	1.	*	3	1730	263	1.
1	0930	39	13.	*	2	0415	114	1.	*	2	2300	189	1.	*	3	1745	264	1.
1	0945	40	12.	*	2	0430	115	1.	*	2	2315	190	1.	*	3	1800	265	1.
1	1000	41	11.	*	2	0445	116	1.	*	2	2330	191	1.	*	3	1815	266	1.
1	1015	42	10.	*	2	0500	117	1.	*	2	2345	192	1.	*	3	1830	267	1.
1	1030	43	10.	*	2	0515	118	1.	*	3	0000	193	1.	*	3	1845	268	1.
1	1045	44	9.	*	2	0530	119	1.	*	3	0015	194	1.	*	3	1900	269	1.
1	1100	45	9.	*	2	0545	120	1.	*	3	0030	195	1.	*	3	1915	270	1.
1	1115	46	8.	*	2	0600	121	1.	*	3	0045	196	1.	*	3	1930	271	1.
1	1130	47	7.	*	2	0615	122	1.	*	3	0100	197	1.	*	3	1945	272	1.
1	1145	48	7.	*	2	0630	123	1.	*	3	0115	198	1.	*	3	2000	273	1.
1	1200	49	7.	*	2	0645	124	1.	*	3	0130	199	1.	*	3	2015	274	1.
1	1215	50	7.	*	2	0700	125	1.	*	3	0145	200	1.	*	3	2030	275	1.
1	1230	51	6.	*	2	0715	126	1.	*	3	0200	201	1.	*	3	2045	276	1.
1	1245	52	6.	*	2	0730	127	1.	*	3	0215	202	1.	*	3	2100	277	1.
1	1300	53	6.	*	2	0745	128	1.	*	3	0230	203	1.	*	3	2115	278	1.
1	1315	54	6.	*	2	0800	129	1.	*	3	0245	204	1.	*	3	2130	279	1.
1	1330	55	6.	*	2	0815	130	1.	*	3	0300	205	1.	*	3	2145	280	1.
1	1345	56	5.	*	2	0830	131	1.	*	3	0315	206	1.	*	3	2200	281	1.
1	1400	57	5.	*	2	0845	132	1.	*	3	0330	207	1.	*	3	2215	282	1.
1	1415	58	5.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	5.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	5.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	5.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	4.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	4.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	4.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	4.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	4.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	4.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	4.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	4.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	4.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	4.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	3.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	3.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	3.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	3.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

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PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 71.	7.50	20.	7.	3.	3.
	(INCHES)	.942	1.349	1.764	1.785
	(AC-FT)	10.	14.	19.	19.

CUMULATIVE AREA = .20 SQ MI

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248 KK \* RDBW3 \*  
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DBW3 ROUTING

HYDROGRAPH ROUTING DATA

250 RS	STORAGE ROUTING								
	NSTPS	1	NUMBER OF SUBREACHES						
	ITYP	ELEV	TYPE OF INITIAL CONDITION						
	RSVRC	113.75	INITIAL CONDITION						
	X	.00	WORKING R AND D COEFFICIENT						
251 SV	STORAGE	.0	4.5	5.7	10.9	11.5	24.7	30.5	
252 SE	ELEVATION	113.75	115.91	118.00	119.00	119.10	121.50	122.50	
253 SQ	DISCHARGE	0.	0.	2.	3.	9.	10.	10.	

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1	2030	83	3.	10.9	119.0	* 2	2130	183	2.	8.1	118.5	* 3	2230	283	2.	5.6	117.9
1	2045	84	3.	10.9	119.0	* 2	2145	184	2.	8.1	118.5	* 3	2245	284	2.	5.6	117.9
1	2100	85	3.	10.9	119.0	* 2	2200	185	2.	8.1	118.5	* 3	2300	285	2.	5.6	117.8
1	2115	86	3.	10.9	119.0	* 2	2215	186	2.	8.1	118.5	* 3	2315	286	2.	5.6	117.8
1	2130	87	3.	10.9	119.0	* 2	2230	187	2.	8.0	118.4	* 3	2330	287	2.	5.5	117.8
1	2145	88	3.	10.9	119.0	* 2	2245	188	2.	8.0	118.4	* 3	2345	288	2.	5.5	117.7
1	2200	89	3.	10.9	119.0	* 2	2300	189	2.	8.0	118.4	* 4	0000	289	2.	5.5	117.7
1	2215	90	3.	10.8	119.0	* 2	2315	190	2.	7.9	118.4	* 4	0015	290	2.	5.5	117.7
1	2230	91	3.	10.8	119.0	* 2	2330	191	2.	7.9	118.4	* 4	0030	291	2.	5.5	117.7
1	2245	92	3.	10.8	119.0	* 2	2345	192	2.	7.9	118.4	* 4	0045	292	2.	5.5	117.6
1	2300	93	3.	10.8	119.0	* 3	0000	193	2.	7.9	118.4	* 4	0100	293	2.	5.5	117.6
1	2315	94	3.	10.8	119.0	* 3	0015	194	2.	7.8	118.4	* 4	0115	294	2.	5.4	117.6
1	2330	95	3.	10.8	119.0	* 3	0030	195	2.	7.8	118.4	* 4	0130	295	2.	5.4	117.6
1	2345	96	3.	10.7	119.0	* 3	0045	196	2.	7.8	118.4	* 4	0145	296	2.	5.4	117.5
2	0000	97	3.	10.7	119.0	* 3	0100	197	2.	7.8	118.4	* 4	0200	297	2.	5.4	117.5
2	0015	98	3.	10.7	119.0	* 3	0115	198	2.	7.7	118.4	* 4	0215	298	2.	5.4	117.5
2	0030	99	3.	10.6	118.9	* 3	0130	199	2.	7.7	118.4	* 4	0230	299	2.	5.4	117.5
2	0045	100	3.	10.6	118.9	* 3	0145	200	2.	7.7	118.4	* 4	0245	300	2.	5.4	117.5

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

			6-HR	24-HR	72-HR	74.75-HR
+	(CFS)	(HR)				
+	3.	17.75	3.	3.	2.	2.
	(INCHES)		.133	.502	1.282	1.282
	(AC-FT)		1.	5.	14.	14.

PEAK STORAGE TIME MAXIMUM AVERAGE STORAGE

			6-HR	24-HR	72-HR	74.75-HR
+	(AC-FT)	(HR)				
+	11.	17.75	11.	10.	8.	8.

PEAK STAGE TIME MAXIMUM AVERAGE STAGE

			6-HR	24-HR	72-HR	74.75-HR
+	(FEET)	(HR)				
+	119.01	17.75	119.00	118.90	118.20	118.04

CUMULATIVE AREA = .20 SQ MI

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254 KK * STP18 * AREA 2A
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RUNOFF FROM AREA 2A

SUBBASIN RUNOFF DATA

256 BA SUBBASIN CHARACTERISTICS  
TAREA .05 SUBBASIN AREA  
SNAP 14.50 NORMAL ANNUAL PRECIPITATION  
RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP18

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	* 1	1845	76	0.	* 2	1330	151	0.	* 3	0815	226	0.				
1	0015	2	0.	* 1	1900	77	0.	* 2	1345	152	0.	* 3	0830	227	0.				
1	0030	3	0.	* 1	1915	78	0.	* 2	1400	153	0.	* 3	0845	228	0.				
1	0045	4	0.	* 1	1930	79	0.	* 2	1415	154	0.	* 3	0900	229	0.				
1	0100	5	0.	* 1	1945	80	0.	* 2	1430	155	0.	* 3	0915	230	0.				
1	0115	6	0.	* 1	2000	81	0.	* 2	1445	156	0.	* 3	0930	231	0.				
1	0130	7	0.	* 1	2015	82	0.	* 2	1500	157	0.	* 3	0945	232	0.				
1	0145	8	4.	* 1	2030	83	0.	* 2	1515	158	0.	* 3	1000	233	0.				
1	0200	9	8.	* 1	2045	84	0.	* 2	1530	159	0.	* 3	1015	234	0.				
1	0215	10	13.	* 1	2100	85	0.	* 2	1545	160	0.	* 3	1030	235	0.				
1	0230	11	15.	* 1	2115	86	0.	* 2	1600	161	0.	* 3	1045	236	0.				
1	0245	12	38.	* 1	2130	87	0.	* 2	1615	162	0.	* 3	1100	237	0.				
1	0300	13	13.	* 1	2145	88	0.	* 2	1630	163	0.	* 3	1115	238	0.				
1	0315	14	2.	* 1	2200	89	0.	* 2	1645	164	0.	* 3	1130	239	0.				
1	0330	15	0.	* 1	2215	90	0.	* 2	1700	165	0.	* 3	1145	240	0.				
1	0345	16	0.	* 1	2230	91	0.	* 2	1715	166	0.	* 3	1200	241	0.				
1	0400	17	0.	* 1	2245	92	0.	* 2	1730	167	0.	* 3	1215	242	0.				







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PEAK FLOW TIME MAXIMUM AVERAGE FLOW
+ (CFS) (HR) 6-HR 24-HR 72-HR 74.75-HR
+ 27. 2.75 4. 1. 1. 1.
(INCHES) .703 .842 1.214 1.235
(AC-FT) 2. 2. 3. 4.
CUMULATIVE AREA = .05 SQ MI

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270 KK * STP20 * AREA 1
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RUNOFF FROM AREA 1

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SUBBASIN RUNOFF DATA
272 BA SUBBASIN CHARACTERISTICS
TAREA .13 SUBBASIN AREA
SNAP 14.00 NORMAL ANNUAL PRECIPITATION
RATIO .00 RATIO OF HYDROGRAPH

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HYDROGRAPH AT STATION STP20

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DA MON HRMN ORD FLOW * DA MON HRMN ORD FLOW * DA MON HRMN ORD FLOW * DA MON HRMN ORD FLOW
1 0000 1 1. * 1 1845 76 1. * 2 1330 151 1. * 3 0815 226 1.
1 0015 2 1. * 1 1900 77 1. * 2 1345 152 1. * 3 0830 227 1.
1 0030 3 1. * 1 1915 78 1. * 2 1400 153 1. * 3 0845 228 1.
1 0045 4 1. * 1 1930 79 1. * 2 1415 154 1. * 3 0900 229 1.
1 0100 5 1. * 1 1945 80 1. * 2 1430 155 1. * 3 0915 230 1.
1 0115 6 1. * 1 2000 81 1. * 2 1445 156 1. * 3 0930 231 1.
1 0130 7 8. * 1 2015 82 1. * 2 1500 157 1. * 3 0945 232 1.
1 0145 8 14. * 1 2030 83 1. * 2 1515 158 1. * 3 1000 233 1.
1 0200 9 19. * 1 2045 84 1. * 2 1530 159 1. * 3 1015 234 1.
1 0215 10 30. * 1 2100 85 1. * 2 1545 160 1. * 3 1030 235 1.
1 0230 11 35. * 1 2115 86 1. * 2 1600 161 1. * 3 1045 236 1.
1 0245 12 79. * 1 2130 87 1. * 2 1615 162 1. * 3 1100 237 1.
1 0300 13 38. * 1 2145 88 1. * 2 1630 163 1. * 3 1115 238 1.
1 0315 14 15. * 1 2200 89 1. * 2 1645 164 1. * 3 1130 239 1.
1 0330 15 8. * 1 2215 90 1. * 2 1700 165 1. * 3 1145 240 1.
1 0345 16 3. * 1 2230 91 1. * 2 1715 166 1. * 3 1200 241 1.
1 0400 17 1. * 1 2245 92 1. * 2 1730 167 1. * 3 1215 242 1.
1 0415 18 1. * 1 2300 93 1. * 2 1745 168 1. * 3 1230 243 1.
1 0430 19 1. * 1 2315 94 1. * 2 1800 169 1. * 3 1245 244 1.
1 0445 20 1. * 1 2330 95 1. * 2 1815 170 1. * 3 1300 245 1.
1 0500 21 1. * 1 2345 96 1. * 2 1830 171 1. * 3 1315 246 1.
1 0515 22 1. * 2 0000 97 1. * 2 1845 172 1. * 3 1330 247 1.
1 0530 23 1. * 2 0015 98 1. * 2 1900 173 1. * 3 1345 248 1.
1 0545 24 1. * 2 0030 99 1. * 2 1915 174 1. * 3 1400 249 1.
1 0600 25 1. * 2 0045 100 1. * 2 1930 175 1. * 3 1415 250 1.
1 0615 26 1. * 2 0100 101 1. * 2 1945 176 1. * 3 1430 251 1.
1 0630 27 1. * 2 0115 102 1. * 2 2000 177 1. * 3 1445 252 1.
1 0645 28 1. * 2 0130 103 1. * 2 2015 178 1. * 3 1500 253 1.
1 0700 29 1. * 2 0145 104 1. * 2 2030 179 1. * 3 1515 254 1.
1 0715 30 1. * 2 0200 105 1. * 2 2045 180 1. * 3 1530 255 1.
1 0730 31 1. * 2 0215 106 1. * 2 2100 181 1. * 3 1545 256 1.
1 0745 32 1. * 2 0230 107 1. * 2 2115 182 1. * 3 1600 257 1.
1 0800 33 1. * 2 0245 108 1. * 2 2130 183 1. * 3 1615 258 1.
1 0815 34 1. * 2 0300 109 1. * 2 2145 184 1. * 3 1630 259 1.
1 0830 35 1. * 2 0315 110 1. * 2 2200 185 1. * 3 1645 260 1.
1 0845 36 1. * 2 0330 111 1. * 2 2215 186 1. * 3 1700 261 1.
1 0900 37 1. * 2 0345 112 1. * 2 2230 187 1. * 3 1715 262 1.
1 0915 38 1. * 2 0400 113 1. * 2 2245 188 1. * 3 1730 263 1.
1 0930 39 1. * 2 0415 114 1. * 2 2300 189 1. * 3 1745 264 1.
1 0945 40 1. * 2 0430 115 1. * 2 2315 190 1. * 3 1800 265 1.
1 1000 41 1. * 2 0445 116 1. * 2 2330 191 1. * 3 1815 266 1.
1 1015 42 1. * 2 0500 117 1. * 2 2345 192 1. * 3 1830 267 1.
1 1030 43 1. * 2 0515 118 1. * 3 0000 193 1. * 3 1845 268 1.
1 1045 44 1. * 2 0530 119 1. * 3 0015 194 1. * 3 1900 269 1.
1 1100 45 1. * 2 0545 120 1. * 3 0030 195 1. * 3 1915 270 1.

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1	1115	46	1.	*	2	0600	121	1.	*	3	0045	196	1.	*	3	1930	271	1.
1	1130	47	1.	*	2	0615	122	1.	*	3	0100	197	1.	*	3	1945	272	1.
1	1145	48	1.	*	2	0630	123	1.	*	3	0115	198	1.	*	3	2000	273	1.
1	1200	49	1.	*	2	0645	124	1.	*	3	0130	199	1.	*	3	2015	274	1.
1	1215	50	1.	*	2	0700	125	1.	*	3	0145	200	1.	*	3	2030	275	1.
1	1230	51	1.	*	2	0715	126	1.	*	3	0200	201	1.	*	3	2045	276	1.
1	1245	52	1.	*	2	0730	127	1.	*	3	0215	202	1.	*	3	2100	277	1.
1	1300	53	1.	*	2	0745	128	1.	*	3	0230	203	1.	*	3	2115	278	1.
1	1315	54	1.	*	2	0800	129	1.	*	3	0245	204	1.	*	3	2130	279	1.
1	1330	55	1.	*	2	0815	130	1.	*	3	0300	205	1.	*	3	2145	280	1.
1	1345	56	1.	*	2	0830	131	1.	*	3	0315	206	1.	*	3	2200	281	1.
1	1400	57	1.	*	2	0845	132	1.	*	3	0330	207	1.	*	3	2215	282	1.
1	1415	58	1.	*	2	0900	133	1.	*	3	0345	208	1.	*	3	2230	283	1.
1	1430	59	1.	*	2	0915	134	1.	*	3	0400	209	1.	*	3	2245	284	1.
1	1445	60	1.	*	2	0930	135	1.	*	3	0415	210	1.	*	3	2300	285	1.
1	1500	61	1.	*	2	0945	136	1.	*	3	0430	211	1.	*	3	2315	286	1.
1	1515	62	1.	*	2	1000	137	1.	*	3	0445	212	1.	*	3	2330	287	1.
1	1530	63	1.	*	2	1015	138	1.	*	3	0500	213	1.	*	3	2345	288	1.
1	1545	64	1.	*	2	1030	139	1.	*	3	0515	214	1.	*	4	0000	289	1.
1	1600	65	1.	*	2	1045	140	1.	*	3	0530	215	1.	*	4	0015	290	1.
1	1615	66	1.	*	2	1100	141	1.	*	3	0545	216	1.	*	4	0030	291	1.
1	1630	67	1.	*	2	1115	142	1.	*	3	0600	217	1.	*	4	0045	292	1.
1	1645	68	1.	*	2	1130	143	1.	*	3	0615	218	1.	*	4	0100	293	1.
1	1700	69	1.	*	2	1145	144	1.	*	3	0630	219	1.	*	4	0115	294	1.
1	1715	70	1.	*	2	1200	145	1.	*	3	0645	220	1.	*	4	0130	295	1.
1	1730	71	1.	*	2	1215	146	1.	*	3	0700	221	1.	*	4	0145	296	1.
1	1745	72	1.	*	2	1230	147	1.	*	3	0715	222	1.	*	4	0200	297	1.
1	1800	73	1.	*	2	1245	148	1.	*	3	0730	223	1.	*	4	0215	298	1.
1	1815	74	1.	*	2	1300	149	1.	*	3	0745	224	1.	*	4	0230	299	1.
1	1830	75	1.	*	2	1315	150	1.	*	3	0800	225	1.	*	4	0245	300	1.

PEAK FLOW TIME MAXIMUM AVERAGE FLOW

+ (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	74.75-HR
+ 79.	2.75	11.	3.	1.	1.
	(INCHES)	.784	.924	1.296	1.317
	(AC-FT)	5.	6.	9.	9.

CUMULATIVE AREA = .13 SQ MI

283 KK \* STP21 \* AREA 2B

RUNOFF FROM AREA 2B

SUBBASIN RUNOFF DATA

285 BA SUBBASIN CHARACTERISTICS  
 TAREA .02 SUBBASIN AREA  
 SNAP 14.00 NORMAL ANNUAL PRECIPITATION  
 RATIO .00 RATIO OF HYDROGRAPH

\*\*\*

HYDROGRAPH AT STATION STP21

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1	0000	1	0.	*	1	1845	76	0.	*	2	1330	151	0.	*	3	0815	226	0.	
1	0015	2	0.	*	1	1900	77	0.	*	2	1345	152	0.	*	3	0830	227	0.	
1	0030	3	0.	*	1	1915	78	0.	*	2	1400	153	0.	*	3	0845	228	0.	
1	0045	4	0.	*	1	1930	79	0.	*	2	1415	154	0.	*	3	0900	229	0.	
1	0100	5	0.	*	1	1945	80	0.	*	2	1430	155	0.	*	3	0915	230	0.	
1	0115	6	0.	*	1	2000	81	0.	*	2	1445	156	0.	*	3	0930	231	0.	
1	0130	7	2.	*	1	2015	82	0.	*	2	1500	157	0.	*	3	0945	232	0.	
1	0145	8	2.	*	1	2030	83	0.	*	2	1515	158	0.	*	3	1000	233	0.	
1	0200	9	3.	*	1	2045	84	0.	*	2	1530	159	0.	*	3	1015	234	0.	
1	0215	10	5.	*	1	2100	85	0.	*	2	1545	160	0.	*	3	1030	235	0.	
1	0230	11	5.	*	1	2115	86	0.	*	2	1600	161	0.	*	3	1045	236	0.	
1	0245	12	12.	*	1	2130	87	0.	*	2	1615	162	0.	*	3	1100	237	0.	
1	0300	13	5.	*	1	2145	88	0.	*	2	1630	163	0.	*	3	1115	238	0.	
1	0315	14	2.	*	1	2200	89	0.	*	2	1645	164	0.	*	3	1130	239	0.	
1	0330	15	1.	*	1	2215	90	0.	*	2	1700	165	0.	*	3	1145	240	0.	





```

*****
PEAK FLOW      TIME          MAXIMUM AVERAGE FLOW
+ (CFS) (HR)      6-HR    24-HR    72-HR    74.75-HR
+ 118.  2.75     16.     5.     2.     2.
      (INCHES) .767   .906   1.278  1.299
      (AC-FT)  8.    10.    14.    14.

      CUMULATIVE AREA = .20 SQ MI
  
```

```

*****
*
*
299 KK * RDBW4 *
*
*****
  
```

DBW4 ROUTING

HYDROGRAPH ROUTING DATA

```

301 RS  STORAGE ROUTING
      NSTPS      1 NUMBER OF SUBREACHES
      ITYP      ELEV TYPE OF INITIAL CONDITION
      RSVRIC    113.75 INITIAL CONDITION
      X          .00 WORKING R AND D COEFFICIENT

302 SV  STORAGE      .0  4.5  5.7  10.9  11.5  24.7  30.5

303 SE  ELEVATION    113.75 115.91 118.00 119.00 119.10 121.50 122.50

304 SQ  DISCHARGE    0.    0.    2.    3.    9.    10.
  
```

\*\*\*

HYDROGRAPH AT STATION RDBW4

```

*****
*
*
DA MON HRMN ORD  OUTFLOW  STORAGE  STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE  STAGE * DA MON HRMN ORD  OUTFLOW  STORAGE  STAGE
*
1  0000  1  0.    .0 113.8 * 2  0100 101  2.    5.5 117.7 * 3  0200 201  1.    5.0 116.9
1  0015  2  0.    .0 113.8 * 2  0115 102  2.    5.5 117.7 * 3  0215 202  1.    5.0 116.9
1  0030  3  0.    .0 113.8 * 2  0130 103  2.    5.5 117.7 * 3  0230 203  1.    5.0 116.9
1  0045  4  0.    .1 113.8 * 2  0145 104  2.    5.5 117.6 * 3  0245 204  1.    5.0 116.9
1  0100  5  0.    .1 113.8 * 2  0200 105  2.    5.5 117.6 * 3  0300 205  1.    5.0 116.9
1  0115  6  0.    .1 113.8 * 2  0215 106  2.    5.4 117.6 * 3  0315 206  1.    5.0 116.9
1  0130  7  0.    .2 113.9 * 2  0230 107  2.    5.4 117.5 * 3  0330 207  1.    5.0 116.9
1  0145  8  0.    .5 114.0 * 2  0245 108  2.    5.4 117.5 * 3  0345 208  1.    5.0 116.9
1  0200  9  0.    1.0 114.2 * 2  0300 109  2.    5.4 117.5 * 3  0400 209  1.    5.0 116.9
1  0215 10  0.    1.8 114.6 * 2  0315 110  2.    5.4 117.5 * 3  0415 210  1.    5.0 116.9
1  0230 11  0.    2.8 115.1 * 2  0330 111  2.    5.4 117.5 * 3  0430 211  1.    5.0 116.9
1  0245 12  0.    4.6 116.1 * 2  0345 112  2.    5.4 117.4 * 3  0445 212  1.    5.0 116.9
1  0300 13  2.    6.5 118.1 * 2  0400 113  2.    5.3 117.4 * 3  0500 213  1.    5.0 116.9
1  0315 14  2.    7.4 118.3 * 2  0415 114  2.    5.3 117.4 * 3  0515 214  1.    5.0 116.9
1  0330 15  2.    7.7 118.4 * 2  0430 115  2.    5.3 117.4 * 3  0530 215  1.    5.0 116.9
1  0345 16  2.    7.8 118.4 * 2  0445 116  2.    5.3 117.3 * 3  0545 216  1.    5.0 116.9
1  0400 17  2.    7.8 118.4 * 2  0500 117  2.    5.3 117.3 * 3  0600 217  1.    5.0 116.9
1  0415 18  2.    7.8 118.4 * 2  0515 118  1.    5.3 117.3 * 3  0615 218  1.    5.0 116.9
1  0430 19  2.    7.7 118.4 * 2  0530 119  1.    5.3 117.3 * 3  0630 219  1.    5.0 116.9
1  0445 20  2.    7.7 118.4 * 2  0545 120  1.    5.3 117.3 * 3  0645 220  1.    5.0 116.9
1  0500 21  2.    7.7 118.4 * 2  0600 121  1.    5.3 117.3 * 3  0700 221  1.    5.0 116.9
1  0515 22  2.    7.6 118.4 * 2  0615 122  1.    5.2 117.2 * 3  0715 222  1.    5.0 116.9
1  0530 23  2.    7.6 118.4 * 2  0630 123  1.    5.2 117.2 * 3  0730 223  1.    5.0 116.9
1  0545 24  2.    7.6 118.4 * 2  0645 124  1.    5.2 117.2 * 3  0745 224  1.    5.0 116.9
1  0600 25  2.    7.6 118.4 * 2  0700 125  1.    5.2 117.2 * 3  0800 225  1.    5.0 116.9
1  0615 26  2.    7.5 118.4 * 2  0715 126  1.    5.2 117.2 * 3  0815 226  1.    5.0 116.9
1  0630 27  2.    7.5 118.3 * 2  0730 127  1.    5.2 117.2 * 3  0830 227  1.    5.0 116.9
1  0645 28  2.    7.5 118.3 * 2  0745 128  1.    5.2 117.2 * 3  0845 228  1.    5.0 116.9
1  0700 29  2.    7.4 118.3 * 2  0800 129  1.    5.2 117.2 * 3  0900 229  1.    5.0 116.9
1  0715 30  2.    7.4 118.3 * 2  0815 130  1.    5.2 117.1 * 3  0915 230  1.    5.0 116.9
1  0730 31  2.    7.4 118.3 * 2  0830 131  1.    5.2 117.1 * 3  0930 231  1.    5.0 116.9
1  0745 32  2.    7.4 118.3 * 2  0845 132  1.    5.2 117.1 * 3  0945 232  1.    5.0 116.9
1  0800 33  2.    7.3 118.3 * 2  0900 133  1.    5.2 117.1 * 3  1000 233  1.    5.0 116.9
1  0815 34  2.    7.3 118.3 * 2  0915 134  1.    5.2 117.1 * 3  1015 234  1.    5.0 116.9
1  0830 35  2.    7.3 118.3 * 2  0930 135  1.    5.2 117.1 * 3  1030 235  1.    5.0 116.9
1  0845 36  2.    7.2 118.3 * 2  0945 136  1.    5.1 117.1 * 3  1045 236  1.    5.0 116.9
1  0900 37  2.    7.2 118.3 * 2  1000 137  1.    5.1 117.1 * 3  1100 237  1.    5.0 116.9
1  0915 38  2.    7.2 118.3 * 2  1015 138  1.    5.1 117.1 * 3  1115 238  1.    5.0 116.9
1  0930 39  2.    7.2 118.3 * 2  1030 139  1.    5.1 117.1 * 3  1130 239  1.    5.0 116.9
  
```





OPERATION	STATION	PEAK FLOW	AVERAGE FLOW FOR MAXIMUM PERIOD			BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
			6-HOUR	24-HOUR	72-HOUR			
HYDROGRAPH AT								
STP1	32.	7.50	9.	3.	1.	.05		
ROUTED TO								
LAG1	30.	7.50	9.	3.	1.	.05		
HYDROGRAPH AT								
STP3	70.	7.50	24.	10.	4.	.13		
HYDROGRAPH AT								
STP4	10.	7.50	4.	2.	1.	.02		
3 COMBINED AT								
C1	111.	7.50	36.	15.	6.	.20		
ROUTED TO								
RDBW1	9.	16.00	9.	9.	5.	.20		
					120.32	16.50		
HYDROGRAPH AT								
STP7	57.	2.75	7.	2.	1.	.05		
HYDROGRAPH AT								
STP8	117.	2.75	18.	5.	2.	.13		
HYDROGRAPH AT								
STP9	18.	2.75	3.	1.	0.	.02		
3 COMBINED AT								
C2	192.	2.75	28.	8.	3.	.20		
ROUTED TO								
RDBW2	9.	3.50	7.	4.	2.	.20		
					119.35	3.75		
HYDROGRAPH AT								
STP12	20.	7.50	4.	1.	1.	.05		
ROUTED TO								
LAG13	19.	7.50	4.	1.	1.	.05		
HYDROGRAPH AT								
STP14	46.	7.50	14.	5.	2.	.13		
HYDROGRAPH AT								
STP15	7.	7.50	2.	1.	0.	.02		
3 COMBINED AT								
C3	71.	7.50	20.	7.	3.	.20		
ROUTED TO								
RDBW3	3.	17.75	3.	3.	2.	.20		
					119.01	17.75		
HYDROGRAPH AT								
STP18	38.	2.75	4.	1.	1.	.05		
ROUTED TO								
LAG19	27.	2.75	4.	1.	1.	.05		
HYDROGRAPH AT								
STP20	79.	2.75	11.	3.	1.	.13		
HYDROGRAPH AT								
STP21	12.	2.75	2.	0.	0.	.02		
3 COMBINED AT								
C4	118.	2.75	16.	5.	2.	.20		
ROUTED TO								
RDBW4	2.	3.75	2.	2.	1.	.20		
					118.40	4.00		

@ 24HR/100YR STORM  
MAX PEAK OUTFLOW  
@ WEST BASIN

@ 24HR/100YR STORM  
MAX WS @  
WEST BASIN

\*\*\* NORMAL END OF HEC-1 \*\*\*

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ATTACHMENT 2

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Transportation Impact Analysis Technical Appendix  
**TUSCANY MEADOWS RESIDENTIAL PROJECT**  
Subdivision 8654

Prepared for:  
City of Pittsburg  
65 Civic Ave  
Pittsburg, CA 94565  
Attn: Paul Reinders

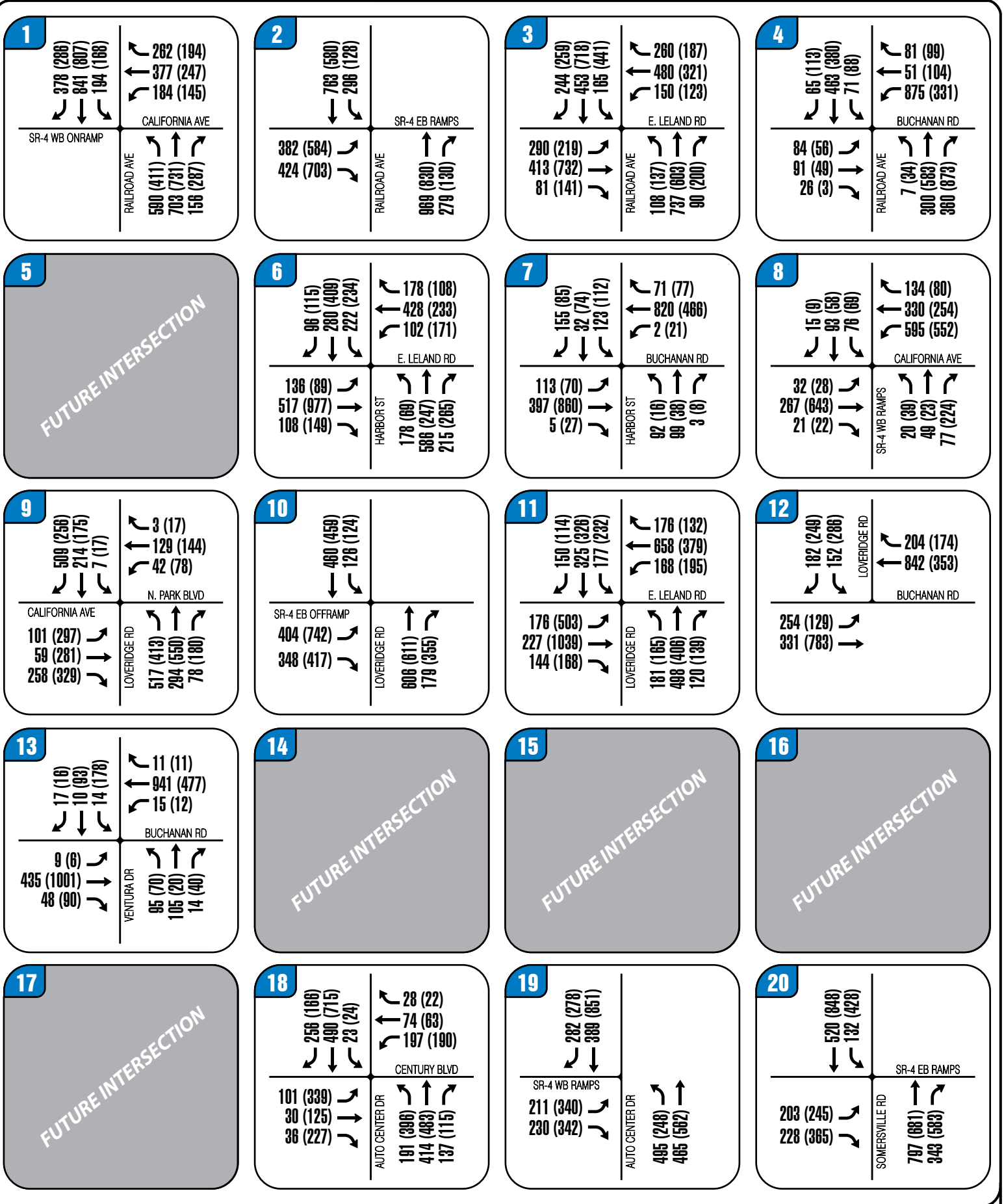
Prepared by:  
Abrams Associates  
1875 Olympic Boulevard, Suite 210  
Walnut Creek, CA 94596

 **Abrams Associates**  
TRAFFIC ENGINEERING, INC.

**MAY 21, 2014**

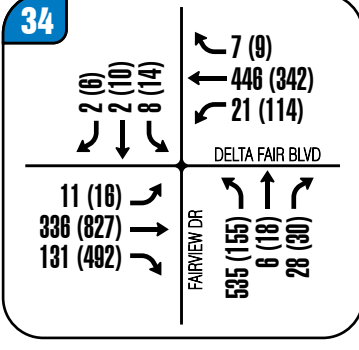
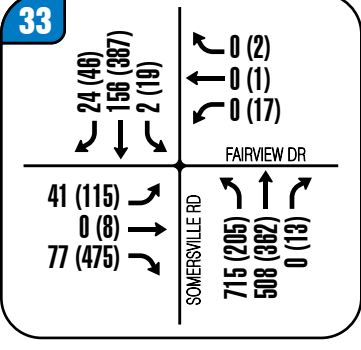
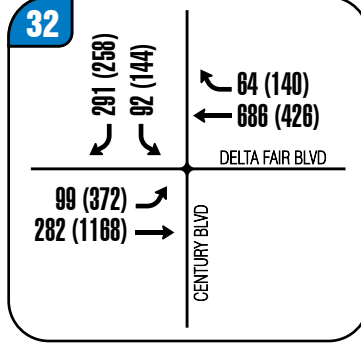
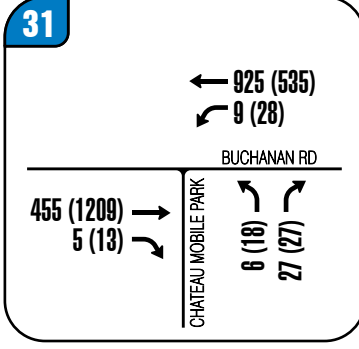
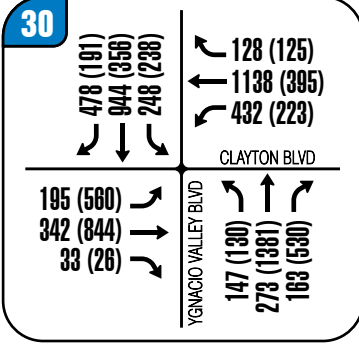
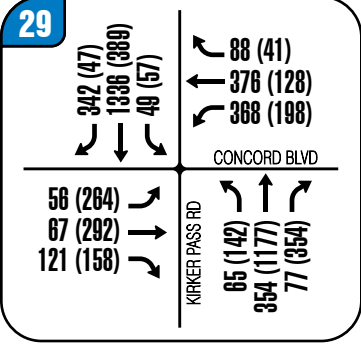
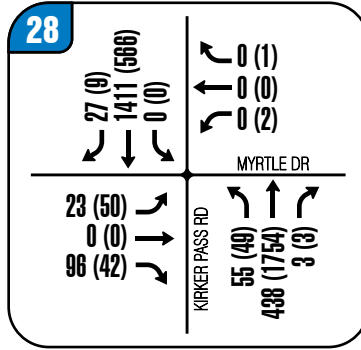
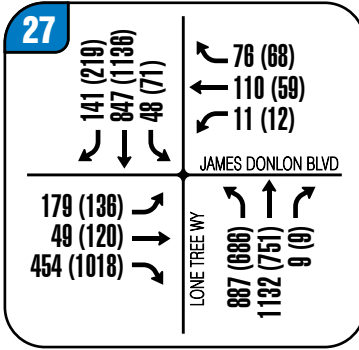
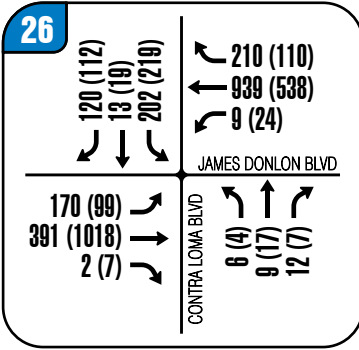
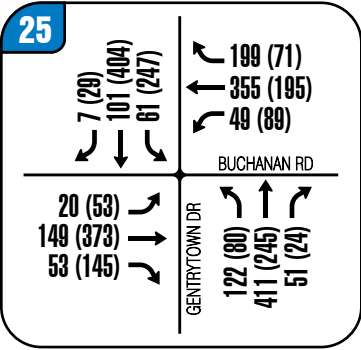
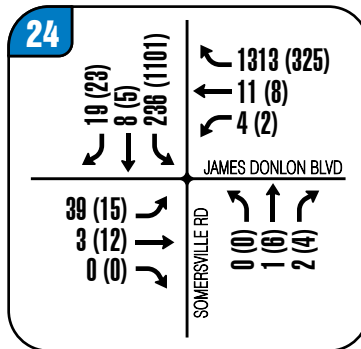
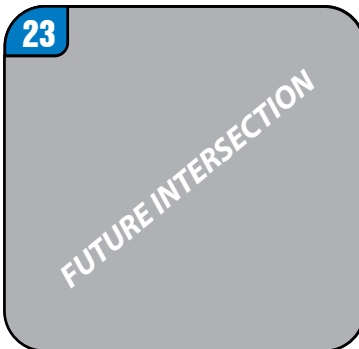
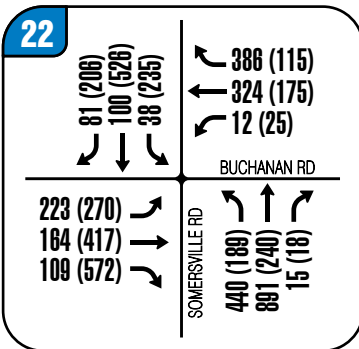
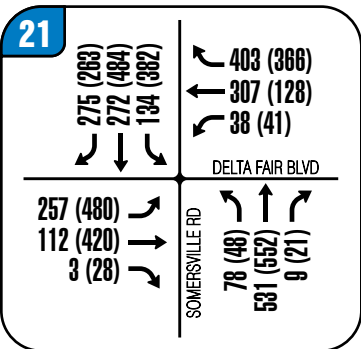
## Appendix Table of Contents

- 1) Figure A-1 Existing Volumes
- 2) Figure A-2 Existing Plus Project Volumes
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- 11) Tuscany Meadows TIA Synchro LOS Calculations using 2010 HCM Methodology
- 12) Tuscany Meadows TIA LOS Calculations using the previously adopted CCTALOS Methodology



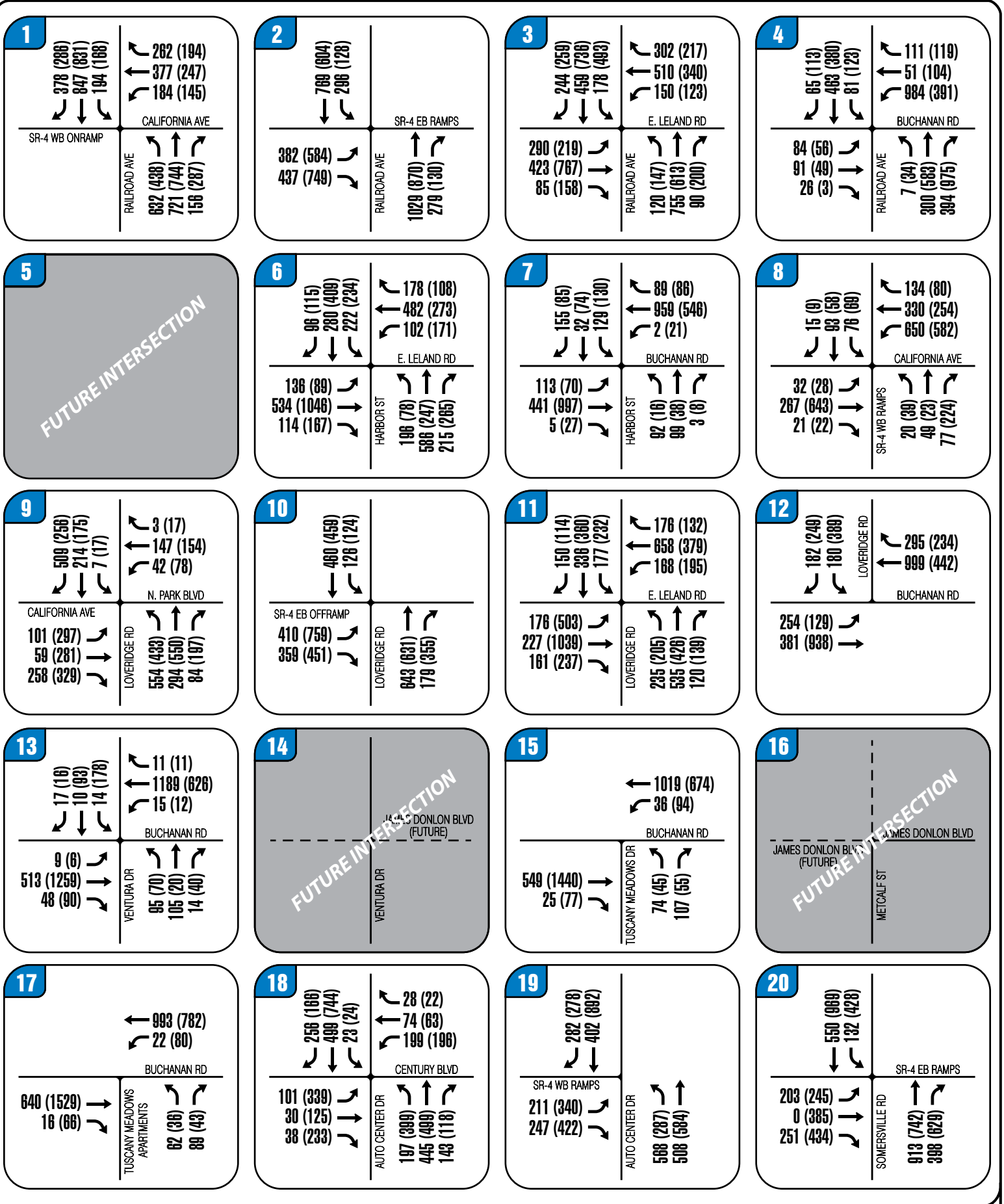
**FIGURE A-1 | EXISTING AM (PM) PEAK HOUR VOLUMES - PAGE 1**  
 TRANSPORTATION IMPACT ANALYSIS

Tuscany Meadows Residential Project  
 City of Pittsburg

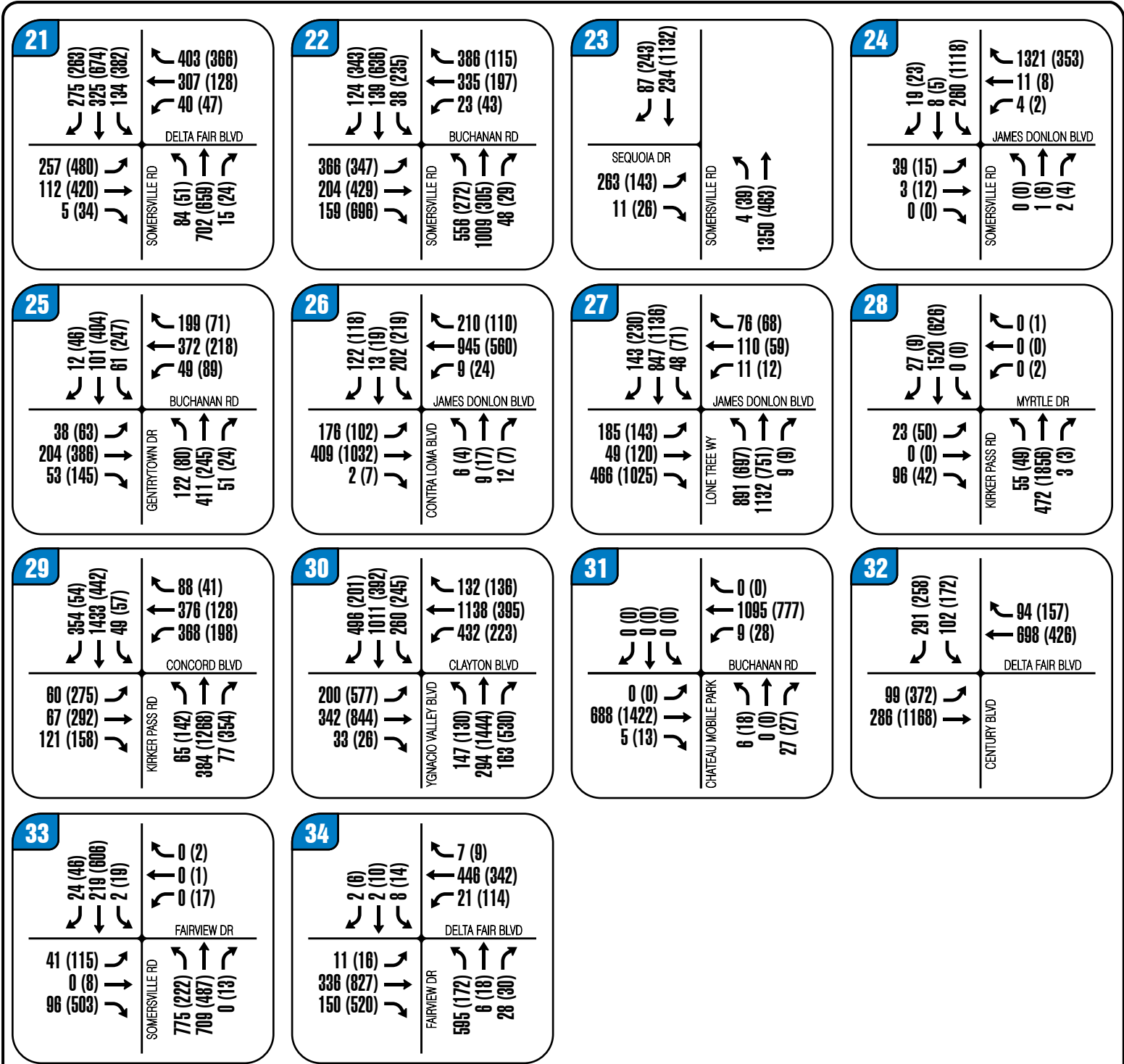


**FIGURE A-1 | EXISTING AM (PM) PEAK HOUR VOLUMES - PAGE 2**  
 TRANSPORTATION IMPACT ANALYSIS  
 Tuscany Meadows Residential Project  
 City of Pittsburg





**FIGURE A-2 | EXISTING PLUS PROJECT AM (PM) PEAK HOUR VOLUMES - PAGE 1**  
**TRANSPORTATION IMPACT ANALYSIS**

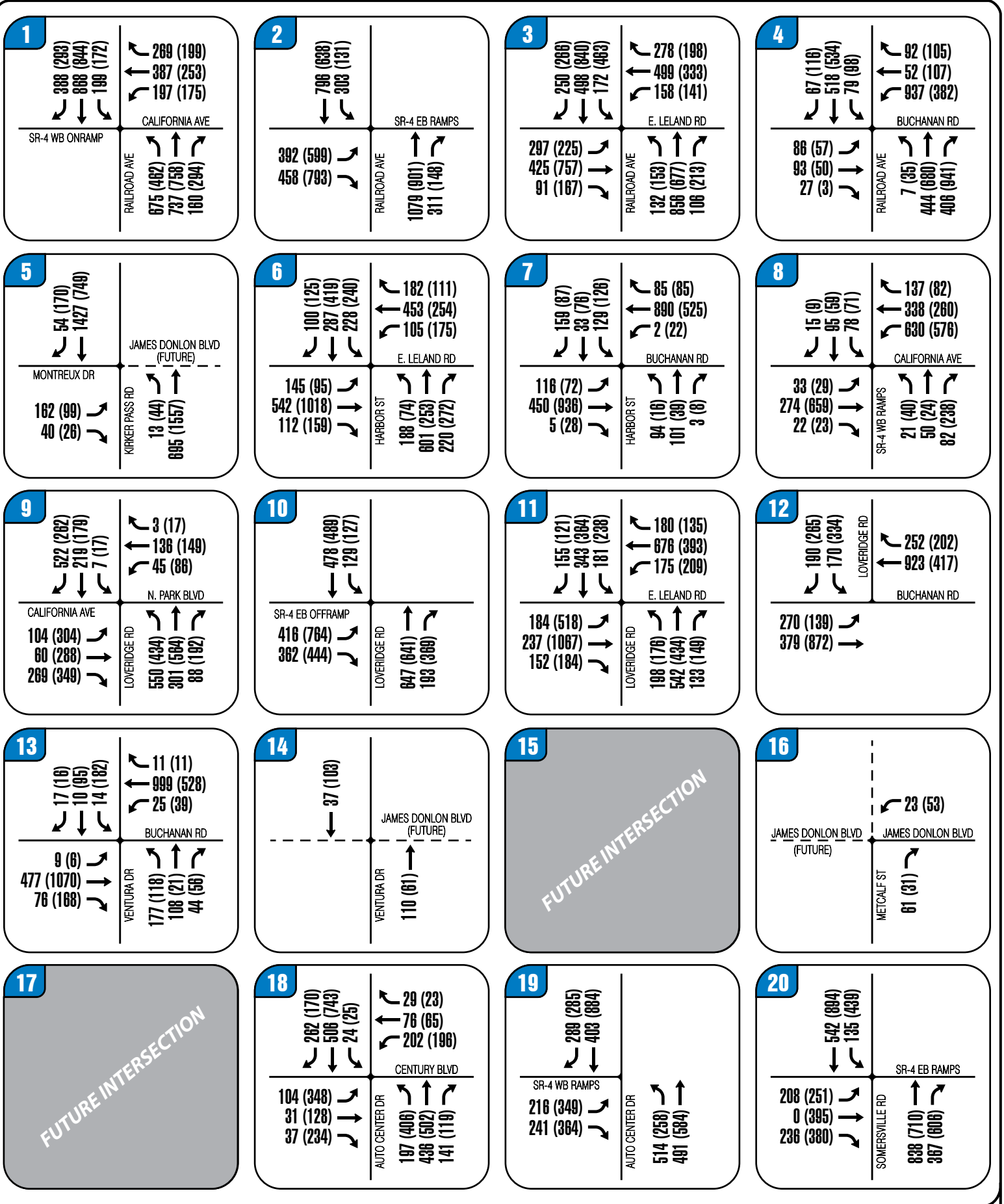


**FIGURE A-2 | EXISTING PLUS PROJECT AM (PM) PEAK HOUR VOLUMES - PAGE 2**

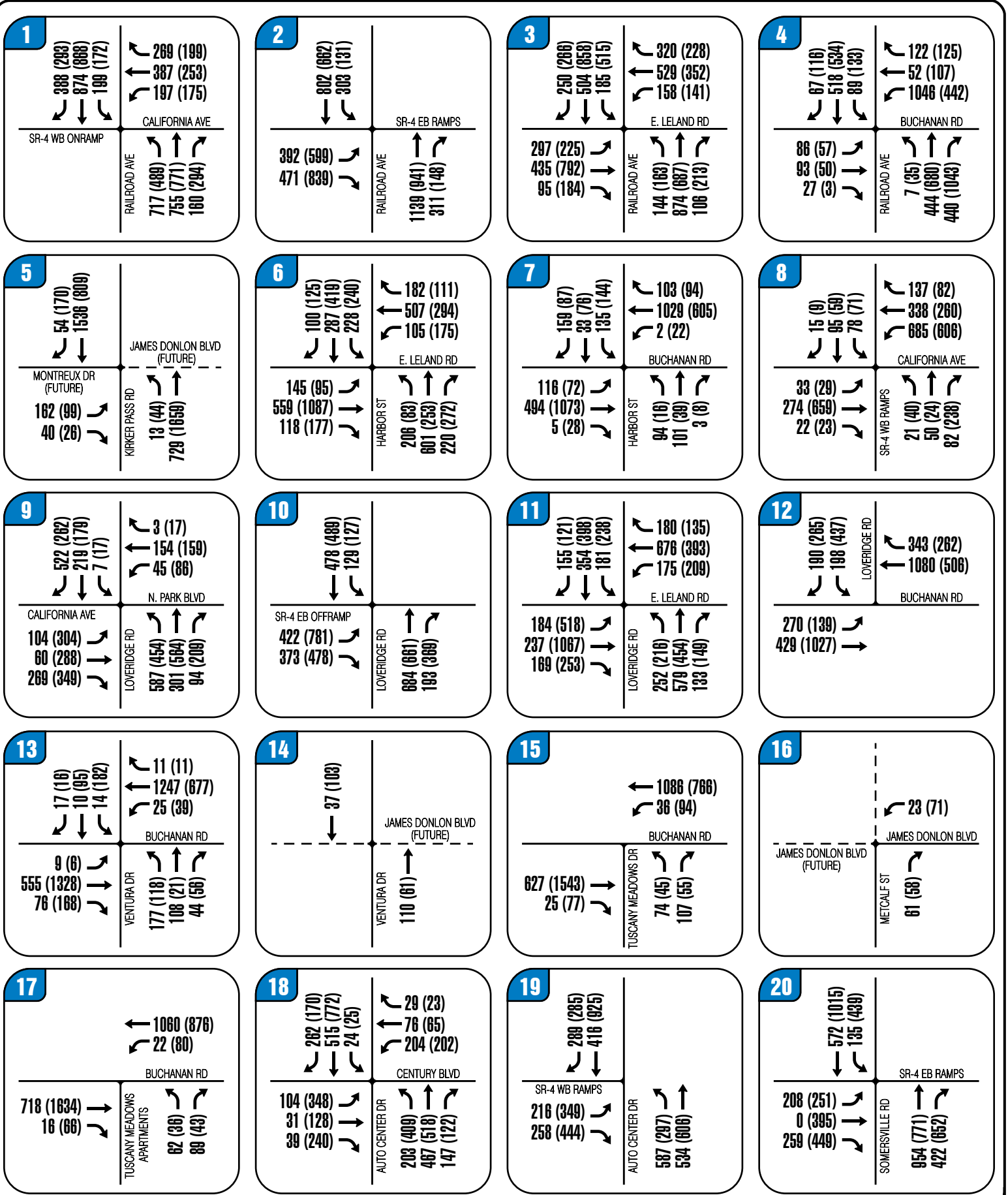
**TRANSPORTATION IMPACT ANALYSIS**

Tuscany Meadows Residential Project  
 City of Pittsburg

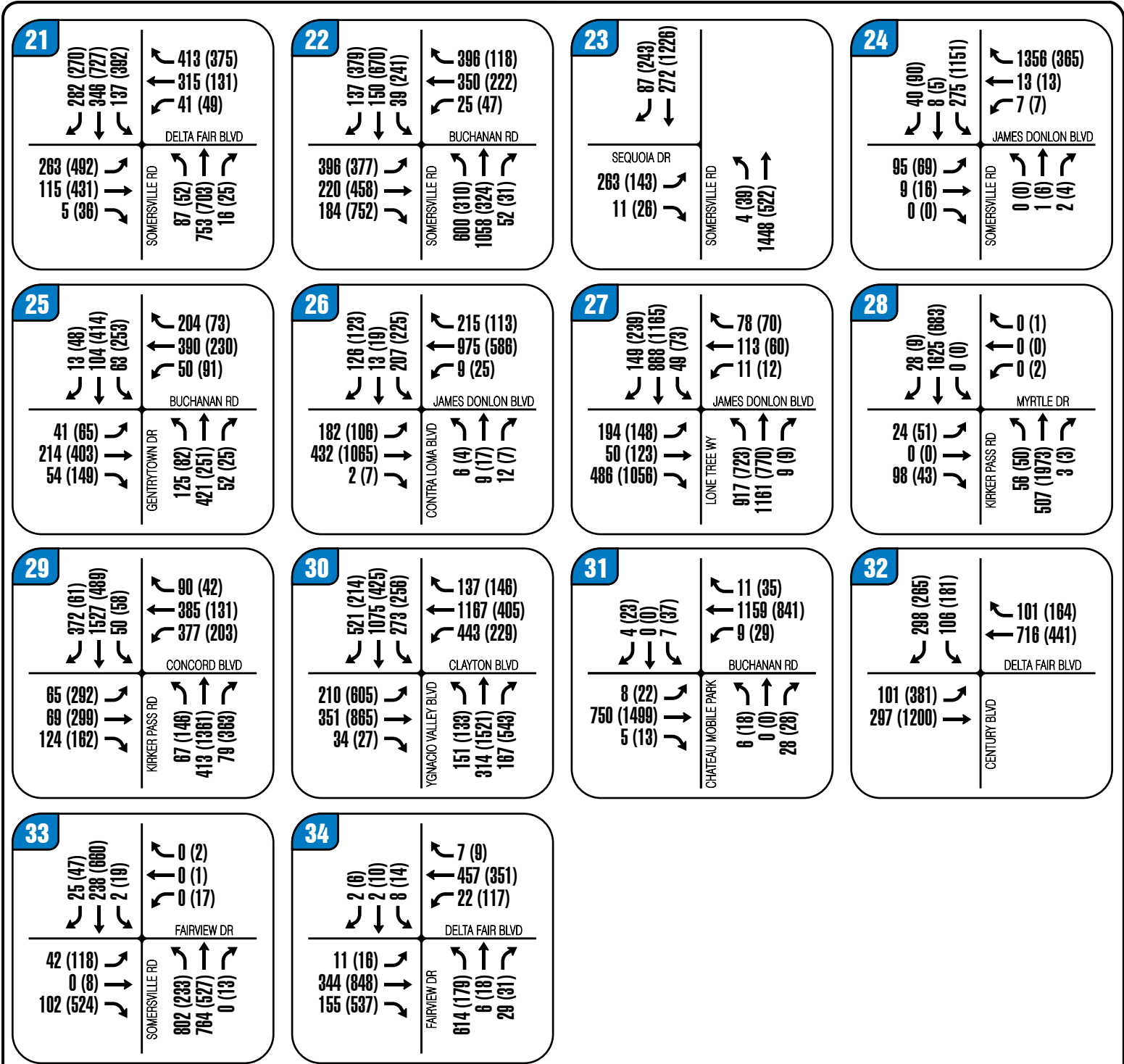




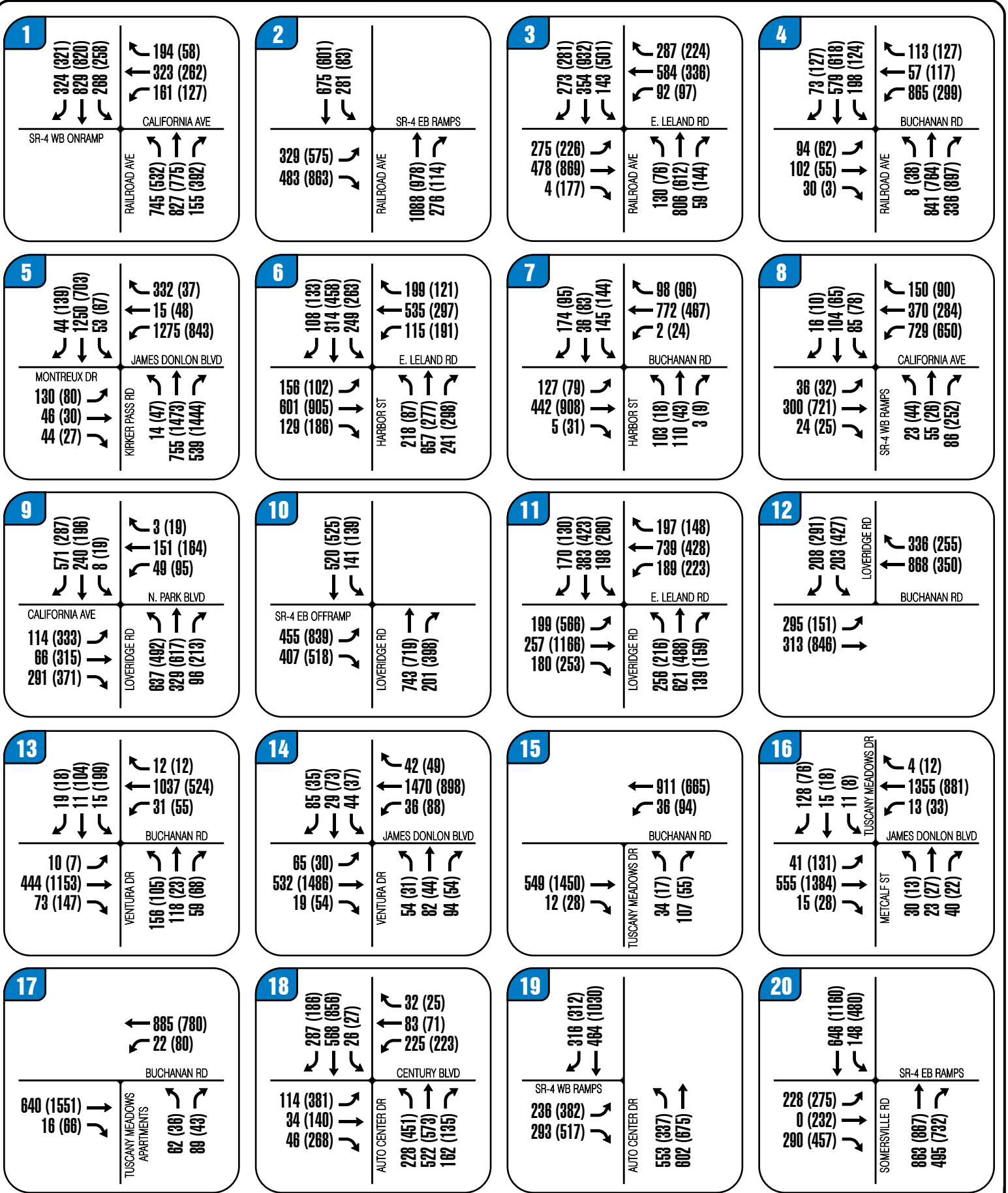
**FIGURE A-3 | BASELINE AM (PM) PEAK HOUR VOLUMES - PAGE 1**  
 TRANSPORTATION IMPACT ANALYSIS



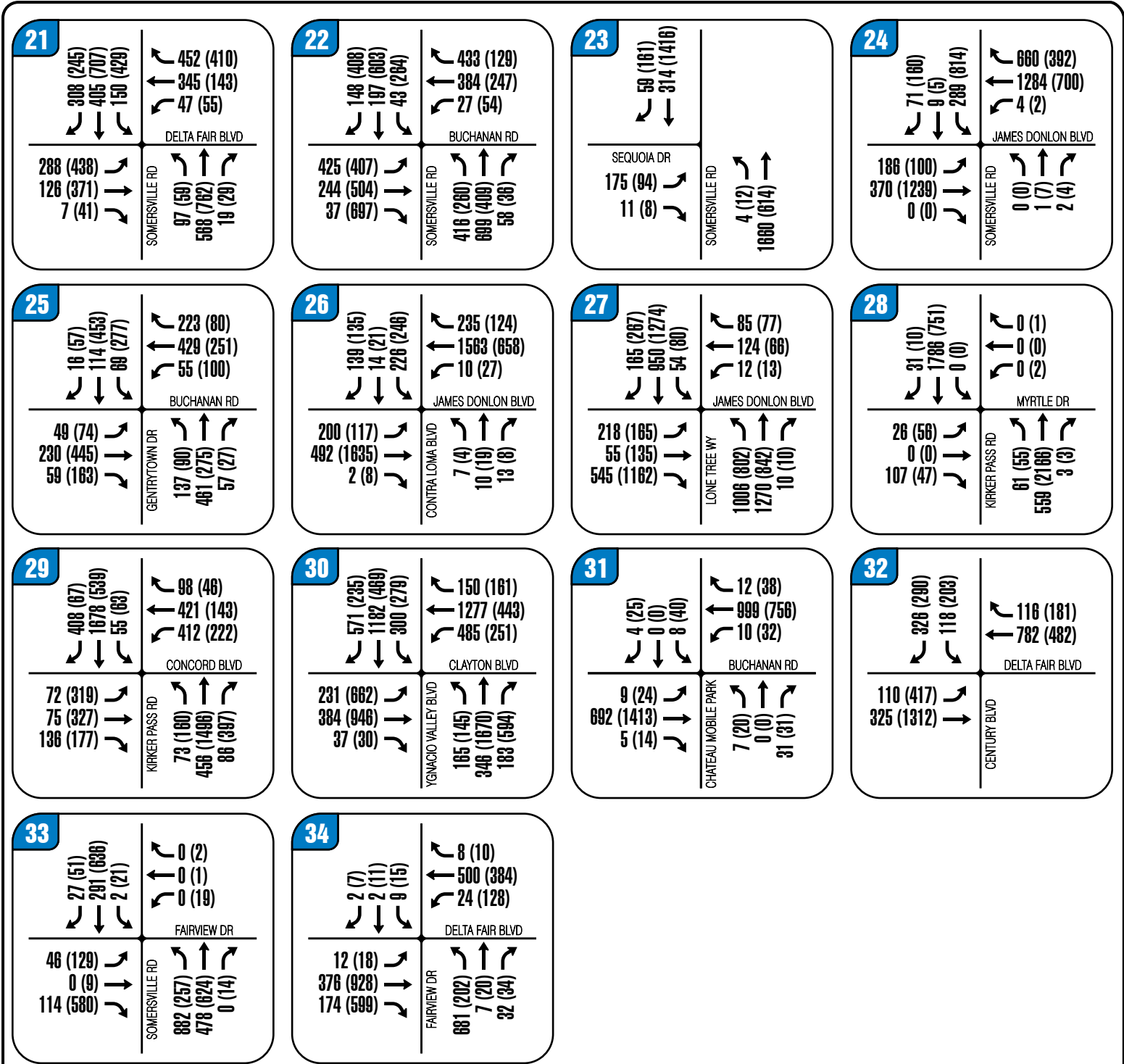
**FIGURE A-4 | BASELINE PLUS PROJECT AM (PM) PEAK HOUR VOLUMES - PAGE 1**  
 TRANSPORTATION IMPACT ANALYSIS



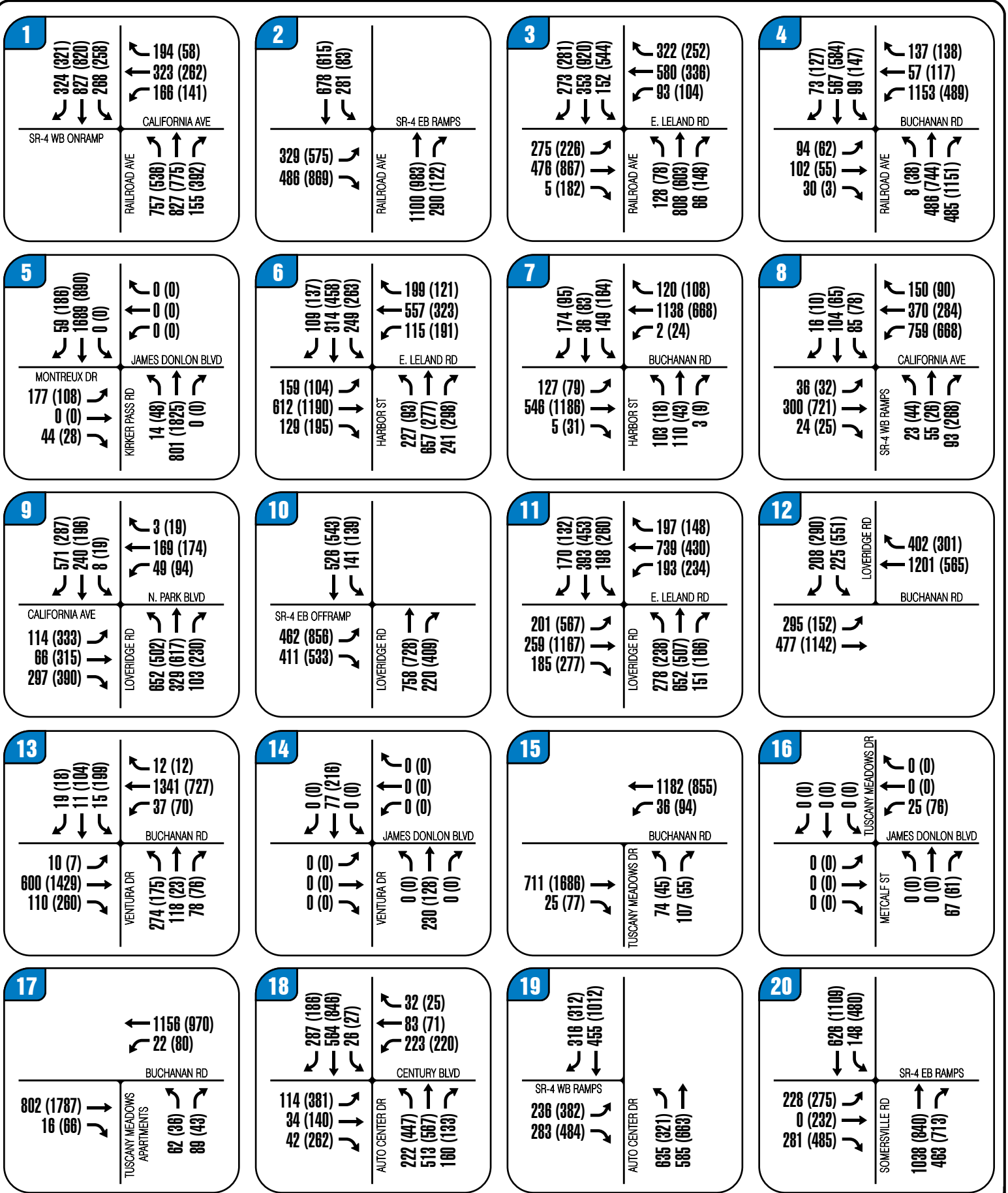
**FIGURE A-4 | BASELINE PLUS PROJECT AM (PM) PEAK HOUR VOLUMES - PAGE 2**  
 TRANSPORTATION IMPACT ANALYSIS



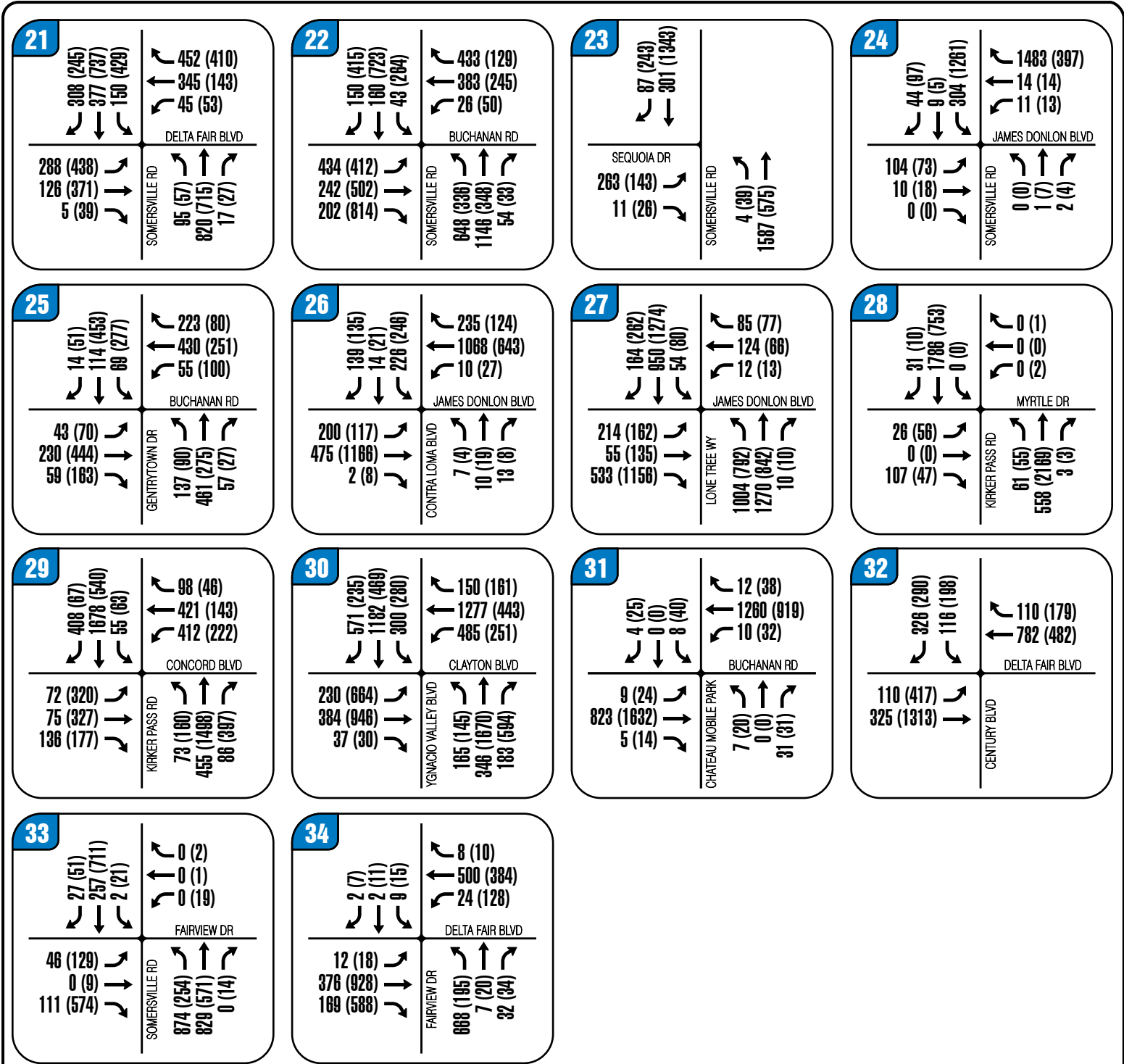
**FIGURE A-5 | CUMULATIVE + PROJECT WITH THE JDE AM (PM) PEAK HOUR VOLUMES - PAGE 1**  
**TRANSPORTATION IMPACT ANALYSIS**



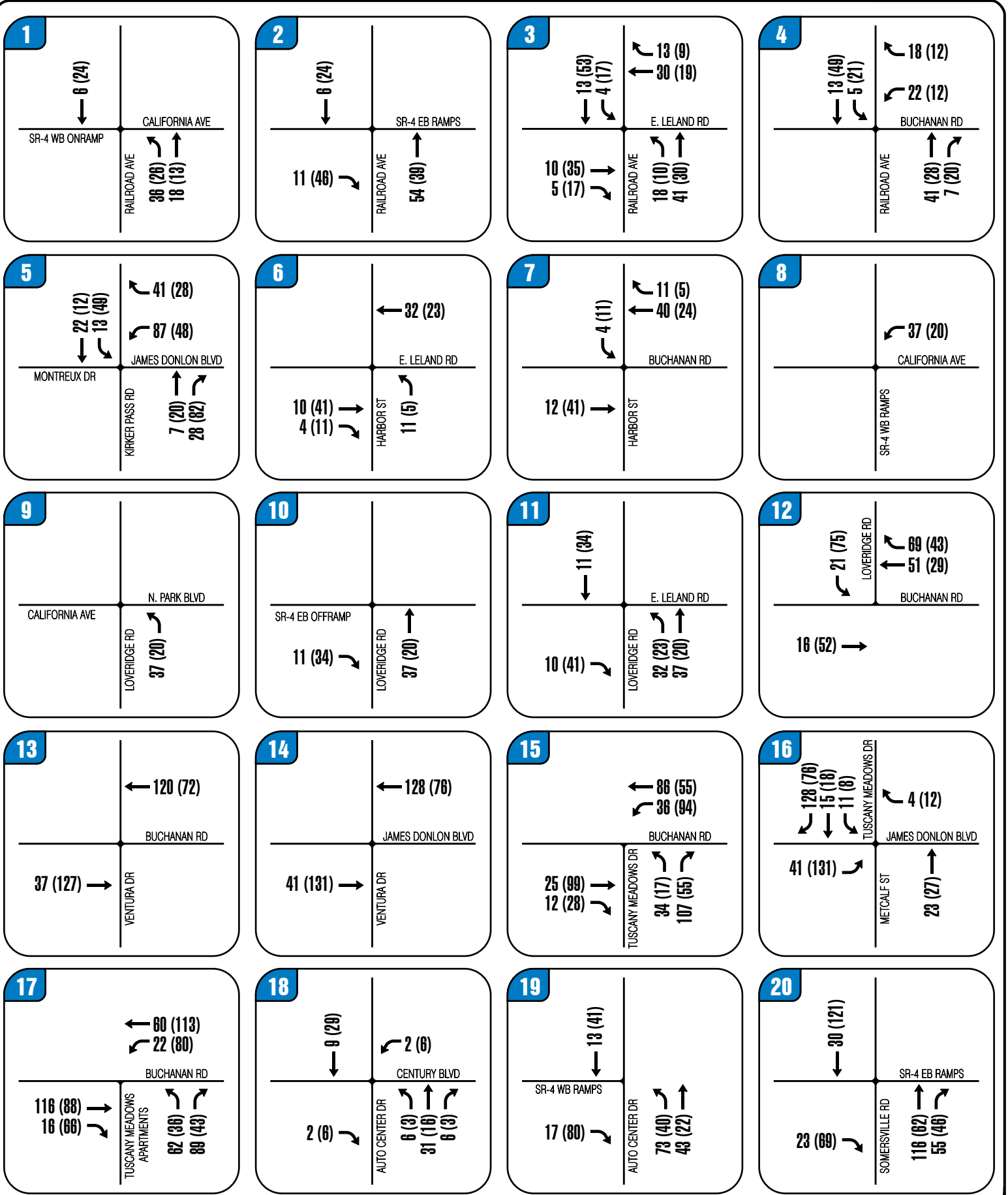
**FIGURE A-5 | CUMULATIVE + PROJECT WITH THE JDE AM (PM) PEAK HOUR VOLUMES - PAGE 2**  
**TRANSPORTATION IMPACT ANALYSIS**



**FIGURE A-6 | CUMULATIVE + PROJECT AM (PM) PEAK HOUR VOLUMES - PAGE 1 (NO JDE)**  
**TRANSPORTATION IMPACT ANALYSIS**

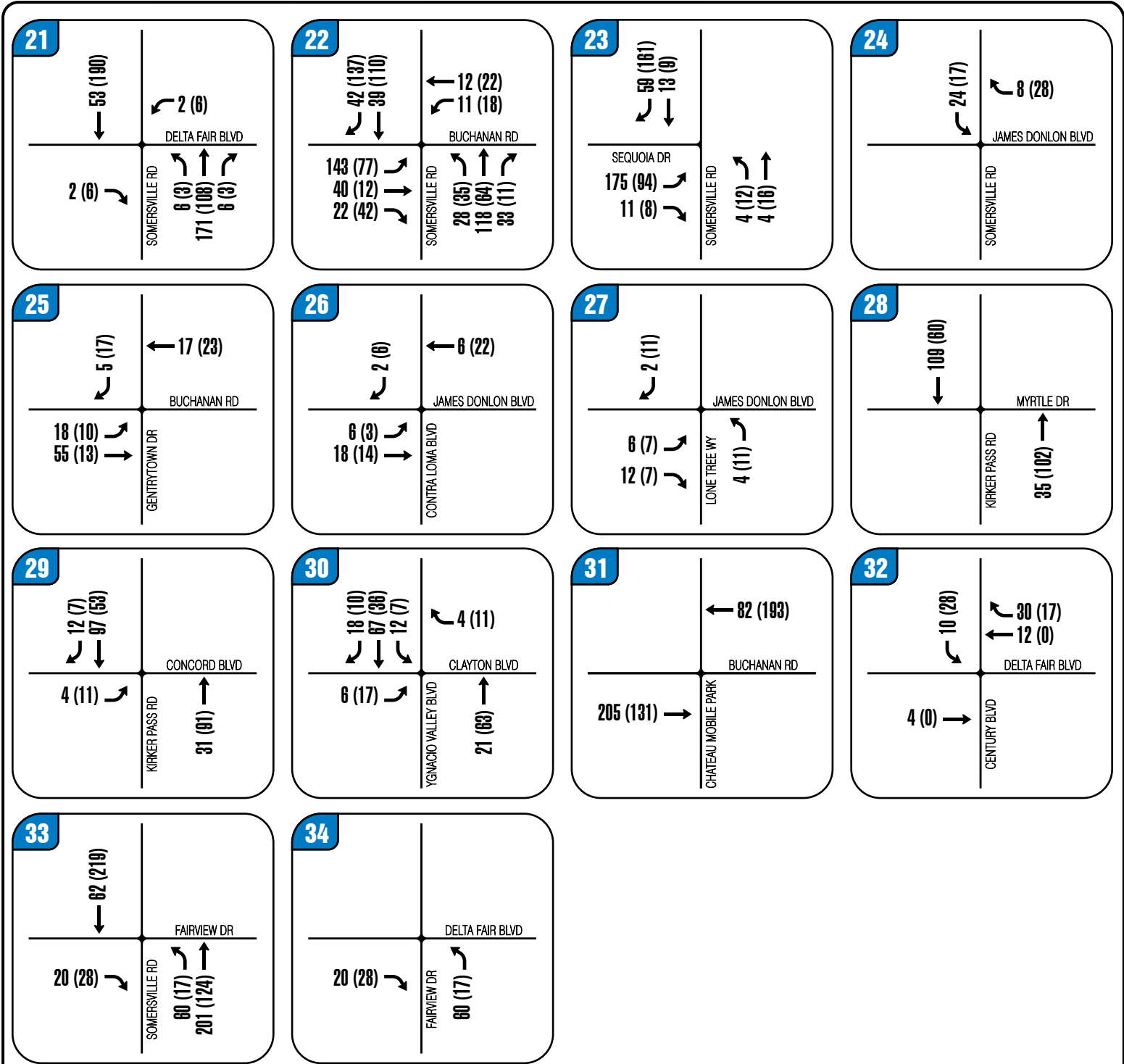


**FIGURE A-6 | CUMULATIVE + PROJECT AM (PM) PEAK HOUR VOLUMES - PAGE 2 (NO JDE)**  
 TRANSPORTATION IMPACT ANALYSIS



**FIGURE A-7 | CUMULATIVE AM (PM) PEAK HOUR PROJECT TRIPS - PAGE 1**  
**TRANSPORTATION IMPACT ANALYSIS**





**FIGURE A-7 | CUMULATIVE AM (PM) PEAK HOUR PROJECT TRIPS - PAGE 2**  
 TRANSPORTATION IMPACT ANALYSIS

## MEMORANDUM

Date: May 2, 2014

To: Paul Reinders  
City Traffic Engineer  
City of Pittsburg  
65 Civic Avenue  
Pittsburg CA 94565

From: Steve Abrams

**Subject: Analysis of Cumulative Level-of-Service Conditions (Year 2035) for Tuscany Meadows with and without the James Donlon Extension**

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The purpose of this memorandum is to review the difference in level of service (LOS) at the Tuscany Meadows Transportation Impact Analysis (TIA) study intersections with and without the James Donlon Extension (JDE). Based on the Countywide Transportation Plan and consistent with other traffic studies prepared in the area the JDE was assumed to be in place under cumulative plus project conditions. However, although not required for the environmental review, it was requested that we also provide a comparison of the project's future traffic operations both with and without the planned JDE to assist in the City's review of the development project application.

The attached **Table A-1** presents a summary of the cumulative plus project conditions at each of the project study intersections both with and without the James Donlon Extension. It was also requested that we provide a comparison of the project conditions with and without the James Donlon Extension so the "*Cumulative without project, or No project, no JDE*" scenario could be reviewed. This information is included in the attached **Table A-2**. Please note that the detailed Synchro Calculations for each scenario presented in Tables A-1 and A-2 are attached to this memorandum.

### Summary and Findings

The results of the analysis of cumulative conditions indicates what would be expected if the James Donlon Extension were not constructed as planned. As shown in **Table A-1**, six different intersections along Buchanan Road would be forecast to operate LOS E or F during the peak hours if the James Donlon Extension is not assumed to be in place. Without the JDE it is also forecast that LOS E operations would result at the intersection of Loveridge Road and California Avenue.

All of these intersections would continue to have acceptable traffic operations in the future if the JDE is included in the future roadway network as currently planned.

As shown in Table A-2, a total of nine intersections are forecast to operate at unacceptable LOS with the project under Cumulative conditions without the JDE. Four additional intersections are forecast to operate at unacceptable LOS with the project than without it under Cumulative conditions without the JDE.

**TABLE A-1**  
**CUMULATIVE PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS**  
**WITH AND WITHOUT THE PLANNED JAMES DONLON EXTENSION**

	INTERSECTION	CONTROL	PEAK HOUR	WITHOUT JDE		WITH JDE	
				Delay	LOS	Delay	LOS
1	RAILROAD AVE & SR-4 WB RAMPS	Traffic Signal	AM	36.8	D	32.0	C
			PM	22.5	C	25.2	C
2	RAILROAD AVE & SR-4 EB RAMPS	Traffic Signal	AM	28.8	C	28.3	C
			PM	24.6	C	24.6	C
3	RAILROAD AVE & E. LELAND RD	Traffic Signal	AM	38.3	D	38.0	D
			PM	<b>64.9</b>	<b>E</b>	<b>61.1</b>	<b>E</b>
4	RAILROAD AVE & BUCHANAN RD	Traffic Signal	AM	27.2	C	22.9	C
			PM	<b>70.9</b>	<b>E</b>	23.4	C
5	KIRKER PASS RD & MONTREUX ENTRANCE	Traffic Signal	AM	10.1	B	25.8	C
			PM	6.4	A	20.6	C
6	HARBOR ST & E LELAND RD	Traffic Signal	AM	31.3	C	33.8	C
			PM	<b>53.0</b>	<b>D</b>	<b>51.3</b>	<b>D</b>
7	HARBOR ST & BUCHANAN RD	Traffic Signal	AM	<b>78.7</b>	<b>E</b>	39.9	D
			PM	40.4	D	25.9	C
8	CALIFORNIA AVE & SR-4 WB RAMPS (LOVERIDGE)	Traffic Signal	AM	19.5	B	19.3	B
			PM	33.4	C	30.3	C
9	LOVERIDGE RD & CALIFORNIA AVE	Traffic Signal	AM	<b>55.1</b>	<b>E</b>	52.9	D
			PM	32.8	C	30.6	C
10	LOVERIDGE RD & SR-4 EB RAMPS	Traffic Signal	AM	24.7	C	24.6	C
			PM	30.4	C	29.9	C
11	LOVERIDGE RD & E. LELAND RD	Traffic Signal	AM	29.4	C	28.7	C
			PM	40.1	D	38.1	D
12	LOVERIDGE RD & BUCHANAN RD	Traffic Signal	AM	<b>79.8</b>	<b>E</b>	30.4	C
			PM	<b>61.4</b>	<b>E</b>	26.3	C
13	BUCHANAN RD & VENTURA DR	Traffic Signal	AM	<b>61.6</b>	<b>E</b>	20.1	C
			PM	<b>80.0</b>	<b>E</b>	31.2	C
14	VENTURA DR & JAMES DONLON BLVD	Traffic Signal	AM	1.8	A	20.5	C
			PM	1.6	A	16.4	B
15	BUCHANAN RD & TUSCANY MEADOWS DR	Traffic Signal	AM	<b>73.6</b>	<b>E</b>	31.3	C
			PM	<b>82.9</b>	<b>F</b>	39.0	D
16	TUSCANY MEADOWS DR & JAMES DONLON BLVD	Traffic Signal	AM	10.3	B	14.0	B
			PM	8.8	A	12.8	B
17	BUCHANAN RD & TUSCANY MEADOWS APARTMENTS	Traffic Signal	AM	32.2	C	24.0	C
			PM	<b>88.4</b>	<b>F</b>	<b>45.0</b>	<b>D</b>
18	AUTO CENTER DR & CENTURY BLVD	Traffic Signal	AM	19.1	B	19.2	B
			PM	23.2	C	23.3	C
19	SOMERSVILLE RD & SR-4 WB RAMPS	Traffic Signal	AM	35.9	D	33.2	C
			PM	27.1	C	29.7	C
20	SOMERSVILLE RD & SR-4 EB RAMPS	Traffic Signal	AM	11.7	B	12.7	B
			PM	24.1	C	22.9	C

**SOURCE:** Abrams Associates, 2014

**NOTES:** Intersection LOS is presented in terms of the V/C Ratio for signalized intersections and unsignalized intersection delay is presented in terms of seconds per vehicle.

**TABLE A-1 (Cont.)**  
**CUMULATIVE PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS**  
**WITH AND WITHOUT THE PLANNED JAMES DONLON EXTENSION**

INTERSECTION		CONTROL	PEAK HOUR	WITHOUT BYPASS		WITH BYPASS	
				Delay	LOS	Delay	LOS
21	SOMERSVILLE RD & DELTA FAIR BLVD	Traffic Signal	AM	22.6	C	31.0	C
			PM	21.6	C	21.9	C
22	SOMERSVILLE RD & BUCHANAN RD	Traffic Signal	AM	<b>97.6</b>	<b>F</b>	<b>62.7</b>	<b>E</b>
			PM	<b>63.7</b>	<b>E</b>	<b>60.6</b>	<b>E</b>
23	SOMERSVILLE RD & TUSCANY MEADOWS	Traffic Signal	AM	9.5	A	6.8	A
			PM	5.1	A	3.6	A
24	SOMERSVILLE RD & JAMES DONLON BLVD	Traffic Signal	AM	11.3	B	21.0	C
			PM	11.7	B	26.1	C
25	BUCHANAN RD & DELTA FAIR BLVD	Traffic Signal	AM	12.6	B	12.7	B
			PM	16.2	B	16.2	B
26	JAMES DONLON BLVD & CONTRA LOMA BLVD	Traffic Signal	AM	30.2	C	43.7	D
			PM	15.4	B	19.9	B
27	JAMES DONLON BLVD & LONE TREE WAY	Traffic Signal	AM	23.0	C	23.1	C
			PM	27.5	C	27.8	C
28	KIRKER PASS & MYRTLE DR	Traffic Signal	AM	7.5	A	7.5	A
			PM	5.7	A	5.7	A
29	YGNACIO VALLEY RD & CONCORD BLVD	Traffic Signal	AM	48.7	D	50.0	D
			PM	39.7	D	38.0	D
30	YGNACIO VALLEY RD & CLAYTON BLVD	Traffic Signal	AM	44.3	D	44.4	D
			PM	46.6	D	46.5	D
31	BUCHANAN RD & CHATEAU MOBILE PARK	Side Street Stop	AM	4.3	A	4.6	A
			PM	7.2	A	6.9	A
32	DELTA FAIR BLVD & CENTURY BLVD	Traffic Signal	AM	15.4	B	15.5	B
			PM	20.1	C	19.7	B
33	SOMERSVILLE RD & FAIRVIEW DR	Traffic Signal	AM	21.1	C	27.6	C
			PM	40.5	D	40.2	D
34	DELTA FAIR BLVD & FAIRVIEW DR	Traffic Signal	AM	27.4	C	29.6	C
			PM	33.0	C	34.2	C

**SOURCE:** Abrams Associates, 2014

**NOTES:** Intersection LOS is presented in terms of the V/C Ratio for signalized intersections and unsignalized intersection delay is presented in terms of seconds per vehicle.

**TABLE A-2**  
**CUMULATIVE WITHOUT THE JAMES DONLON EXTENSION**  
**INTERSECTION LEVEL OF SERVICE CONDITIONS**

	INTERSECTION	CONTROL	PEAK HOUR	CUMULATIVE		CUMULATIVE PLUS PROJECT	
				Delay	LOS	Delay	LOS
1	RAILROAD AVE & SR-4 WB RAMPS	Traffic Signal	AM	32.8	C	36.8	D
			PM	22.3	C	22.5	C
2	RAILROAD AVE & SR-4 EB RAMPS	Traffic Signal	AM	28.0	C	28.8	C
			PM	24.2	C	24.6	C
3	RAILROAD AVE & E. LELAND RD	Traffic Signal	AM	33.8	C	38.3	D
			PM	<b>56.0</b>	<b>E</b>	<b>64.9</b>	<b>E</b>
4	RAILROAD AVE & BUCHANAN RD	Traffic Signal	AM	21.6	C	27.2	C
			PM	<b>45.0</b>	<b>D</b>	<b>70.9</b>	<b>E</b>
5	KIRKER PASS RD & MONTREUX ENTRANCE	Traffic Signal	AM	9.4	A	10.1	B
			PM	6.2	A	6.4	A
6	HARBOR ST & E LELAND RD	Traffic Signal	AM	30.4	C	31.3	C
			PM	<b>49.9</b>	<b>D</b>	<b>53.0</b>	<b>D</b>
7	HARBOR ST & BUCHANAN RD	Traffic Signal	AM	<b>56.8</b>	<b>E</b>	<b>78.7</b>	<b>E</b>
			PM	28.5	C	40.4	D
8	CALIFORNIA AVE & SR-4 WB RAMPS (LOVERIDGE)	Traffic Signal	AM	19.3	B	19.5	B
			PM	30.7	C	33.4	C
9	LOVERIDGE RD & CALIFORNIA AVE	Traffic Signal	AM	53.9	D	<b>55.1</b>	<b>E</b>
			PM	30.8	C	32.8	C
10	LOVERIDGE RD & SR-4 EB RAMPS	Traffic Signal	AM	24.2	C	24.7	C
			PM	29.1	C	30.4	C
11	LOVERIDGE RD & E. LELAND RD	Traffic Signal	AM	28.0	C	29.4	C
			PM	37.3	D	40.1	D
12	LOVERIDGE RD & BUCHANAN RD	Traffic Signal	AM	<b>56.3</b>	<b>E</b>	<b>79.8</b>	<b>E</b>
			PM	36.5	D	<b>61.4</b>	<b>E</b>
13	BUCHANAN RD & VENTURA DR	Traffic Signal	AM	32.7	C	<b>61.6</b>	<b>E</b>
			PM	43.3	D	<b>80.0</b>	<b>E</b>
14	VENTURA DR & JAMES DONLON BLVD	Traffic Signal	AM	1.8	A	1.8	A
			PM	1.6	A	1.6	A
15	BUCHANAN RD & TUSCANY MEADOWS DR	Traffic Signal	AM	N/A	N/A	<b>73.6</b>	<b>E</b>
			PM	N/A	N/A	<b>&gt; 80.0</b>	<b>F</b>
16	TUSCANY MEADOWS DR & JAMES DONLON BLVD	Traffic Signal	AM	10.3	B	10.3	B
			PM	10.1	B	8.8	A
17	BUCHANAN RD & TUSCANY MEADOWS APARTMENTS	Traffic Signal	AM	N/A	N/A	32.2	C
			PM	N/A	N/A	<b>&gt; 80.0</b>	<b>F</b>
18	AUTO CENTER DR & CENTURY BLVD	Traffic Signal	AM	19.1	B	19.1	B
			PM	22.7	C	23.2	C
19	SOMERSVILLE RD & SR-4 WB RAMPS	Traffic Signal	AM	26.2	C	35.9	D
			PM	29.5	C	27.1	C
20	SOMERSVILLE RD & SR-4 EB RAMPS	Traffic Signal	AM	12.1	B	11.7	B
			PM	21.0	C	24.1	C

**SOURCE:** Abrams Associates, 2014

**NOTES:** Intersection LOS is presented in terms of the V/C Ratio for signalized intersections and unsignalized intersection delay is presented in terms of seconds per vehicle.

**TABLE A-2 (Cont.)**  
**CUMULATIVE WITHOUT THE JAMES DONLON EXTENSION**  
**INTERSECTION LEVEL OF SERVICE CONDITIONS**

	INTERSECTION	CONTROL	PEAK HOUR	CUMULATIVE		CUMULATIVE PLUS PROJECT	
				Delay	LOS	Delay	LOS
21	SOMERSVILLE RD & DELTA FAIR BLVD	Traffic Signal	AM	21.7	C	22.6	C
			PM	21.9	C	21.6	C
22	SOMERSVILLE RD & BUCHANAN RD	Traffic Signal	AM	<b>55.8</b>	<b>E</b>	<b>&gt; 80.0</b>	<b>F</b>
			PM	36.5	D	63.7	E
23	SOMERSVILLE RD & TUSCANY MEADOWS	Traffic Signal	AM	N/A	N/A	9.5	A
			PM	N/A	N/A	5.1	A
24	SOMERSVILLE RD & JAMES DONLON BLVD	Traffic Signal	AM	11.3	B	11.3	B
			PM	10.8	B	11.7	B
25	BUCHANAN RD & DELTA FAIR BLVD	Traffic Signal	AM	11.8	B	12.6	B
			PM	15.8	B	16.2	B
26	JAMES DONLON BLVD & CONTRA LOMA BLVD	Traffic Signal	AM	30.7	C	30.2	C
			PM	15.2	B	15.4	B
27	JAMES DONLON BLVD & LONE TREE WAY	Traffic Signal	AM	22.6	C	23.0	C
			PM	27.1	C	27.5	C
28	KIRKER PASS & MYRTLE DR	Traffic Signal	AM	7.4	A	7.5	A
			PM	5.5	A	5.7	A
29	YGNACIO VALLEY RD & CONCORD BLVD	Traffic Signal	AM	45.4	D	48.7	D
			PM	39.0	D	39.7	D
30	YGNACIO VALLEY RD & CLAYTON BLVD	Traffic Signal	AM	43.2	D	44.3	D
			PM	45.1	D	46.6	D
31	BUCHANAN RD & CHATEAU MOBILE PARK	Traffic Signal	AM	4.7	A	4.3	A
			PM	6.9	A	7.2	A
32	DELTA FAIR BLVD & CENTURY BLVD	Traffic Signal	AM	14.8	B	15.4	B
			PM	19.4	B	20.1	C
33	SOMERSVILLE RD & FAIRVIEW DR	Traffic Signal	AM	21.8	C	21.1	C
			PM	29.7	C	40.5	D
34	DELTA FAIR BLVD & FAIRVIEW DR	Traffic Signal	AM	21.9	C	27.4	C
			PM	30.6	C	33.0	C



















**SOURCE:** Abrams Associates, 2014

**NOTES:** Intersection LOS is presented in terms of the V/C Ratio for signalized intersections and unsignalized intersection delay is presented in terms of seconds per vehicle.

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Cumulative Plus Project AM With Bypass

3/16/2014





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	161	323	194	745	827	155	268	829	324
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				201	417	265	893	1305	244	358	1376	585
Arrive On Green				0.25	0.25	0.25	0.44	0.72	0.72	0.20	0.37	0.00
Sat Flow, veh/h				789	1636	1041	3408	3025	565	1757	3689	1568
Grp Volume(v), veh/h				400	0	337	810	548	519	291	901	0
Grp Sat Flow(s),veh/h/ln				1805	0	1661	1704	1845	1745	1757	1845	1568
Q Serve(g_s), s				23.1	0.0	20.6	24.1	18.0	18.0	17.2	22.1	0.0
Cycle Q Clear(g_c), s				23.1	0.0	20.6	24.1	18.0	18.0	17.2	22.1	0.0
Prop In Lane				0.44		0.63	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h				460	0	423	893	796	753	358	1376	585
V/C Ratio(X)				0.87	0.00	0.80	0.91	0.69	0.69	0.81	0.65	0.00
Avail Cap(c_a), veh/h				530	0	488	1126	796	753	468	1376	585
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.57	0.57	0.57	1.00	1.00	0.00
Uniform Delay (d), s/veh				38.9	0.0	37.9	29.4	11.2	11.2	41.4	28.3	0.0
Incr Delay (d2), s/veh				13.2	0.0	7.8	5.6	2.8	3.0	8.1	2.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				12.4	0.0	9.7	9.9	6.3	6.0	8.5	10.7	0.0
Lane Grp Delay (d), s/veh				52.0	0.0	45.8	34.9	14.0	14.2	49.5	30.8	0.0
Lane Grp LOS				D		D	C	B	B	D	C	
Approach Vol, veh/h					737			1877			1192	
Approach Delay, s/veh					49.2			23.1			35.4	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					31.8		32.6	51.0		26.2	44.6	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					32.0		36.0	47.0		29.0	40.0	
Max Q Clear Time (g_c+I1), s					25.1		26.1	20.0		19.2	24.1	
Green Ext Time (p_c), s					2.6		2.4	8.2		3.0	6.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					32.0							
HCM 2010 LOS					C							
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave
























Cumulative Plus Project AM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	329	0	483	0	0	0	0	1088	276	281	675	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	418	438	745				0	1644	417	473	2548	0
Arrive On Green	0.24	0.00	0.24				0.00	0.39	0.39	0.54	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4262	1081	1757	3689	0
Grp Volume(v), veh/h	358	0	525				0	1024	459	305	734	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1654	1757	1845	0
Q Serve(g_s), s	21.8	0.0	17.1				0.0	26.3	26.3	13.7	0.0	0.0
Cycle Q Clear(g_c), s	21.8	0.0	17.1				0.0	26.3	26.3	13.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	418	438	745				0	1423	638	473	2548	0
V/C Ratio(X)	0.86	0.00	0.70				0.00	0.72	0.72	0.65	0.29	0.00
Avail Cap(c_a), veh/h	551	579	984				0	1423	638	473	2548	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.67	0.67	0.00
Uniform Delay (d), s/veh	40.7	0.0	38.9				0.0	29.1	29.1	22.0	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.0	1.5				0.0	3.2	6.9	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.8	0.0	6.9				0.0	12.7	12.1	5.2	0.1	0.0
Lane Grp Delay (d), s/veh	50.8	0.0	40.4				0.0	32.3	36.0	24.0	0.2	0.0
Lane Grp LOS	D		D					C		D	C	A
Approach Vol, veh/h		883						1483			1039	
Approach Delay, s/veh		44.6						33.4			7.2	
Approach LOS		D						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		30.5						47.0		34.0		81.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0						43.0		30.0		77.0
Max Q Clear Time (g_c+I1), s		23.8						28.3		15.7		2.0
Green Ext Time (p_c), s		2.8						8.8		5.3		7.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.3									
HCM 2010 LOS			C									
<b>Notes</b>												






























HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd

Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	478	4	92	584	287	130	806	59	143	354	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	339	1304	10	127	871	370	402	1090	463	189	643	273
Arrive On Green	0.19	0.36	0.36	0.07	0.24	0.24	0.23	0.30	0.30	0.11	0.17	0.17
Sat Flow, veh/h	1757	3656	28	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	299	262	262	100	635	312	141	876	64	155	385	297
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	15.8	10.2	10.2	5.3	15.1	13.6	6.4	20.9	2.2	8.2	9.2	11.0
Cycle Q Clear(g_c), s	15.8	10.2	10.2	5.3	15.1	13.6	6.4	20.9	2.2	8.2	9.2	11.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	658	656	127	871	370	402	1090	463	189	643	273
V/C Ratio(X)	0.88	0.40	0.40	0.79	0.73	0.84	0.35	0.80	0.14	0.82	0.60	1.09
Avail Cap(c_a), veh/h	498	774	772	240	1006	428	402	1394	592	276	1316	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	23.0	23.0	43.5	33.6	19.5	30.8	31.0	14.9	41.6	36.3	17.4
Incr Delay (d2), s/veh	12.1	0.4	0.4	10.1	2.3	12.7	0.5	2.7	0.1	11.8	0.9	54.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.1	4.7	4.7	2.7	7.2	6.4	2.9	10.0	1.1	4.3	4.4	8.3
Lane Grp Delay (d), s/veh	49.5	23.4	23.4	53.6	35.9	32.2	31.4	33.8	15.1	53.4	37.2	71.8
Lane Grp LOS	D	C	C	D	D	C	C	C	B	D	D	F
Approach Vol, veh/h		823			1047			1081			837	
Approach Delay, s/veh		32.9			36.5			32.3			52.4	
Approach LOS		C			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.4	38.0		10.9	26.5		25.8	32.2		14.3	20.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	27.0	40.0		13.0	26.0		17.0	36.0		15.0	34.0	
Max Q Clear Time (g_c+I1), s	17.8	12.2		7.3	17.1		8.4	22.9		10.2	13.0	
Green Ext Time (p_c), s	0.6	10.3		0.1	5.4		0.6	5.3		0.2	3.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.0								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd






























Cumulative Plus Project AM With Bypass  
3/16/2014

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations				 				 			 	 	
Volume (veh/h)	94	102	30	865	57	113	8	841	336	198	579	73	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	
Lanes	1	1	1	2	1	1	1	2	1	1	2	1	
Cap, veh/h	583	612	521	1132	612	521	85	1390	591	257	1753	745	
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.38	0.38	0.15	0.48	0.48	
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568	
Grp Volume(v), veh/h	102	111	33	940	62	123	9	914	365	215	629	79	
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568	
Q Serve(g_s), s	3.4	3.5	1.2	21.1	1.9	4.7	0.4	17.0	15.7	9.9	8.9	2.3	
Cycle Q Clear(g_c), s	3.4	3.5	1.2	21.1	1.9	4.7	0.4	17.0	15.7	9.9	8.9	2.3	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	583	612	521	1132	612	521	85	1390	591	257	1753	745	
V/C Ratio(X)	0.17	0.18	0.06	0.83	0.10	0.24	0.11	0.66	0.62	0.84	0.36	0.11	
Avail Cap(c_a), veh/h	583	612	521	1643	889	756	339	1690	718	424	1868	794	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	19.6	19.7	18.9	25.6	19.2	20.1	37.8	21.4	21.0	34.4	13.8	12.0	
Incr Delay (d2), s/veh	0.1	0.1	0.1	2.5	0.1	0.2	0.5	0.7	1.1	7.3	0.1	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q (50%), veh/ln	1.4	1.6	0.5	8.7	0.8	1.8	0.2	7.6	6.1	4.8	3.9	0.8	
Lane Grp Delay (d), s/veh	19.8	19.8	19.0	28.0	19.2	20.3	38.3	22.1	22.1	41.8	13.9	12.1	
Lane Grp LOS	B	B	B	C	B	C	D	C	C	D	B	B	
Approach Vol, veh/h		246			1125			1288			923		
Approach Delay, s/veh		19.7			26.7			22.2			20.2		
Approach LOS		B			C			C			C		
<b>Timer</b>													
Assigned Phs		2			6		3	8		7		4	
Phs Duration (G+Y+Rc), s		31.5			31.5		8.0	35.3		16.2		43.4	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0	
Max Green Setting (Gmax), s		16.0			40.0		16.0	38.0		20.0		42.0	
Max Q Clear Time (g_c+I1), s		5.5			23.1		2.4	19.0		11.9		10.9	
Green Ext Time (p_c), s		4.3			4.4		0.0	12.2		0.4		16.5	
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay				22.9									
HCM 2010 LOS				C									
<b>Notes</b>													

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

























Cumulative Plus Project AM With Bypass

3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 		 		 	 		 	
Volume (veh/h)	130	46	44	1275	15	332	14	755	539	53	1250	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	2	1	2	2	1	2	1
Cap, veh/h	801	841	715	1554	841	1430	24	1687	1434	192	1476	627
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.01	0.46	0.46	0.40	0.40	0.40
Sat Flow, veh/h	1757	1845	1568	3408	1845	3136	1757	3689	3136	377	3689	1568
Grp Volume(v), veh/h	141	50	48	1386	16	361	15	821	586	58	1359	48
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	377	1845	1568
Q Serve(g_s), s	4.4	1.4	1.6	34.4	0.4	6.5	0.8	14.3	11.5	11.7	32.3	1.7
Cycle Q Clear(g_c), s	4.4	1.4	1.6	34.4	0.4	6.5	0.8	14.3	11.5	20.7	32.3	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	801	841	715	1554	841	1430	24	1687	1434	192	1476	627
V/C Ratio(X)	0.18	0.06	0.07	0.89	0.02	0.25	0.62	0.49	0.41	0.30	0.92	0.08
Avail Cap(c_a), veh/h	801	841	715	1738	941	1599	76	1801	1531	193	1481	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	14.0	14.1	23.0	13.8	15.4	45.2	17.5	16.7	26.5	26.3	17.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	5.8	0.0	0.1	22.8	0.2	0.2	0.9	9.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.6	0.6	15.5	0.2	2.5	0.5	6.4	4.4	1.1	16.5	0.7
Lane Grp Delay (d), s/veh	14.9	14.1	14.1	28.8	13.8	15.5	68.0	17.7	16.9	27.4	36.0	17.2
Lane Grp LOS	B	B	B	C	B	B	E	B	B	C	D	B
Approach Vol, veh/h		239			1763			1422			1465	
Approach Delay, s/veh		14.6			26.0			17.9			35.0	
Approach LOS		B			C			B			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2			6	
Phs Duration (G+Y+Rc), s		46.0			46.0		5.3	46.2			40.9	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	
Max Green Setting (Gmax), s		16.0			47.0		4.0	45.0			37.0	
Max Q Clear Time (g_c+I1), s		6.4			36.4		2.8	16.3			34.3	
Green Ext Time (p_c), s		5.9			5.7		0.0	23.0			2.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Cumulative Plus Project AM With Bypass  
3/16/2014
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	156	601	129	115	535	199	218	657	241	249	314	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	206	870	370	156	765	325	281	1118	475	313	849	286
Arrive On Green	0.12	0.24	0.24	0.09	0.21	0.21	0.16	0.30	0.30	0.18	0.32	0.32
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2641	891
Grp Volume(v), veh/h	170	653	140	125	582	216	237	714	262	271	236	222
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1687
Q Serve(g_s), s	7.8	13.6	6.2	5.8	12.2	10.4	10.8	13.8	11.5	12.4	8.2	8.5
Cycle Q Clear(g_c), s	7.8	13.6	6.2	5.8	12.2	10.4	10.8	13.8	11.5	12.4	8.2	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	206	870	370	156	765	325	281	1118	475	313	593	542
V/C Ratio(X)	0.82	0.75	0.38	0.80	0.76	0.66	0.84	0.64	0.55	0.87	0.40	0.41
Avail Cap(c_a), veh/h	256	939	399	192	805	342	447	1118	475	405	593	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	29.3	26.4	36.8	30.8	30.0	33.7	24.8	24.0	32.9	21.8	21.9
Incr Delay (d2), s/veh	16.1	3.2	0.6	17.4	4.1	4.5	8.2	2.8	4.5	14.5	2.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.4	6.6	2.4	3.3	6.1	4.4	5.4	6.7	5.0	6.7	4.0	3.8
Lane Grp Delay (d), s/veh	51.6	32.4	27.1	54.3	34.8	34.5	41.9	27.6	28.6	47.5	23.8	24.1
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		963			923			1213			729	
Approach Delay, s/veh		35.0			37.4			30.6			32.7	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.7	23.5		11.3	21.1		17.2	29.0		18.7	30.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	21.0		9.0	18.0		21.0	25.0		19.0	23.0	
Max Q Clear Time (g_c+I1), s	9.8	15.6		7.8	14.2		12.8	15.8		14.4	10.5	
Green Ext Time (p_c), s	0.1	3.9		0.0	2.8		0.4	5.5		0.3	6.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				33.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	442	5	2	772	98	103	110	3	145	36	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	163	1141	12	24	1009	858	136	231	6	184	43	208
Arrive On Green	0.09	0.63	0.63	0.01	0.55	0.55	0.08	0.13	0.13	0.10	0.16	0.16
Sat Flow, veh/h	1757	1822	19	1757	1845	1568	1757	1792	45	1757	275	1334
Grp Volume(v), veh/h	138	0	485	2	839	107	112	0	123	158	0	228
Grp Sat Flow(s),veh/h/ln	1757	0	1841	1757	1845	1568	1757	0	1837	1757	0	1609
Q Serve(g_s), s	9.8	0.0	16.9	0.1	47.7	2.6	7.9	0.0	7.9	11.2	0.0	17.6
Cycle Q Clear(g_c), s	9.8	0.0	16.9	0.1	47.7	2.6	7.9	0.0	7.9	11.2	0.0	17.6
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.02	1.00		0.83
Lane Grp Cap(c), veh/h	163	0	1153	24	1009	858	136	0	236	184	0	251
V/C Ratio(X)	0.84	0.00	0.42	0.08	0.83	0.12	0.82	0.00	0.52	0.86	0.00	0.91
Avail Cap(c_a), veh/h	195	0	1153	56	1009	858	153	0	236	209	0	255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.00	0.74	0.24	0.24	0.24	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	0.0	12.0	61.4	23.7	5.5	57.3	0.0	51.3	55.6	0.0	52.4
Incr Delay (d2), s/veh	19.0	0.0	0.8	0.3	2.1	0.1	26.6	0.0	2.0	26.3	0.0	33.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	7.3	0.1	21.3	1.6	4.6	0.0	3.9	6.4	0.0	9.7
Lane Grp Delay (d), s/veh	75.3	0.0	12.8	61.8	25.8	5.6	83.9	0.0	53.4	81.9	0.0	85.6
Lane Grp LOS	E		B	E	C	A	F		D	F		F
Approach Vol, veh/h		623			948			235				386
Approach Delay, s/veh		26.6			23.6			67.9				84.1
Approach LOS		C			C			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	15.7	83.0		5.7	73.0		13.8	20.2		17.2		23.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	14.0	79.0		4.0	69.0		11.0	16.0		15.0		20.0
Max Q Clear Time (g_c+I1), s	11.8	18.9		2.1	49.7		9.9	9.9		13.2		19.6
Green Ext Time (p_c), s	0.1	3.4		0.1	6.4		0.0	0.5		0.1		0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.9								
HCM 2010 LOS				D								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	300	24	729	370	150	23	55	86	85	104	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	62	991	79	1561	2643	1123	189	198	168	189	168	25
Arrive On Green	0.04	0.29	0.29	0.46	0.72	0.72	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1757	3374	268	3408	3689	1568	1757	1845	1568	1757	1567	236
Grp Volume(v), veh/h	39	177	175	792	402	163	25	60	93	92	0	130
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1803
Q Serve(g_s), s	1.9	6.4	6.5	14.0	3.0	2.8	1.1	2.6	4.8	4.2	0.0	5.9
Cycle Q Clear(g_c), s	1.9	6.4	6.5	14.0	3.0	2.8	1.1	2.6	4.8	4.2	0.0	5.9
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	62	542	528	1561	2643	1123	189	198	168	189	0	194
V/C Ratio(X)	0.63	0.33	0.33	0.51	0.15	0.15	0.13	0.30	0.55	0.49	0.00	0.67
Avail Cap(c_a), veh/h	144	542	528	1721	2643	1123	371	390	331	371	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	23.5	23.5	16.3	3.8	3.8	34.4	35.1	36.1	35.8	0.0	36.6
Incr Delay (d2), s/veh	10.0	1.6	1.7	0.1	0.1	0.1	0.3	0.8	2.8	1.9	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	3.1	3.1	5.7	1.1	0.9	0.5	1.2	2.0	2.0	0.0	2.9
Lane Grp Delay (d), s/veh	50.5	25.1	25.2	16.4	3.9	4.0	34.7	35.9	38.9	37.7	0.0	40.5
Lane Grp LOS	D	C	C	B	A	A	C	D	D	D		D
Approach Vol, veh/h		391			1357			178			222	
Approach Delay, s/veh		27.7			11.2			37.3			39.4	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	7.0	29.0		43.0	65.0			13.1			13.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	7.0	25.0		43.0	61.0			18.0			18.0	
Max Q Clear Time (g_c+I1), s	3.9	8.5		16.0	5.0			6.8			7.9	
Green Ext Time (p_c), s	1.1	1.8		3.3	3.6			1.3			1.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd

Cumulative Plus Project AM With Bypass  
3/16/2014

























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	66	291	49	151	3	637	329	96	8	240	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	435	306	260	100	244	4	792	1711	490	65	1567	666
Arrive On Green	0.13	0.17	0.17	0.03	0.07	0.07	0.23	0.62	0.62	0.04	0.42	0.42
Sat Flow, veh/h	3408	1845	1568	3408	3612	66	3408	2759	790	1757	3689	1568
Grp Volume(v), veh/h	124	72	316	53	84	83	692	238	224	9	261	621
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1705	1757	1845	1568
Q Serve(g_s), s	3.6	3.7	18.0	1.7	4.8	4.8	21.2	6.1	6.2	0.5	4.7	40.9
Cycle Q Clear(g_c), s	3.6	3.7	18.0	1.7	4.8	4.8	21.2	6.1	6.2	0.5	4.7	40.9
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	435	306	260	100	125	124	792	1144	1058	65	1567	666
V/C Ratio(X)	0.29	0.24	1.21	0.53	0.67	0.67	0.87	0.21	0.21	0.14	0.17	0.93
Avail Cap(c_a), veh/h	435	306	260	126	272	270	912	1144	1058	259	1803	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	39.2	45.2	51.9	49.4	49.4	40.1	9.0	9.0	50.5	19.3	29.7
Incr Delay (d2), s/veh	0.4	0.4	126.2	4.3	6.1	6.2	8.5	0.1	0.1	1.0	0.0	16.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	1.8	16.3	0.8	2.5	2.5	10.2	2.7	2.5	0.3	2.2	18.9
Lane Grp Delay (d), s/veh	43.2	39.6	171.4	56.2	55.4	55.6	48.6	9.1	9.1	51.5	19.4	46.6
Lane Grp LOS	D	D	F	E	E	E	D	A	A	D	B	D
Approach Vol, veh/h		512			220			1154			891	
Approach Delay, s/veh		121.8			55.7			32.8			38.6	
Approach LOS		F			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	17.8	22.0		7.2	11.3		29.2	71.2		8.0	50.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	18.0		4.0	16.0		29.0	66.0		16.0	53.0	
Max Q Clear Time (g_c+I1), s	5.6	20.0		3.7	6.8		23.2	8.2		2.5	42.9	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.5		2.0	6.5		0.0	3.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				52.9								
HCM 2010 LOS				D								
<b>Notes</b>												















HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	455	0	407	0	0	0	0	743	201	141	520	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1111	0	511				0	1843	783	217	2214	0
Arrive On Green	0.33	0.00	0.33				0.00	0.50	0.50	0.06	0.60	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	495	0	442				0	808	218	153	565	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	12.4	0.0	28.7				0.0	15.2	8.8	4.8	7.8	0.0
Cycle Q Clear(g_c), s	12.4	0.0	28.7				0.0	15.2	8.8	4.8	7.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1111	0	511				0	1843	783	217	2214	0
V/C Ratio(X)	0.45	0.00	0.86				0.00	0.44	0.28	0.71	0.26	0.00
Avail Cap(c_a), veh/h	1479	0	680				0	1843	783	378	2214	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	28.8	0.0	34.3				0.0	17.4	15.8	49.7	10.2	0.0
Incr Delay (d2), s/veh	0.3	0.0	8.9				0.0	0.8	0.9	3.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	12.4				0.0	7.0	3.5	2.2	3.5	0.0
Lane Grp Delay (d), s/veh	29.1	0.0	43.1				0.0	18.1	16.6	53.5	10.5	0.0
Lane Grp LOS	C		D					B	B	D	B	
Approach Vol, veh/h		937						1026			718	
Approach Delay, s/veh		35.7						17.8			19.7	
Approach LOS		D						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		39.3						58.1		10.9	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						49.0		12.0	65.0	
Max Q Clear Time (g_c+I1), s		30.7						17.2		6.8	9.8	
Green Ext Time (p_c), s		4.7						13.3		0.2	15.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	199	257	180	189	739	197	256	621	139	198	383	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	304	1198	509	290	1184	503	326	1143	486	303	786	334
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.19	0.31	0.31	0.09	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	216	279	196	205	803	214	278	675	151	215	416	185
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.1	4.6	8.1	4.9	15.8	9.0	12.8	12.9	6.1	5.1	8.4	8.8
Cycle Q Clear(g_c), s	5.1	4.6	8.1	4.9	15.8	9.0	12.8	12.9	6.1	5.1	8.4	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1198	509	290	1184	503	326	1143	486	303	786	334
V/C Ratio(X)	0.71	0.23	0.38	0.71	0.68	0.43	0.85	0.59	0.31	0.71	0.53	0.55
Avail Cap(c_a), veh/h	531	1679	713	490	1634	695	631	1811	770	531	1060	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	20.6	21.8	37.2	24.6	22.3	32.9	24.4	22.0	37.0	29.1	29.3
Incr Delay (d2), s/veh	3.1	0.1	0.5	3.1	0.7	0.6	6.4	0.5	0.4	3.1	0.6	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	2.1	3.1	2.2	7.1	3.5	6.2	5.9	2.4	2.3	3.9	3.5
Lane Grp Delay (d), s/veh	40.1	20.7	22.2	40.3	25.3	22.9	39.3	24.8	22.4	40.1	29.7	30.7
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		691			1222			1104			816	
Approach Delay, s/veh		27.2			27.4			28.1			32.7	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.4	31.1		11.1	30.8		19.5	29.9		11.4	21.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	38.0		12.0	37.0		30.0	41.0		13.0	24.0	
Max Q Clear Time (g_c+I1), s	7.1	10.1		6.9	17.8		14.8	14.9		7.1	10.8	
Green Ext Time (p_c), s	0.3	10.7		0.3	9.0		0.7	10.0		0.3	7.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd






















						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	295	313	868	336	203	208
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	365	1462	1022	868	257	229
Arrive On Green	0.21	0.79	1.00	1.00	0.15	0.15
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	321	340	943	365	221	226
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	23.0	6.1	0.0	0.0	16.0	18.7
Cycle Q Clear(g_c), s	23.0	6.1	0.0	0.0	16.0	18.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	365	1462	1022	868	257	229
V/C Ratio(X)	0.88	0.23	0.92	0.42	0.86	0.99
Avail Cap(c_a), veh/h	365	1462	1022	868	257	229
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.47	0.47	1.00	1.00
Uniform Delay (d), s/veh	49.9	3.4	0.0	0.0	54.2	55.4
Incr Delay (d2), s/veh	18.3	0.3	8.1	0.7	24.4	55.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.1	2.2	2.3	0.2	9.0	18.6
Lane Grp Delay (d), s/veh	68.3	3.8	8.1	0.7	78.6	110.7
Lane Grp LOS	E	A	A	A	E	F
Approach Vol, veh/h		661	1308		447	
Approach Delay, s/veh		35.1	6.1		94.8	
Approach LOS		D	A		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	31.0	107.0	76.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	27.0	103.0	72.0			
Max Q Clear Time (g_c+I1), s	25.0	8.1	2.0			
Green Ext Time (p_c), s	0.7	3.2	12.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			30.4			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	444	73	31	1037	12	156	118	59	15	11	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	15	1328	1129	43	1339	15	251	186	93	123	96	169
Arrive On Green	0.02	1.00	1.00	0.02	0.74	0.74	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1757	1845	1568	1757	1820	21	1357	1161	581	1175	603	1055
Grp Volume(v), veh/h	11	483	79	34	0	1140	170	0	192	16	0	33
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1841	1357	0	1742	1175	0	1658
Q Serve(g_s), s	0.8	0.0	0.0	2.4	0.0	53.7	15.4	0.0	13.0	1.6	0.0	2.1
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.4	0.0	53.7	17.5	0.0	13.0	14.6	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.33	1.00		0.64
Lane Grp Cap(c), veh/h	15	1328	1129	43	0	1355	251	0	278	123	0	265
V/C Ratio(X)	0.74	0.36	0.07	0.79	0.00	0.84	0.68	0.00	0.69	0.13	0.00	0.12
Avail Cap(c_a), veh/h	56	1328	1129	84	0	1355	273	0	307	142	0	292
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.44	0.00	0.44	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.3	0.0	0.0	60.7	0.0	11.5	52.5	0.0	49.6	56.5	0.0	45.0
Incr Delay (d2), s/veh	45.7	0.7	0.1	13.2	0.0	3.0	5.9	0.0	5.7	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.2	0.0	1.2	0.0	21.7	5.8	0.0	6.4	0.5	0.0	0.9
Lane Grp Delay (d), s/veh	107.0	0.7	0.1	73.8	0.0	14.4	58.4	0.0	55.3	57.0	0.0	45.2
Lane Grp LOS	F	A	A	E		B	E		E	E		D
Approach Vol, veh/h		573			1174			362				49
Approach Delay, s/veh		2.6			16.1			56.8				49.1
Approach LOS		A			B			E				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.1	94.0		7.1	96.0			24.0				24.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	90.0		6.0	92.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	2.8	2.0		4.4	55.7			19.5				16.6
Green Ext Time (p_c), s	0.2	3.6		0.0	13.3			0.5				0.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

Cumulative Plus Project AM With Bypass  
 3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	532	19	36	1470	42	54	82	94	44	29	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	91	2062	75	52	2001	57	75	115	132	60	58	167
Arrive On Green	0.05	0.58	0.58	0.03	0.56	0.56	0.04	0.15	0.15	0.03	0.14	0.14
Sat Flow, veh/h	1757	3538	128	1757	3569	102	1757	786	900	1757	421	1210
Grp Volume(v), veh/h	71	301	298	39	824	820	59	0	191	48	0	124
Grp Sat Flow(s),veh/h/ln	1757	1845	1822	1757	1845	1827	1757	0	1686	1757	0	1631
Q Serve(g_s), s	3.1	6.3	6.3	1.7	27.4	27.6	2.6	0.0	8.4	2.1	0.0	5.5
Cycle Q Clear(g_c), s	3.1	6.3	6.3	1.7	27.4	27.6	2.6	0.0	8.4	2.1	0.0	5.5
Prop In Lane	1.00		0.07	1.00		0.06	1.00		0.53	1.00		0.74
Lane Grp Cap(c), veh/h	91	1075	1062	52	1034	1024	75	0	247	60	0	225
V/C Ratio(X)	0.78	0.28	0.28	0.76	0.80	0.80	0.79	0.00	0.77	0.80	0.00	0.55
Avail Cap(c_a), veh/h	137	1123	1110	137	1123	1112	114	0	350	114	0	338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.2	8.0	8.0	37.2	13.5	13.5	36.6	0.0	31.7	37.0	0.0	31.0
Incr Delay (d2), s/veh	15.3	0.1	0.1	19.8	3.8	4.0	18.5	0.0	6.8	21.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.7	2.6	2.6	1.0	12.1	12.1	1.5	0.0	4.0	1.3	0.0	2.3
Lane Grp Delay (d), s/veh	51.5	8.2	8.2	57.0	17.3	17.5	55.2	0.0	38.5	58.1	0.0	33.1
Lane Grp LOS	D	A	A	E	B	B	E		D	E		C
Approach Vol, veh/h		670			1683			250				172
Approach Delay, s/veh		12.8			18.3			42.4				40.1
Approach LOS		B			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	8.0	49.0		6.3	47.3		7.3	15.3		6.6		14.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	47.0		6.0	47.0		5.0	16.0		5.0		16.0
Max Q Clear Time (g_c+I1), s	5.1	8.3		3.7	29.6		4.6	10.4		4.1		7.5
Green Ext Time (p_c), s	0.0	24.6		0.0	13.7		0.0	0.9		0.0		1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.5								
HCM 2010 LOS				C								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↙	↗
Volume (veh/h)	549	12	36	911	34	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	958	814	50	1069	625	558
Arrive On Green	0.52	0.52	0.03	0.58	0.36	0.36
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	597	13	39	990	37	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	28.5	0.5	2.7	60.2	1.7	6.4
Cycle Q Clear(g_c), s	28.5	0.5	2.7	60.2	1.7	6.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	958	814	50	1069	625	558
V/C Ratio(X)	0.62	0.02	0.79	0.93	0.06	0.21
Avail Cap(c_a), veh/h	999	849	99	1163	625	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	14.4	59.7	23.6	26.2	27.7
Incr Delay (d2), s/veh	1.1	0.0	23.1	11.9	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.7	0.2	1.6	28.8	0.8	2.6
Lane Grp Delay (d), s/veh	22.3	14.4	82.9	35.5	26.4	28.6
Lane Grp LOS	C	B	F	D	C	C
Approach Vol, veh/h	610			1029	153	
Approach Delay, s/veh	22.1			37.2	28.1	
Approach LOS	C			D	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	68.2		7.5	75.7		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	67.0		7.0	78.0		
Max Q Clear Time (g_c+I1), s	30.5		4.7	62.2		
Green Ext Time (p_c), s	14.9		0.0	9.5		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			31.3			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr























Cumulative Plus Project AM With Bypass













3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	555	15	13	1355	4	30	23	40	11	15	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	59	2117	56	24	2102	6	48	90	155	21	22	189
Arrive On Green	0.03	0.59	0.59	0.01	0.57	0.57	0.03	0.15	0.15	0.01	0.13	0.13
Sat Flow, veh/h	1757	3578	95	1757	3678	10	1757	610	1049	1757	164	1428
Grp Volume(v), veh/h	45	311	308	14	739	738	33	0	68	12	0	155
Grp Sat Flow(s),veh/h/ln	1757	1845	1828	1757	1845	1843	1757	0	1659	1757	0	1593
Q Serve(g_s), s	1.7	5.6	5.6	0.5	19.5	19.5	1.3	0.0	2.5	0.5	0.0	6.4
Cycle Q Clear(g_c), s	1.7	5.6	5.6	0.5	19.5	19.5	1.3	0.0	2.5	0.5	0.0	6.4
Prop In Lane	1.00		0.05	1.00		0.01	1.00		0.63	1.00		0.90
Lane Grp Cap(c), veh/h	59	1091	1081	24	1054	1053	48	0	245	21	0	210
V/C Ratio(X)	0.76	0.28	0.29	0.58	0.70	0.70	0.69	0.00	0.28	0.57	0.00	0.74
Avail Cap(c_a), veh/h	129	1329	1317	103	1302	1301	129	0	415	103	0	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	6.8	6.8	33.3	10.4	10.4	32.8	0.0	25.8	33.4	0.0	28.4
Incr Delay (d2), s/veh	17.9	0.1	0.1	20.4	1.3	1.3	16.1	0.0	0.6	22.3	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	2.2	2.2	0.4	8.2	8.2	0.8	0.0	1.0	0.3	0.0	2.8
Lane Grp Delay (d), s/veh	50.5	7.0	7.0	53.8	11.7	11.7	48.9	0.0	26.4	55.7	0.0	33.3
Lane Grp LOS	D	A	A	D	B	B	D		C	E		C
Approach Vol, veh/h		664			1491			101				167
Approach Delay, s/veh		9.9			12.1			33.7				34.9
Approach LOS		A			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	6.3	44.2		4.9	42.9		5.9	14.0		4.8		13.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	5.0	49.0		4.0	48.0		5.0	17.0		4.0		16.0
Max Q Clear Time (g_c+I1), s	3.7	7.6		2.5	21.5		3.3	4.5		2.5		8.4
Green Ext Time (p_c), s	0.0	22.7		0.0	17.4		0.0	1.0		0.0		0.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				14.0								
HCM 2010 LOS				B								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	640	16	22	885	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	783	666	193	1066	589	526
Arrive On Green	0.42	0.42	0.11	0.58	0.34	0.34
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	696	17	24	962	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	32.2	0.6	1.1	42.5	2.4	4.0
Cycle Q Clear(g_c), s	32.2	0.6	1.1	42.5	2.4	4.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	783	666	193	1066	589	526
V/C Ratio(X)	0.89	0.03	0.12	0.90	0.11	0.18
Avail Cap(c_a), veh/h	1517	1290	209	1817	589	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	15.5	37.1	17.2	21.2	21.7
Incr Delay (d2), s/veh	3.7	0.0	0.3	3.8	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	14.7	0.2	0.5	17.7	1.1	1.6
Lane Grp Delay (d), s/veh	28.2	15.5	37.4	21.0	21.6	22.5
Lane Grp LOS	C	B	D	C	C	C
Approach Vol, veh/h	713			986	164	
Approach Delay, s/veh	27.9			21.4	22.1	
Approach LOS	C			C	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	43.2		14.2	57.4		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	76.0		11.0	91.0		
Max Q Clear Time (g_c+I1), s	34.2		3.1	44.5		
Green Ext Time (p_c), s	5.0		4.0	8.9		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			24.0			
HCM 2010 LOS			C			
<b>Notes</b>						























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	34	46	225	83	32	228	522	162	26	568	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	410	222	189	410	152	59	594	2879	871	41	2045	869
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.06	0.23	0.23	0.02	0.55	0.55
Sat Flow, veh/h	3408	1845	1568	3408	1266	492	3408	4082	1234	1757	3689	1568
Grp Volume(v), veh/h	124	37	50	245	0	125	248	511	232	28	617	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1627	1757	1845	1568
Q Serve(g_s), s	2.6	1.4	2.3	5.4	0.0	5.3	5.6	8.8	9.1	1.3	7.1	8.8
Cycle Q Clear(g_c), s	2.6	1.4	2.3	5.4	0.0	5.3	5.6	8.8	9.1	1.3	7.1	8.8
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	410	222	189	410	0	211	594	2602	1147	41	2045	869
V/C Ratio(X)	0.30	0.17	0.27	0.60	0.00	0.59	0.42	0.20	0.20	0.69	0.30	0.36
Avail Cap(c_a), veh/h	773	418	355	944	0	487	859	2602	1147	177	2045	869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	31.3	31.7	33.1	0.0	33.1	33.5	12.4	12.5	38.5	9.5	9.8
Incr Delay (d2), s/veh	0.4	0.4	0.7	1.4	0.0	2.6	0.5	0.2	0.4	18.5	0.4	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.7	0.9	2.4	0.0	2.5	2.6	4.5	4.2	0.8	3.0	3.4
Lane Grp Delay (d), s/veh	32.3	31.7	32.5	34.5	0.0	35.7	34.0	12.5	12.9	57.0	9.9	11.0
Lane Grp LOS	C	C	C	C		D	C	B	B	E	A	B
Approach Vol, veh/h		211			370			991			957	
Approach Delay, s/veh		32.2			34.9			18.0			11.6	
Approach LOS		C			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.5			13.5		17.8	60.0		5.8		48.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			22.0		20.0	56.0		8.0		44.0
Max Q Clear Time (g_c+I1), s		4.6			7.4		7.6	11.1		3.3		10.8
Green Ext Time (p_c), s		2.1			2.1		4.7	7.1		0.0		7.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.2								
HCM 2010 LOS				B								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	236	293	553	602	464	316
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	775	357	716	3882	2522	715
Arrive On Green	0.23	0.23	0.07	0.23	0.46	0.46
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	257	318	601	654	504	343
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	7.1	22.1	19.6	10.6	6.1	17.2
Cycle Q Clear(g_c), s	7.1	22.1	19.6	10.6	6.1	17.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	775	357	716	3882	2522	715
V/C Ratio(X)	0.33	0.89	0.84	0.17	0.20	0.48
Avail Cap(c_a), veh/h	999	459	1120	3882	2522	715
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.91	0.91
Uniform Delay (d), s/veh	36.3	42.2	50.5	17.0	18.3	21.3
Incr Delay (d2), s/veh	0.2	16.1	3.2	0.1	0.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.1	1.6	9.4	5.4	2.8	7.1
Lane Grp Delay (d), s/veh	36.6	58.3	53.8	17.1	18.5	23.4
Lane Grp LOS	D	E	D	B	B	C
Approach Vol, veh/h	575			1255	847	
Approach Delay, s/veh	48.6			34.7	20.5	
Approach LOS	D			C	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			27.7	83.0	55.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			37.0	79.0	38.0	
Max Q Clear Time (g_c+I1), s			21.6	12.6	19.2	
Green Ext Time (p_c), s			2.1	13.5	9.2	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			33.2			
HCM 2010 LOS			C			
<b>Notes</b>						
























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Cumulative Plus Project AM With Bypass  
 3/16/2014

























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	228	0	290	0	0	0	0	863	495	148	646	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	439	238	404				0	3868	1096	223	4427	0
Arrive On Green	0.13	0.00	0.13				0.00	1.00	1.00	0.13	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	248	0	315				0	938	538	161	702	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.7	0.0	10.9				0.0	0.0	0.0	5.1	0.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	10.9				0.0	0.0	0.0	5.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	439	238	404				0	3868	1096	223	4427	0
V/C Ratio(X)	0.56	0.00	0.78				0.00	0.24	0.49	0.72	0.16	0.00
Avail Cap(c_a), veh/h	666	361	613				0	3868	1096	485	4427	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.79	0.79	0.94	0.94	0.00
Uniform Delay (d), s/veh	46.0	0.0	47.4				0.0	0.0	0.0	47.9	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	3.6				0.0	0.1	1.2	4.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	0.0	4.6				0.0	0.0	0.4	2.3	0.0	0.0
Lane Grp Delay (d), s/veh	47.2	0.0	51.1				0.0	0.1	1.2	52.0	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		563						1476			863	
Approach Delay, s/veh		49.3						0.5			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		18.5						82.6		11.4	94.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		22.0						70.0		16.0	90.0	
Max Q Clear Time (g_c+I1), s		12.9						2.0		7.1	2.0	
Green Ext Time (p_c), s		1.6						25.8		0.3	27.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.7									
HCM 2010 LOS			B									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd



























Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	288	126	7	47	345	452	97	568	19	150	405	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1533	776	45	790	830	705	292	1892	64	236	954	405
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.05	0.12	0.12	0.02	0.09	0.09
Sat Flow, veh/h	3408	1726	101	1757	1845	1568	1757	5322	180	3408	3689	1568
Grp Volume(v), veh/h	313	0	145	51	375	491	105	427	211	163	440	335
Grp Sat Flow(s),veh/h/ln	1704	0	1827	1757	1845	1568	1757	1845	1813	1704	1845	1568
Q Serve(g_s), s	5.3	0.0	4.5	1.6	13.4	24.0	5.5	10.2	10.2	4.5	10.9	20.1
Cycle Q Clear(g_c), s	5.3	0.0	4.5	1.6	13.4	24.0	5.5	10.2	10.2	4.5	10.9	20.1
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	1533	0	822	790	830	705	292	1312	645	236	954	405
V/C Ratio(X)	0.20	0.00	0.18	0.06	0.45	0.70	0.36	0.33	0.33	0.69	0.46	0.83
Avail Cap(c_a), veh/h	1533	0	822	790	830	705	292	1312	645	356	1157	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.75	0.75	0.99	0.99	0.99	0.98	0.98	0.98
Uniform Delay (d), s/veh	15.9	0.0	15.7	14.9	18.2	21.1	40.3	31.7	31.7	45.7	37.4	41.6
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	1.3	4.3	0.7	0.7	1.3	3.5	0.3	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	0.0	2.0	0.7	6.2	9.8	2.6	5.2	5.3	2.2	5.5	9.6
Lane Grp Delay (d), s/veh	16.0	0.0	15.8	15.0	19.5	25.3	41.0	32.3	33.0	49.2	37.7	50.9
Lane Grp LOS	B		B	B	B	C	D	C	C	D	D	D
Approach Vol, veh/h		458			917			743			938	
Approach Delay, s/veh		16.0			22.4			33.8			44.4	
Approach LOS		B			C			C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		47.0			47.0		19.9	38.0		10.6		28.7
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			43.0		14.0	34.0		10.0		30.0
Max Q Clear Time (g_c+I1), s		7.3			26.0		7.5	12.2		6.5		22.1
Green Ext Time (p_c), s		4.6			6.2		0.5	4.2		0.2		2.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	425	244	37	27	384	433	416	699	58	43	197	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	464	1714	729	37	409	347	449	1156	96	60	452	192
Arrive On Green	0.26	0.46	0.00	0.02	0.22	0.00	0.26	0.34	0.34	0.03	0.12	0.12
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3362	279	1757	3689	1568
Grp Volume(v), veh/h	462	265	0	29	417	0	452	417	406	47	214	161
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1796	1757	1845	1568
Q Serve(g_s), s	30.8	4.9	0.0	1.9	26.0	0.0	30.0	22.5	22.5	3.1	6.3	11.8
Cycle Q Clear(g_c), s	30.8	4.9	0.0	1.9	26.0	0.0	30.0	22.5	22.5	3.1	6.3	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	464	1714	729	37	409	347	449	634	617	60	452	192
V/C Ratio(X)	1.00	0.15	0.00	0.79	1.02	0.00	1.01	0.66	0.66	0.78	0.47	0.84
Avail Cap(c_a), veh/h	464	1714	729	90	409	347	449	634	617	120	534	227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	18.1	0.0	57.2	45.7	0.0	43.7	32.6	32.7	56.2	48.0	50.4
Incr Delay (d2), s/veh	40.6	0.0	0.0	30.5	49.9	0.0	44.2	2.5	2.6	19.2	0.8	20.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	18.7	2.1	0.0	1.2	18.0	0.0	19.0	11.0	10.7	1.7	3.1	5.8
Lane Grp Delay (d), s/veh	83.8	18.2	0.0	87.7	95.6	0.0	87.9	35.1	35.2	75.5	48.7	70.8
Lane Grp LOS	F	B		F	F		F	D	D	E	D	E
Approach Vol, veh/h		727			446			1275			422	
Approach Delay, s/veh		59.9			95.1			53.8			60.1	
Approach LOS		E			F			D			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	35.0	58.6		6.4	30.0		34.0	44.4		8.0	18.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	31.0	51.0		6.0	26.0		30.0	39.0		8.0	17.0	
Max Q Clear Time (g_c+I1), s	32.8	6.9		3.9	28.0		32.0	24.5		5.1	13.8	
Green Ext Time (p_c), s	0.0	4.8		0.0	0.0		0.0	6.3		0.0	0.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				62.7								
HCM 2010 LOS				E								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	175	11	4	1660	314	59
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	239	213	804	2786	2786	1184
Arrive On Green	0.14	0.14	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1757	1568	967	3689	3689	1568
Grp Volume(v), veh/h	190	12	4	1804	341	64
Grp Sat Flow(s),veh/h/ln	1757	1568	967	1845	1845	1568
Q Serve(g_s), s	7.7	0.5	0.1	17.2	1.8	0.8
Cycle Q Clear(g_c), s	7.7	0.5	1.9	17.2	1.8	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	239	213	804	2786	2786	1184
V/C Ratio(X)	0.79	0.06	0.00	0.65	0.12	0.05
Avail Cap(c_a), veh/h	574	512	1232	4418	4418	1878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	27.6	2.7	4.3	2.4	2.3
Incr Delay (d2), s/veh	5.9	0.1	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	0.2	0.0	5.9	0.6	0.2
Lane Grp Delay (d), s/veh	36.7	27.7	2.7	4.6	2.4	2.3
Lane Grp LOS	D	C	A	A	A	A
Approach Vol, veh/h	202			1808	405	
Approach Delay, s/veh	36.1			4.6	2.4	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				59.5	59.5	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				88.0	88.0	
Max Q Clear Time (g_c+I1), s				19.2	3.8	
Green Ext Time (p_c), s				36.3	39.6	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			6.8			
HCM 2010 LOS			A			
<b>Notes</b>						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 					 		 
Volume (veh/h)	186	370	0	4	1284	660	0	1	2	289	9	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	243	2383	0	7	1888	802	2	23	46	404	383	651
Arrive On Green	0.14	0.65	0.00	0.00	0.51	0.00	0.00	0.04	0.04	0.12	0.21	0.21
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	202	402	0	4	1396	0	0	0	3	314	10	77
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	9.4	3.7	0.0	0.2	25.1	0.0	0.0	0.0	0.1	7.5	0.4	1.7
Cycle Q Clear(g_c), s	9.4	3.7	0.0	0.2	25.1	0.0	0.0	0.0	0.1	7.5	0.4	1.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	243	2383	0	7	1888	802	2	0	69	404	383	651
V/C Ratio(X)	0.83	0.17	0.00	0.54	0.74	0.00	0.00	0.00	0.04	0.78	0.03	0.12
Avail Cap(c_a), veh/h	396	3018	0	83	2362	1004	83	0	333	566	591	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	5.9	0.0	41.9	16.2	0.0	0.0	0.0	38.8	36.1	26.6	27.1
Incr Delay (d2), s/veh	7.7	0.0	0.0	48.9	1.0	0.0	0.0	0.0	0.3	4.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.7	1.4	0.0	0.2	11.1	0.0	0.0	0.0	0.1	3.5	0.2	0.6
Lane Grp Delay (d), s/veh	43.1	6.0	0.0	90.9	17.1	0.0	0.0	0.0	39.1	40.6	26.6	27.2
Lane Grp LOS	D	A		F	B				D	D	C	C
Approach Vol, veh/h		604			1400			3			401	
Approach Delay, s/veh		18.4			17.3			39.1			37.7	
Approach LOS		B			B			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	15.7	58.5		4.4	47.2		0.0	7.5		14.0	21.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	19.0	69.0		4.0	54.0		4.0	17.0		14.0	27.0	
Max Q Clear Time (g_c+I1), s	11.4	5.7		2.2	27.1		0.0	2.1		9.5	3.7	
Green Ext Time (p_c), s	0.3	23.9		0.0	16.1		0.0	0.2		0.5	0.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

Cumulative Plus Project AM With Bypass  
3/16/2014




















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	230	59	55	429	223	137	461	57	69	114	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	301	1118	280	478	901	465	653	748	93	315	857	728
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	730	2849	714	1051	2296	1184	1230	1610	199	836	1845	1568
Grp Volume(v), veh/h	53	160	154	60	374	334	149	0	563	75	124	17
Grp Sat Flow(s),veh/h/ln	730	1845	1719	1051	1845	1636	1230	0	1809	836	1845	1568
Q Serve(g_s), s	3.3	3.2	3.3	2.3	8.6	8.7	4.4	0.0	13.5	4.3	2.2	0.3
Cycle Q Clear(g_c), s	12.1	3.2	3.3	5.6	8.6	8.7	6.6	0.0	13.5	17.8	2.2	0.3
Prop In Lane	1.00		0.42	1.00		0.72	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	301	724	674	478	724	642	653	0	841	315	857	728
V/C Ratio(X)	0.18	0.22	0.23	0.13	0.52	0.52	0.23	0.00	0.67	0.24	0.14	0.02
Avail Cap(c_a), veh/h	577	1420	1323	875	1420	1259	1601	0	2235	959	2278	1936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	11.3	11.3	13.2	12.9	13.0	10.5	0.0	11.6	18.5	8.6	8.1
Incr Delay (d2), s/veh	0.3	0.2	0.2	0.1	0.6	0.7	0.2	0.0	0.9	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	1.3	1.3	0.5	3.5	3.2	1.2	0.0	5.4	0.9	0.8	0.1
Lane Grp Delay (d), s/veh	17.8	11.4	11.5	13.3	13.5	13.6	10.7	0.0	12.6	18.9	8.7	8.1
Lane Grp LOS	B	B	B	B	B	B	B		B	B	A	A
Approach Vol, veh/h		367			768			712				216
Approach Delay, s/veh		12.4			13.5			12.2				12.2
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs		4			8			2				6
Phs Duration (G+Y+Rc), s		25.9			25.9			30.0				30.0
Change Period (Y+Rc), s		4.0			4.0			4.0				4.0
Max Green Setting (Gmax), s		43.0			43.0			69.0				69.0
Max Q Clear Time (g_c+I1), s		14.1			10.7			15.5				19.8
Green Ext Time (p_c), s		7.9			8.1			6.2				6.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.7								
HCM 2010 LOS				B								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd
























Cumulative Plus Project AM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	492	2	10	1563	235	7	10	13	226	14	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	236	2442	9	19	1795	172	86	111	108	211	27	275
Arrive On Green	0.13	0.66	0.66	0.01	0.54	0.54	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3673	14	1757	3316	317	187	586	570	1367	144	1446
Grp Volume(v), veh/h	217	269	268	11	934	930	33	0	0	246	0	166
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1789	1343	0	0	1367	0	1590
Q Serve(g_s), s	10.9	5.1	5.1	0.6	42.1	44.4	0.1	0.0	0.0	8.5	0.0	8.4
Cycle Q Clear(g_c), s	10.9	5.1	5.1	0.6	42.1	44.4	8.5	0.0	0.0	17.0	0.0	8.4
Prop In Lane	1.00		0.01	1.00		0.18	0.24		0.42	1.00		0.91
Lane Grp Cap(c), veh/h	236	1226	1225	19	998	968	305	0	0	211	0	302
V/C Ratio(X)	0.92	0.22	0.22	0.59	0.94	0.96	0.11	0.00	0.00	1.17	0.00	0.55
Avail Cap(c_a), veh/h	236	1226	1225	79	1011	981	305	0	0	211	0	302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	5.9	5.9	44.0	19.1	19.6	29.9	0.0	0.0	42.1	0.0	32.7
Incr Delay (d2), s/veh	37.6	0.1	0.1	25.7	15.2	19.7	0.2	0.0	0.0	115.0	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.3	2.0	2.0	0.4	21.9	23.4	0.6	0.0	0.0	11.5	0.0	3.5
Lane Grp Delay (d), s/veh	75.8	6.0	6.0	69.7	34.2	39.2	30.1	0.0	0.0	157.0	0.0	34.8
Lane Grp LOS	E	A	A	E	C	D	C			F		C
Approach Vol, veh/h		754			1875			33				412
Approach Delay, s/veh		26.1			36.9			30.1				107.8
Approach LOS		C			D			C				F
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	16.0	63.4		5.0	52.4			21.0				21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	12.0	57.0		4.0	49.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	12.9	7.1		2.6	46.4			10.5				19.0
Green Ext Time (p_c), s	0.0	32.9		0.0	2.0			1.1				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				43.7								
HCM 2010 LOS				D								
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd



























Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	218	55	545	12	124	85	1006	1270	10	54	950	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	300	315	1674	28	286	267	1238	2407	1023	76	1527	264
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.36	0.65	0.65	0.04	0.33	0.33
Sat Flow, veh/h	1757	1845	3136	161	1675	1568	3408	3689	1568	1757	4598	795
Grp Volume(v), veh/h	237	60	592	148	0	92	1093	1380	11	59	828	384
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1837	0	1568	1704	1845	1568	1757	1845	1704
Q Serve(g_s), s	11.6	2.5	9.7	6.5	0.0	4.6	26.9	18.6	0.2	3.0	17.3	17.4
Cycle Q Clear(g_c), s	11.6	2.5	9.7	6.5	0.0	4.6	26.9	18.6	0.2	3.0	17.3	17.4
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	300	315	1674	313	0	267	1238	2407	1023	76	1225	566
V/C Ratio(X)	0.79	0.19	0.35	0.47	0.00	0.34	0.88	0.57	0.01	0.78	0.68	0.68
Avail Cap(c_a), veh/h	333	350	1734	328	0	280	1522	2595	1103	157	1277	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	31.9	12.0	33.5	0.0	32.7	26.7	8.6	5.4	42.5	25.8	25.8
Incr Delay (d2), s/veh	11.1	0.3	0.1	1.1	0.0	0.8	5.5	0.3	0.0	15.9	1.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.1	1.2	3.5	3.1	0.0	1.9	12.3	7.6	0.1	1.7	8.1	7.7
Lane Grp Delay (d), s/veh	46.7	32.1	12.1	34.6	0.0	33.5	32.3	8.9	5.5	58.3	27.1	28.7
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		889			240			2484			1271	
Approach Delay, s/veh		22.7			34.2			19.2			29.1	
Approach LOS		C			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		19.3			19.3		36.5	62.5		7.9		33.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			16.0		40.0	63.0		8.0		31.0
Max Q Clear Time (g_c+I1), s		13.6			8.5		28.9	20.6		5.0		19.4
Green Ext Time (p_c), s		1.7			3.0		3.6	30.7		0.0		10.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr























Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	26	0	107	0	0	0	61	559	3	0	1786	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	176	0	157	495	184	157	84	2897	1231	3	3687	65
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.05	0.79	0.79	0.00	0.68	0.68
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5422	95
Grp Volume(v), veh/h	28	0	116	0	0	0	66	608	3	0	1320	655
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	3.0	0.0	0.0	12.4	12.5
Cycle Q Clear(g_c), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	3.0	0.0	0.0	12.4	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	176	0	157	495	184	157	84	2897	1231	3	2509	1243
V/C Ratio(X)	0.16	0.00	0.74	0.00	0.00	0.00	0.78	0.21	0.00	0.00	0.53	0.53
Avail Cap(c_a), veh/h	403	0	360	1136	423	360	252	3596	1528	101	3279	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	30.5	0.0	0.0	0.0	32.8	1.9	1.6	0.0	5.6	5.6
Incr Delay (d2), s/veh	0.4	0.0	6.7	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.0	2.2	0.0	0.0	0.0	1.5	0.8	0.0	0.0	4.5	4.5
Lane Grp Delay (d), s/veh	29.1	0.0	37.2	0.0	0.0	0.0	47.3	2.0	1.6	0.0	5.7	5.9
Lane Grp LOS	C		D				D	A	A		A	A
Approach Vol, veh/h		144			0			677			1975	
Approach Delay, s/veh		35.6			0.0			6.4			5.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		11.0			11.0		7.3	58.8		0.0		51.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		10.0	68.0		4.0		62.0
Max Q Clear Time (g_c+I1), s		7.0			0.0		4.6	5.0		0.0		14.5
Green Ext Time (p_c), s		0.4			0.0		0.0	39.6		0.0		33.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				7.5								
HCM 2010 LOS				A								
<b>Notes</b>												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	72	75	136	412	421	98	73	456	86	55	1678	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	361	208	177	450	602	256	90	2052	376	77	1919	454
Arrive On Green	0.21	0.11	0.11	0.26	0.16	0.16	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4553	834	1757	4329	1024
Grp Volume(v), veh/h	78	82	148	448	458	107	79	400	189	60	1547	720
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1697	1757	1845	1664
Q Serve(g_s), s	4.3	4.8	10.8	29.8	13.9	6.2	5.2	7.8	8.1	4.0	47.1	49.7
Cycle Q Clear(g_c), s	4.3	4.8	10.8	29.8	13.9	6.2	5.2	7.8	8.1	4.0	47.1	49.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		0.62
Lane Grp Cap(c), veh/h	361	208	177	450	602	256	90	1663	765	77	1636	738
V/C Ratio(X)	0.22	0.39	0.84	1.00	0.76	0.42	0.88	0.24	0.25	0.78	0.95	0.98
Avail Cap(c_a), veh/h	361	252	214	450	1071	455	90	1663	765	135	1638	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	48.3	50.9	43.5	46.8	33.0	55.2	19.8	19.9	55.4	31.3	32.0
Incr Delay (d2), s/veh	0.3	1.2	21.0	41.2	2.0	1.1	57.0	0.1	0.2	15.4	11.8	27.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	2.4	5.4	18.6	6.8	2.5	3.8	3.6	3.5	2.1	24.4	26.1
Lane Grp Delay (d), s/veh	39.0	49.5	72.0	84.7	48.8	34.1	112.2	19.9	20.1	70.9	43.1	58.9
Lane Grp LOS	D	D	E	F	D	C	F	B	C	E	D	E
Approach Vol, veh/h		308			1013			668			2327	
Approach Delay, s/veh		57.6			63.2			30.9			48.7	
Approach LOS		E			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	28.1	17.2		34.0	23.1		10.0	56.8		9.1	55.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	16.0		30.0	34.0		6.0	49.0		9.0	52.0	
Max Q Clear Time (g_c+I1), s	6.3	12.8		31.8	15.9		7.2	10.1		6.0	51.7	
Green Ext Time (p_c), s	0.9	0.4		0.0	3.2		0.0	31.7		0.0	0.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				50.0								
HCM 2010 LOS				D								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
30: Ygnacio Valley Rd & Clayton Blvd












Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	231	384	37	485	1277	150	165	346	183	300	1182	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	307	1262	0	605	1747	0	234	1887	535	393	2146	608
Arrive On Green	0.09	0.23	0.00	0.18	0.32	0.00	0.07	0.34	0.34	0.12	0.39	0.39
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	251	417	0	527	1388	0	179	376	199	326	1285	621
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Cycle Q Clear(g_c), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1262	0	605	1747	0	234	1887	535	393	2146	608
V/C Ratio(X)	0.82	0.33	0.00	0.87	0.79	0.00	0.77	0.20	0.37	0.83	0.60	1.02
Avail Cap(c_a), veh/h	323	1262	0	764	1907	0	235	1887	535	529	2146	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	37.4	0.0	46.4	36.3	0.0	53.1	27.0	28.9	50.2	28.3	35.5
Incr Delay (d2), s/veh	14.6	0.2	0.0	8.9	2.2	0.0	13.9	0.1	0.4	8.0	0.5	42.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.5	0.0	8.4	12.8	0.0	3.1	2.6	4.5	5.2	10.1	24.7
Lane Grp Delay (d), s/veh	66.4	37.5	0.0	55.3	38.5	0.0	67.0	27.1	29.3	58.2	28.8	77.6
Lane Grp LOS	E	D		E	D		E	C	C	E	C	F
Approach Vol, veh/h		668			1915			754			2232	
Approach Delay, s/veh		48.4			43.1			37.2			46.7	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	14.4	30.5		24.6	40.6		12.0	43.6		17.4	49.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	25.0		26.0	40.0		8.0	35.0		18.0	45.0	
Max Q Clear Time (g_c+I1), s	10.4	9.3		19.5	28.6		8.0	13.1		12.9	47.0	
Green Ext Time (p_c), s	0.1	10.9		1.2	8.1		0.0	16.0		0.5	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				44.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd






















Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	692	5	10	999	12	7	0	31	8	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	18	2346	16	20	2335	28	241	0	72	215	0	72
Arrive On Green	0.01	0.64	0.64	0.01	0.64	0.64	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1757	3661	24	1757	3638	44	1393	0	1568	1356	0	1568
Grp Volume(v), veh/h	10	379	378	11	551	548	8	0	34	9	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1837	1393	0	1568	1356	0	1568
Q Serve(g_s), s	0.2	3.7	3.7	0.2	6.1	6.1	0.2	0.0	0.8	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.2	3.7	3.7	0.2	6.1	6.1	0.3	0.0	0.8	1.1	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1182	1179	20	1184	1179	241	0	72	215	0	72
V/C Ratio(X)	0.54	0.32	0.32	0.54	0.47	0.47	0.03	0.00	0.47	0.04	0.00	0.06
Avail Cap(c_a), veh/h	354	3758	3749	354	3758	3742	843	0	749	800	0	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	3.2	3.2	19.5	3.6	3.6	18.3	0.0	18.5	19.0	0.0	18.1
Incr Delay (d2), s/veh	22.4	0.2	0.2	20.8	0.3	0.3	0.1	0.0	4.8	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.8	0.8	0.2	1.3	1.3	0.1	0.0	0.4	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	42.0	3.4	3.4	40.4	3.9	3.9	18.4	0.0	23.3	19.1	0.0	18.5
Lane Grp LOS	D	A	A	D	A	A	B		C	B		B
Approach Vol, veh/h		767			1110			42				13
Approach Delay, s/veh		3.9			4.3			22.3				18.9
Approach LOS		A			A			C				B
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	29.5		4.5	29.5			5.8				5.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	81.0		8.0	81.0			19.0				19.0
Max Q Clear Time (g_c+I1), s	2.2	5.7		2.2	8.1			2.8				3.1
Green Ext Time (p_c), s	0.0	17.5		0.0	17.5			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.6								
HCM 2010 LOS				A								
<b>Notes</b>												

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	110	325	782	116	118	326
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	157	2170	1345	199	475	424
Arrive On Green	0.09	0.59	0.43	0.43	0.27	0.27
Sat Flow, veh/h	1757	3689	3141	466	1757	1568
Grp Volume(v), veh/h	120	353	499	477	128	354
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1762	1757	1568
Q Serve(g_s), s	3.8	2.5	12.0	12.0	3.2	12.0
Cycle Q Clear(g_c), s	3.8	2.5	12.0	12.0	3.2	12.0
Prop In Lane	1.00			0.26	1.00	1.00
Lane Grp Cap(c), veh/h	157	2170	790	755	475	424
V/C Ratio(X)	0.77	0.16	0.63	0.63	0.27	0.84
Avail Cap(c_a), veh/h	435	3789	1306	1248	747	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	5.3	12.7	12.7	16.2	19.4
Incr Delay (d2), s/veh	7.6	0.0	0.8	0.9	0.3	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.9	5.0	4.8	1.4	0.6
Lane Grp Delay (d), s/veh	32.8	5.3	13.5	13.5	16.5	24.8
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		473	976		482	
Approach Delay, s/veh		12.3	13.5		22.6	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	9.0	37.2	28.2			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	58.0	40.0			
Max Q Clear Time (g_c+I1), s	5.8	4.5	14.0			
Green Ext Time (p_c), s	0.2	12.4	10.2			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			15.5			
HCM 2010 LOS			B			
<b>Notes</b>						





















HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	114	0	0	0	882	478	0	2	291	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	237	0	154	65	181	0	1001	2932	0	2	746	68
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.57	0.79	0.00	0.00	0.22	0.22
Sat Flow, veh/h	1757	0	1568	1250	1845	0	1757	3689	0	1757	3332	304
Grp Volume(v), veh/h	50	0	124	0	0	0	959	520	0	2	174	171
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1250	1845	0	1757	1845	0	1757	1845	1791
Q Serve(g_s), s	2.9	0.0	8.6	0.0	0.0	0.0	57.3	3.7	0.0	0.1	9.0	9.1
Cycle Q Clear(g_c), s	2.9	0.0	8.6	0.0	0.0	0.0	57.3	3.7	0.0	0.1	9.0	9.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.17
Lane Grp Cap(c), veh/h	237	0	154	65	181	0	1001	2932	0	2	413	401
V/C Ratio(X)	0.21	0.00	0.81	0.00	0.00	0.00	0.96	0.18	0.00	1.26	0.42	0.43
Avail Cap(c_a), veh/h	319	0	227	123	267	0	1190	2932	0	63	413	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.40	0.40	0.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	46.4	0.0	48.9	0.0	0.0	0.0	22.6	2.7	0.0	55.4	36.8	36.9
Incr Delay (d2), s/veh	0.4	0.0	12.3	0.0	0.0	0.0	8.1	0.1	0.0	390.0	2.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	4.0	0.0	0.0	0.0	26.2	1.3	0.0	0.2	4.5	4.4
Lane Grp Delay (d), s/veh	46.8	0.0	61.2	0.0	0.0	0.0	30.7	2.8	0.0	445.3	39.2	39.4
Lane Grp LOS	D		E				C	A		F	D	D
Approach Vol, veh/h		174			0			1479			347	
Approach Delay, s/veh		57.1			0.0			20.9			41.6	
Approach LOS		E						C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		14.9			14.9		67.1	92.0		3.9		28.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		75.0	88.0		4.0		17.0
Max Q Clear Time (g_c+I1), s		10.6			0.0		59.3	5.7		2.1		11.1
Green Ext Time (p_c), s		0.3			0.0		3.8	4.1		0.0		1.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					27.6							
HCM 2010 LOS					C							
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	376	174	24	500	8	681	7	32	9	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	22	493	225	39	779	13	903	9	959	190	38	24
Arrive On Green	0.01	0.21	0.21	0.02	0.22	0.22	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1757	2400	1096	1757	3619	60	1320	14	1568	176	62	40
Grp Volume(v), veh/h	13	313	285	26	277	275	748	0	35	14	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1651	1757	1845	1834	1334	0	1568	278	0	0
Q Serve(g_s), s	0.6	12.2	12.4	1.1	10.4	10.4	0.0	0.0	0.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.6	12.2	12.4	1.1	10.4	10.4	37.9	0.0	0.7	38.2	0.0	0.0
Prop In Lane	1.00		0.66	1.00		0.03	0.99		1.00	0.71		0.14
Lane Grp Cap(c), veh/h	22	379	339	39	397	395	912	0	959	253	0	0
V/C Ratio(X)	0.58	0.83	0.84	0.66	0.70	0.70	0.82	0.00	0.04	0.06	0.00	0.00
Avail Cap(c_a), veh/h	94	395	353	94	397	395	1140	0	1216	486	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.7	28.4	28.5	36.3	27.1	27.1	13.0	0.0	5.8	15.0	0.0	0.0
Incr Delay (d2), s/veh	22.0	13.1	15.8	17.5	5.3	5.3	4.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	6.9	6.6	0.7	5.3	5.3	11.8	0.0	0.2	0.2	0.0	0.0
Lane Grp Delay (d), s/veh	58.8	41.5	44.4	53.8	32.4	32.4	16.9	0.0	5.8	15.0	0.0	0.0
Lane Grp LOS	E	D	D	D	C	C	B		A	B		
Approach Vol, veh/h		611			578			783				14
Approach Delay, s/veh		43.2			33.4			16.4				15.0
Approach LOS		D			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.9	19.4		5.7	20.1			49.8				49.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0			58.0				58.0
Max Q Clear Time (g_c+I1), s	2.6	14.4		3.1	12.4			39.9				40.2
Green Ext Time (p_c), s	0.0	1.0		0.0	2.2			5.6				5.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
1: Railroad Ave & SR-4 WB OnRamp





















Cumulative Plus Project PM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	127	262	58	532	775	392	258	820	321
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				164	358	82	673	1170	587	379	1928	819
Arrive On Green				0.17	0.17	0.17	0.33	0.84	0.84	0.22	0.52	0.00
Sat Flow, veh/h				967	2106	483	3408	2320	1164	1757	3689	1568
Grp Volume(v), veh/h				256	0	230	578	668	600	280	891	0
Grp Sat Flow(s),veh/h/ln				1796	0	1759	1704	1845	1639	1757	1845	1568
Q Serve(g_s), s				15.1	0.0	13.6	17.3	15.8	16.2	16.2	16.6	0.0
Cycle Q Clear(g_c), s				15.1	0.0	13.6	17.3	15.8	16.2	16.2	16.6	0.0
Prop In Lane				0.54		0.27	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h				305	0	299	673	930	827	379	1928	819
V/C Ratio(X)				0.84	0.00	0.77	0.86	0.72	0.73	0.74	0.46	0.00
Avail Cap(c_a), veh/h				379	0	371	875	930	827	483	1928	819
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.65	0.65	0.65	1.00	1.00	0.00
Uniform Delay (d), s/veh				43.8	0.0	43.2	35.1	5.5	5.6	39.9	16.4	0.0
Incr Delay (d2), s/veh				12.9	0.0	7.5	4.6	3.1	3.6	4.4	0.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				8.0	0.0	6.7	7.3	4.0	3.7	7.7	7.6	0.0
Lane Grp Delay (d), s/veh				56.7	0.0	50.7	39.8	8.6	9.2	44.3	17.2	0.0
Lane Grp LOS				E		D	D	A	A	D	B	
Approach Vol, veh/h					486			1846			1171	
Approach Delay, s/veh					53.8			18.6			23.7	
Approach LOS					D			B			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1		6
Phs Duration (G+Y+Rc), s					22.5		25.5	59.0		27.5		61.0
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s					23.0		28.0	55.0		30.0		57.0
Max Q Clear Time (g_c+I1), s					17.1		19.3	18.2		18.2		18.6
Green Ext Time (p_c), s					1.5		2.2	12.0		2.6		7.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					25.2							
HCM 2010 LOS					C							
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Cumulative Plus Project PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	575	0	863	0	0	0	0	978	114	83	601	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	725	761	1294				0	1734	202	203	1882	0
Arrive On Green	0.41	0.00	0.41				0.00	0.36	0.36	0.23	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4867	567	1757	3689	0
Grp Volume(v), veh/h	625	0	938				0	805	382	90	653	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1745	1757	1845	0
Q Serve(g_s), s	33.7	0.0	26.0				0.0	18.7	18.7	4.6	0.0	0.0
Cycle Q Clear(g_c), s	33.7	0.0	26.0				0.0	18.7	18.7	4.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.32	1.00		0.00
Lane Grp Cap(c), veh/h	725	761	1294				0	1314	621	203	1882	0
V/C Ratio(X)	0.86	0.00	0.72				0.00	0.61	0.61	0.44	0.35	0.00
Avail Cap(c_a), veh/h	998	1048	1781				0	1314	621	203	1882	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	27.8	0.0	25.6				0.0	27.5	27.6	37.1	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.9				0.0	2.1	4.5	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.6	0.0	10.2				0.0	8.9	8.8	2.0	0.1	0.0
Lane Grp Delay (d), s/veh	33.7	0.0	26.5				0.0	29.7	32.0	38.4	0.4	0.0
Lane Grp LOS	C		C					C	C	D	A	
Approach Vol, veh/h		1563						1187			743	
Approach Delay, s/veh		29.4						30.4			5.0	
Approach LOS		C						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		46.9						41.0		16.0	57.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		59.0						37.0		12.0	53.0	
Max Q Clear Time (g_c+I1), s		35.7						20.7		6.6	2.0	
Green Ext Time (p_c), s		7.2						7.5		2.2	5.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

























Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	226	869	177	97	336	224	76	612	144	501	932	281
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	273	921	187	103	785	334	291	727	309	529	1228	522
Arrive On Green	0.16	0.31	0.31	0.06	0.21	0.21	0.17	0.20	0.20	0.30	0.33	0.33
Sat Flow, veh/h	1757	2978	604	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	246	585	552	105	365	243	83	665	157	545	1013	305
Grp Sat Flow(s),veh/h/ln	1757	1845	1738	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.4	37.0	37.0	7.0	10.3	9.2	4.9	21.1	9.0	36.0	30.2	12.9
Cycle Q Clear(g_c), s	16.4	37.0	37.0	7.0	10.3	9.2	4.9	21.1	9.0	36.0	30.2	12.9
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	571	538	103	785	334	291	727	309	529	1228	522
V/C Ratio(X)	0.90	1.02	1.03	1.02	0.47	0.73	0.29	0.91	0.51	1.03	0.82	0.58
Avail Cap(c_a), veh/h	294	571	538	103	785	334	291	740	315	529	1481	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	41.3	41.3	56.3	41.1	12.4	43.7	47.0	30.5	41.8	36.7	14.7
Incr Delay (d2), s/veh	27.8	44.1	45.7	94.5	0.4	7.8	0.5	15.7	1.3	47.2	3.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.6	24.4	23.3	5.9	5.0	4.1	2.3	11.6	3.7	23.1	14.6	5.0
Lane Grp Delay (d), s/veh	77.4	85.4	87.0	150.8	41.6	20.3	44.2	62.7	31.8	89.0	40.0	15.7
Lane Grp LOS	E	F	F	F	D	C	D	E	C	F	D	B
Approach Vol, veh/h		1383			713			905			1863	
Approach Delay, s/veh		84.6			50.4			55.7			50.4	
Approach LOS		F			D			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.6	41.0		11.0	29.4		23.8	27.6		40.0	43.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	20.0	37.0		7.0	24.0		12.0	24.0		36.0	48.0	
Max Q Clear Time (g_c+I1), s	18.4	39.0		9.0	12.3		6.9	23.1		38.0	32.2	
Green Ext Time (p_c), s	0.1	0.0		0.0	7.8		1.1	0.5		0.0	7.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				61.1								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd






























Cumulative Plus Project PM With Bypass

3/16/2014





























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	55	3	299	117	127	38	764	897	124	618	127
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	224	235	200	435	235	200	77	2411	1025	166	2599	1104
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.65	0.65	0.09	0.70	0.70
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	67	60	3	325	127	138	41	830	975	135	672	138
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.3	2.8	0.2	8.9	6.2	8.1	2.2	9.7	55.1	7.3	6.4	2.8
Cycle Q Clear(g_c), s	3.3	2.8	0.2	8.9	6.2	8.1	2.2	9.7	55.1	7.3	6.4	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	235	200	435	235	200	77	2411	1025	166	2599	1104
V/C Ratio(X)	0.30	0.26	0.02	0.75	0.54	0.69	0.53	0.34	0.95	0.81	0.26	0.12
Avail Cap(c_a), veh/h	327	343	292	564	305	259	291	2518	1070	254	2599	1104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	38.0	36.9	40.7	39.5	40.4	45.2	7.5	15.3	42.9	5.2	4.6
Incr Delay (d2), s/veh	0.7	0.6	0.0	4.0	1.9	5.1	5.5	0.1	16.7	10.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	1.3	0.1	4.0	3.0	3.5	1.1	3.9	24.0	3.8	2.4	0.9
Lane Grp Delay (d), s/veh	39.0	38.6	36.9	44.7	41.4	45.5	50.8	7.6	32.1	53.8	5.2	4.7
Lane Grp LOS	D	D	D	D	D	D	D	A	C	D	A	A
Approach Vol, veh/h		130			590			1846			945	
Approach Delay, s/veh		38.8			44.2			21.5			12.1	
Approach LOS		D			D			C			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		16.3			16.3		8.3	67.2		13.2		72.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		16.0	66.0		14.0		64.0
Max Q Clear Time (g_c+I1), s		5.3			10.9		4.2	57.1		9.3		8.4
Green Ext Time (p_c), s		2.4			1.4		0.0	6.1		0.1		30.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

Cumulative Plus Project PM With Bypass  
3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 		 		 	 		 	
Volume (veh/h)	80	30	27	843	48	37	47	1473	1444	67	703	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	2	1	2	2	1	2	1
Cap, veh/h	537	564	479	1041	564	958	65	2249	1912	97	1957	832
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.04	0.61	0.61	0.53	0.53	0.53
Sat Flow, veh/h	1757	1845	1568	3408	1845	3136	1757	3689	3136	66	3689	1568
Grp Volume(v), veh/h	87	33	29	916	52	40	51	1601	1570	73	764	151
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	66	1845	1568
Q Serve(g_s), s	3.4	1.2	1.2	24.1	1.9	0.8	2.7	28.2	36.9	29.3	11.6	4.7
Cycle Q Clear(g_c), s	3.4	1.2	1.2	24.1	1.9	0.8	2.7	28.2	36.9	50.0	11.6	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Lane Grp Cap(c), veh/h	537	564	479	1041	564	958	65	2249	1912	97	1957	832
V/C Ratio(X)	0.16	0.06	0.06	0.88	0.09	0.04	0.79	0.71	0.82	0.75	0.39	0.18
Avail Cap(c_a), veh/h	537	564	479	1229	665	1131	75	2270	1929	97	1957	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	23.2	23.2	31.1	23.4	23.0	45.0	12.7	14.4	43.0	13.1	11.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	6.8	0.1	0.0	37.4	1.1	3.0	28.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	0.6	0.5	11.2	0.9	0.3	1.9	11.9	13.9	2.5	5.0	1.8
Lane Grp Delay (d), s/veh	24.1	23.2	23.2	37.8	23.5	23.0	82.4	13.7	17.3	71.1	13.2	11.6
Lane Grp LOS	C	C	C	D	C	C	F	B	B	E	B	B
Approach Vol, veh/h		149			1008			3222			988	
Approach Delay, s/veh		23.7			36.5			16.6			17.3	
Approach LOS		C			D			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2			6	
Phs Duration (G+Y+Rc), s		32.8			32.8		7.5	61.5			54.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	
Max Green Setting (Gmax), s		16.0			34.0		4.0	58.0			50.0	
Max Q Clear Time (g_c+I1), s		5.4			26.1		4.7	38.9			52.0	
Green Ext Time (p_c), s		3.7			2.7		0.0	18.4			0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	102	905	186	191	297	121	87	277	298	263	458	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	141	1089	463	239	1296	551	121	754	320	321	875	253
Arrive On Green	0.08	0.30	0.30	0.14	0.35	0.35	0.07	0.20	0.20	0.18	0.32	0.32
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2752	797
Grp Volume(v), veh/h	111	984	202	208	323	132	95	301	324	286	333	310
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1704
Q Serve(g_s), s	5.5	22.6	9.2	10.2	5.5	5.3	4.7	6.2	18.0	14.0	13.2	13.4
Cycle Q Clear(g_c), s	5.5	22.6	9.2	10.2	5.5	5.3	4.7	6.2	18.0	14.0	13.2	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	141	1089	463	239	1296	551	121	754	320	321	586	542
V/C Ratio(X)	0.79	0.90	0.44	0.87	0.25	0.24	0.78	0.40	1.01	0.89	0.57	0.57
Avail Cap(c_a), veh/h	239	1131	481	239	1296	551	199	754	320	339	586	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	29.8	25.1	37.3	20.3	20.2	40.3	30.4	35.0	35.1	25.0	25.0
Incr Delay (d2), s/veh	9.4	10.0	0.6	27.1	0.1	0.2	10.5	0.3	53.1	23.5	1.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.8	11.9	3.6	6.4	2.5	2.0	2.4	2.9	11.8	8.2	6.2	5.9
Lane Grp Delay (d), s/veh	49.2	39.9	25.8	64.4	20.4	20.5	50.8	30.7	88.1	58.6	26.3	26.5
Lane Grp LOS	D	D	C	E	C	C	D	C	F	E	C	C
Approach Vol, veh/h		1297			663			720			929	
Approach Delay, s/veh		38.5			34.2			59.2			36.3	
Approach LOS		D			C			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.1	30.0		16.0	34.9		10.1	22.0		20.1		32.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	27.0		12.0	27.0		10.0	18.0		17.0		25.0
Max Q Clear Time (g_c+I1), s	7.5	24.6		12.2	7.5		6.7	20.0		16.0		15.4
Green Ext Time (p_c), s	0.1	1.4		0.0	10.5		0.1	0.0		0.1		4.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				41.3								
HCM 2010 LOS				D								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	908	31	24	467	96	18	43	9	144	83	95
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	109	1218	42	33	1187	1009	35	74	16	185	107	122
Arrive On Green	0.06	0.69	0.69	0.02	0.64	0.64	0.02	0.05	0.05	0.11	0.14	0.14
Sat Flow, veh/h	1757	1773	61	1757	1845	1568	1757	1475	314	1757	786	900
Grp Volume(v), veh/h	86	0	1021	26	508	104	20	0	57	157	0	193
Grp Sat Flow(s),veh/h/ln	1757	0	1834	1757	1845	1568	1757	0	1789	1757	0	1686
Q Serve(g_s), s	5.6	0.0	45.2	1.7	15.6	2.9	1.3	0.0	3.6	10.1	0.0	12.9
Cycle Q Clear(g_c), s	5.6	0.0	45.2	1.7	15.6	2.9	1.3	0.0	3.6	10.1	0.0	12.9
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	109	0	1260	33	1187	1009	35	0	90	185	0	229
V/C Ratio(X)	0.79	0.00	0.81	0.80	0.43	0.10	0.58	0.00	0.64	0.85	0.00	0.84
Avail Cap(c_a), veh/h	199	0	1260	61	1187	1009	76	0	249	229	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.00	0.47	0.60	0.60	0.60	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.2	0.0	12.7	56.2	10.1	7.8	55.9	0.0	53.6	50.5	0.0	48.5
Incr Delay (d2), s/veh	5.9	0.0	2.8	22.5	0.7	0.1	14.4	0.0	7.3	21.0	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	0.0	18.8	1.0	6.6	1.0	0.7	0.0	1.9	5.7	0.0	6.2
Lane Grp Delay (d), s/veh	59.1	0.0	15.5	78.8	10.8	8.0	70.3	0.0	60.9	71.5	0.0	57.0
Lane Grp LOS	E		B	E	B	A	E		E	E		E
Approach Vol, veh/h		1107			638			77				350
Approach Delay, s/veh		18.9			13.1			63.3				63.5
Approach LOS		B			B			E				E
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	11.1	83.0		6.1	78.0		6.3	9.8		16.1		19.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	13.0	79.0		4.0	70.0		5.0	16.0		15.0		26.0
Max Q Clear Time (g_c+I1), s	7.6	47.2		3.7	17.6		3.3	5.6		12.1		14.9
Green Ext Time (p_c), s	0.1	10.2		0.0	4.0		0.0	0.2		0.1		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.9								
HCM 2010 LOS				C								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	721	25	650	284	90	44	26	252	78	65	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	51	1325	46	1054	2412	1025	338	355	302	338	301	47
Arrive On Green	0.03	0.37	0.37	0.31	0.65	0.65	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3546	122	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	35	408	403	707	309	98	48	28	274	85	0	82
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.9	17.1	17.1	17.4	3.1	2.2	2.2	1.2	16.5	4.0	0.0	3.7
Cycle Q Clear(g_c), s	1.9	17.1	17.1	17.4	3.1	2.2	2.2	1.2	16.5	4.0	0.0	3.7
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	51	689	681	1054	2412	1025	338	355	302	338	0	347
V/C Ratio(X)	0.68	0.59	0.59	0.67	0.13	0.10	0.14	0.08	0.91	0.25	0.00	0.24
Avail Cap(c_a), veh/h	109	689	681	1167	2412	1025	346	364	309	338	0	347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.3	24.3	24.3	29.0	6.3	6.2	32.3	31.9	38.1	33.0	0.0	32.9
Incr Delay (d2), s/veh	14.9	3.7	3.8	1.1	0.1	0.1	0.2	0.1	28.5	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	8.5	8.4	7.5	1.3	0.8	1.0	0.6	8.8	1.8	0.0	1.7
Lane Grp Delay (d), s/veh	61.3	28.0	28.0	30.1	6.4	6.3	32.5	32.0	66.5	33.4	0.0	33.3
Lane Grp LOS	E	C	C	C	A	A	C	C	E	C		C
Approach Vol, veh/h		846			1114			350				167
Approach Delay, s/veh		29.4			21.4			59.1				33.3
Approach LOS		C			C			E				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.8	40.0		33.8	67.0			22.6				22.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	36.0		33.0	63.0			19.0				16.0
Max Q Clear Time (g_c+I1), s	3.9	19.1		19.4	5.1			18.5				6.0
Green Ext Time (p_c), s	0.7	4.8		2.5	2.6			0.1				1.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.3								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd

Cumulative Plus Project PM With Bypass

























3/16/2014













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	333	315	371	95	164	19	492	617	213	19	196	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	884	548	465	166	280	33	821	1133	392	78	869	369
Arrive On Green	0.26	0.30	0.30	0.05	0.09	0.09	0.24	0.43	0.43	0.04	0.24	0.24
Sat Flow, veh/h	3408	1845	1568	3408	3245	378	3408	2623	907	1757	3689	1568
Grp Volume(v), veh/h	362	342	403	103	100	99	535	472	431	21	213	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1778	1704	1845	1685	1757	1845	1568
Q Serve(g_s), s	7.9	14.4	21.9	2.7	4.7	4.8	12.7	17.6	17.6	1.0	4.2	17.1
Cycle Q Clear(g_c), s	7.9	14.4	21.9	2.7	4.7	4.8	12.7	17.6	17.6	1.0	4.2	17.1
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	884	548	465	166	159	153	821	797	728	78	869	369
V/C Ratio(X)	0.41	0.62	0.87	0.62	0.63	0.64	0.65	0.59	0.59	0.27	0.25	0.84
Avail Cap(c_a), veh/h	884	718	610	265	472	455	1099	944	862	313	1354	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	27.3	29.9	42.0	39.7	39.8	30.7	19.5	19.5	41.5	27.9	32.8
Incr Delay (d2), s/veh	0.3	1.2	10.0	3.8	4.1	4.5	0.9	0.7	0.8	1.8	0.1	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	6.7	9.7	1.2	2.4	2.4	5.5	8.0	7.3	0.5	1.9	7.3
Lane Grp Delay (d), s/veh	27.9	28.5	39.9	45.7	43.8	44.2	31.6	20.2	20.3	43.4	28.0	39.6
Lane Grp LOS	C	C	D	D	D	D	C	C	C	D	C	D
Approach Vol, veh/h		1107			302			1438			546	
Approach Delay, s/veh		32.5			44.6			24.5			35.2	
Approach LOS		C			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	27.3	30.7		8.4	11.7		25.7	42.9		8.0		25.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	19.0	35.0		7.0	23.0		29.0	46.0		16.0		33.0
Max Q Clear Time (g_c+I1), s	9.9	23.9		4.7	6.8		14.7	19.6		3.0		19.1
Green Ext Time (p_c), s	1.2	2.8		0.1	0.9		7.0	9.3		0.0		2.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	839	0	518	0	0	0	0	719	398	139	525	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1390	0	640				0	1467	623	301	1923	0
Arrive On Green	0.41	0.00	0.41				0.00	0.40	0.40	0.09	0.52	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	912	0	563				0	782	433	151	571	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	24.5	0.0	37.5				0.0	18.3	26.0	4.8	9.9	0.0
Cycle Q Clear(g_c), s	24.5	0.0	37.5				0.0	18.3	26.0	4.8	9.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1390	0	640				0	1467	623	301	1923	0
V/C Ratio(X)	0.66	0.00	0.88				0.00	0.53	0.69	0.50	0.30	0.00
Avail Cap(c_a), veh/h	1596	0	734				0	1467	623	301	1923	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	27.1	0.0	30.9				0.0	26.1	28.4	49.2	15.3	0.0
Incr Delay (d2), s/veh	0.8	0.0	10.9				0.0	1.4	6.3	1.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.4	0.0	16.5				0.0	8.8	11.3	2.2	4.5	0.0
Lane Grp Delay (d), s/veh	27.9	0.0	41.8				0.0	27.4	34.6	50.4	15.7	0.0
Lane Grp LOS	C		D					C	C	D	B	
Approach Vol, veh/h		1475						1215			722	
Approach Delay, s/veh		33.2						30.0			22.9	
Approach LOS		C						C			C	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		50.2						49.0		14.0	63.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		53.0						45.0		10.0	59.0	
Max Q Clear Time (g_c+I1), s		39.5						28.0		6.8	11.9	
Green Ext Time (p_c), s		6.6						6.7		1.4	5.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			29.9									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	566	1166	253	223	428	148	216	488	159	260	423	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	714	1579	671	306	1137	483	268	841	357	349	656	279
Arrive On Green	0.21	0.43	0.43	0.09	0.31	0.31	0.15	0.23	0.23	0.10	0.18	0.18
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	615	1267	275	242	465	161	235	530	173	283	460	141
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	18.3	31.5	12.8	7.3	10.5	8.3	13.8	13.6	10.1	8.6	12.3	8.6
Cycle Q Clear(g_c), s	18.3	31.5	12.8	7.3	10.5	8.3	13.8	13.6	10.1	8.6	12.3	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	714	1579	671	306	1137	483	268	841	357	349	656	279
V/C Ratio(X)	0.86	0.80	0.41	0.79	0.41	0.33	0.88	0.63	0.48	0.81	0.70	0.51
Avail Cap(c_a), veh/h	970	1750	744	356	1137	483	350	1050	446	420	770	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	26.3	20.9	47.0	28.9	28.1	43.7	36.7	35.3	46.3	40.7	39.1
Incr Delay (d2), s/veh	6.1	2.6	0.4	10.0	0.2	0.4	17.6	0.8	1.0	9.6	2.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.5	15.0	5.0	3.6	4.9	3.3	7.5	6.5	4.1	4.2	6.0	3.5
Lane Grp Delay (d), s/veh	46.2	28.8	21.3	57.0	29.1	28.5	61.2	37.5	36.3	55.9	43.0	40.5
Lane Grp LOS	D	C	C	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		2157			868			938			884	
Approach Delay, s/veh		32.8			36.8			43.2			46.7	
Approach LOS		C			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	26.1	49.1		13.5	36.5		20.1	28.0		14.8	22.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	30.0	50.0		11.0	31.0		21.0	30.0		13.0	22.0	
Max Q Clear Time (g_c+I1), s	20.3	33.5		9.3	12.5		15.8	15.6		10.6	14.3	
Green Ext Time (p_c), s	1.7	11.6		0.1	13.2		0.3	6.7		0.2	4.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.1								
HCM 2010 LOS				D								
<b>Notes</b>												





















						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	151	846	350	255	427	291
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	305	1189	808	686	509	454
Arrive On Green	0.17	0.64	0.88	0.88	0.29	0.29
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	164	920	380	277	464	316
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	10.3	42.8	5.3	4.1	30.9	21.7
Cycle Q Clear(g_c), s	10.3	42.8	5.3	4.1	30.9	21.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	305	1189	808	686	509	454
V/C Ratio(X)	0.54	0.77	0.47	0.40	0.91	0.70
Avail Cap(c_a), veh/h	305	1189	808	686	639	570
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.89	0.89	1.00	1.00
Uniform Delay (d), s/veh	45.6	15.3	4.6	4.5	41.5	38.3
Incr Delay (d2), s/veh	0.5	1.5	1.7	1.6	15.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.6	18.1	1.8	1.4	15.9	0.3
Lane Grp Delay (d), s/veh	46.2	16.8	6.3	6.1	56.7	40.9
Lane Grp LOS	D	B	A	A	E	D
Approach Vol, veh/h		1084	657		780	
Approach Delay, s/veh		21.2	6.2		50.3	
Approach LOS		C	A		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.0	82.0	57.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	21.0	78.0	53.0			
Max Q Clear Time (g_c+I1), s	12.3	44.8	7.3			
Green Ext Time (p_c), s	4.6	9.0	3.5			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			26.3			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	1153	147	55	524	12	105	23	68	199	104	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	54	1263	1073	68	1244	28	203	76	225	224	282	50
Arrive On Green	0.04	0.91	0.91	0.04	0.69	0.69	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1757	1845	1568	1757	1796	41	1239	412	1218	1278	1527	270
Grp Volume(v), veh/h	8	1253	160	60	0	583	114	0	99	216	0	133
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1837	1239	0	1630	1278	0	1797
Q Serve(g_s), s	0.6	81.8	1.4	4.4	0.0	18.6	11.6	0.0	6.9	17.1	0.0	8.5
Cycle Q Clear(g_c), s	0.6	81.8	1.4	4.4	0.0	18.6	20.1	0.0	6.9	24.0	0.0	8.5
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.75	1.00		0.15
Lane Grp Cap(c), veh/h	54	1263	1073	68	0	1272	203	0	301	224	0	332
V/C Ratio(X)	0.15	0.99	0.15	0.89	0.00	0.46	0.56	0.00	0.33	0.96	0.00	0.40
Avail Cap(c_a), veh/h	54	1263	1073	68	0	1272	203	0	301	224	0	332
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.47	0.91	0.00	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.7	5.5	1.9	62.2	0.0	9.0	55.5	0.0	46.0	58.3	0.0	46.7
Incr Delay (d2), s/veh	0.6	15.7	0.1	67.7	0.0	1.1	3.4	0.0	0.6	49.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	9.3	0.4	3.3	0.0	7.7	3.9	0.0	2.9	10.4	0.0	4.0
Lane Grp Delay (d), s/veh	61.3	21.2	2.0	130.0	0.0	10.1	59.0	0.0	46.6	108.3	0.0	47.5
Lane Grp LOS	E	C	A	F		B	E		D	F		D
Approach Vol, veh/h		1421			643			213				349
Approach Delay, s/veh		19.2			21.3			53.2				85.1
Approach LOS		B			C			D				F
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	8.0	93.0		9.0	94.0			28.0				28.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	89.0		5.0	90.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	2.6	83.8		6.4	20.6			22.1				26.0
Green Ext Time (p_c), s	1.2	4.1		0.0	4.3			0.5				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.2								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

Cumulative Plus Project PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	1486	54	88	898	49	31	44	54	37	73	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	47	2086	76	123	2194	119	47	74	91	53	119	57
Arrive On Green	0.03	0.59	0.59	0.07	0.63	0.63	0.03	0.10	0.10	0.03	0.10	0.10
Sat Flow, veh/h	1757	3538	129	1757	3468	188	1757	754	927	1757	1178	567
Grp Volume(v), veh/h	33	840	834	96	519	510	34	0	107	40	0	117
Grp Sat Flow(s),veh/h/ln	1757	1845	1822	1757	1845	1811	1757	0	1681	1757	0	1745
Q Serve(g_s), s	1.4	25.8	26.1	4.1	10.8	10.8	1.4	0.0	4.6	1.7	0.0	4.9
Cycle Q Clear(g_c), s	1.4	25.8	26.1	4.1	10.8	10.8	1.4	0.0	4.6	1.7	0.0	4.9
Prop In Lane	1.00		0.07	1.00		0.10	1.00		0.55	1.00		0.32
Lane Grp Cap(c), veh/h	47	1088	1074	123	1167	1146	47	0	165	53	0	177
V/C Ratio(X)	0.71	0.77	0.78	0.78	0.44	0.44	0.72	0.00	0.65	0.76	0.00	0.66
Avail Cap(c_a), veh/h	140	1151	1137	163	1175	1154	93	0	357	93	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	11.6	11.7	34.5	7.1	7.1	36.4	0.0	32.7	36.3	0.0	32.6
Incr Delay (d2), s/veh	17.9	3.1	3.3	16.1	0.3	0.3	18.1	0.0	4.2	19.4	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	11.2	11.2	2.3	4.3	4.2	0.9	0.0	2.1	1.0	0.0	2.3
Lane Grp Delay (d), s/veh	54.3	14.8	15.0	50.6	7.3	7.3	54.4	0.0	36.9	55.6	0.0	36.8
Lane Grp LOS	D	B	B	D	A	A	D		D	E		D
Approach Vol, veh/h		1707			1125			141				157
Approach Delay, s/veh		15.7			11.0			41.2				41.6
Approach LOS		B			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	6.0	48.4		9.3	51.7		6.0	11.4		6.3		11.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	47.0		7.0	48.0		4.0	16.0		4.0		16.0
Max Q Clear Time (g_c+I1), s	3.4	28.1		6.1	12.8		3.4	6.6		3.7		6.9
Green Ext Time (p_c), s	0.0	16.3		0.0	27.4		0.0	0.8		0.0		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.4								
HCM 2010 LOS				B								
<b>Notes</b>												






















	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1450	28	94	665	17	55
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1489	1266	73	1627	90	80
Arrive On Green	0.81	0.81	0.08	1.00	0.05	0.05
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1576	30	102	723	18	60
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	97.0	0.5	5.0	0.0	1.2	4.5
Cycle Q Clear(g_c), s	97.0	0.5	5.0	0.0	1.2	4.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1489	1266	73	1627	90	80
V/C Ratio(X)	1.06	0.02	1.40	0.44	0.20	0.75
Avail Cap(c_a), veh/h	1489	1266	73	1627	234	209
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.85	0.85	1.00	1.00
Uniform Delay (d), s/veh	11.6	2.3	55.1	0.0	54.6	56.2
Incr Delay (d2), s/veh	28.1	0.0	234.1	0.8	1.1	12.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	43.5	0.1	6.9	0.3	0.6	2.1
Lane Grp Delay (d), s/veh	39.6	2.3	289.2	0.8	55.7	69.1
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1606			825	78	
Approach Delay, s/veh	38.9			36.4	66.0	
Approach LOS	D			D	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	101.0		9.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	97.0		5.0	106.0		
Max Q Clear Time (g_c+I1), s	99.0		7.0	2.0		
Green Ext Time (p_c), s	0.0		0.0	5.7		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			39.0			
HCM 2010 LOS			D			
<b>Notes</b>						



HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr


















Cumulative Plus Project PM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	131	1384	28	33	881	12	13	27	22	8	18	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	182	2239	45	51	1984	27	24	93	77	16	30	124
Arrive On Green	0.10	0.62	0.62	0.03	0.55	0.55	0.01	0.10	0.10	0.01	0.10	0.10
Sat Flow, veh/h	1757	3605	72	1757	3631	49	1757	935	774	1757	314	1301
Grp Volume(v), veh/h	142	769	765	36	487	484	14	0	53	9	0	103
Grp Sat Flow(s),veh/h/ln	1757	1845	1832	1757	1845	1836	1757	0	1708	1757	0	1615
Q Serve(g_s), s	5.2	18.0	18.1	1.4	10.8	10.8	0.5	0.0	1.9	0.3	0.0	4.1
Cycle Q Clear(g_c), s	5.2	18.0	18.1	1.4	10.8	10.8	0.5	0.0	1.9	0.3	0.0	4.1
Prop In Lane	1.00		0.04	1.00		0.03	1.00		0.45	1.00		0.81
Lane Grp Cap(c), veh/h	182	1146	1138	51	1008	1003	24	0	171	16	0	154
V/C Ratio(X)	0.78	0.67	0.67	0.70	0.48	0.48	0.58	0.00	0.31	0.56	0.00	0.67
Avail Cap(c_a), veh/h	396	1331	1322	132	1054	1049	106	0	437	106	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	8.2	8.2	32.0	9.3	9.3	32.6	0.0	27.8	32.8	0.0	29.1
Incr Delay (d2), s/veh	7.0	1.1	1.1	15.9	0.4	0.4	20.3	0.0	1.0	26.6	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.6	7.2	7.1	0.8	4.4	4.4	0.4	0.0	0.8	0.3	0.0	1.8
Lane Grp Delay (d), s/veh	36.1	9.3	9.3	47.9	9.7	9.7	52.9	0.0	28.8	59.4	0.0	34.0
Lane Grp LOS	D	A	A	D	A	A	D		C	E		C
Approach Vol, veh/h		1676			1007			67				112
Approach Delay, s/veh		11.6			11.0			33.8				36.0
Approach LOS		B			B			C				D
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	10.9	45.3		5.9	40.3		4.9	10.7		4.6		10.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	15.0	48.0		5.0	38.0		4.0	17.0		4.0		17.0
Max Q Clear Time (g_c+I1), s	7.2	20.1		3.4	12.8		2.5	3.9		2.3		6.1
Green Ext Time (p_c), s	0.2	21.2		0.0	19.6		0.0	0.6		0.0		0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.8								
HCM 2010 LOS				B								
<b>Notes</b>												





















	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1501	66	80	780	36	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1515	1288	59	1639	78	70
Arrive On Green	1.00	1.00	0.03	0.89	0.04	0.04
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1632	72	87	848	39	47
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	98.0	0.0	4.0	11.3	2.6	3.5
Cycle Q Clear(g_c), s	98.0	0.0	4.0	11.3	2.6	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1515	1288	59	1639	78	70
V/C Ratio(X)	1.08	0.06	1.48	0.52	0.50	0.67
Avail Cap(c_a), veh/h	1515	1288	59	1639	236	210
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	57.7	1.4	55.7	56.1
Incr Delay (d2), s/veh	36.2	0.0	285.8	1.2	4.8	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.2	0.0	6.5	2.7	1.3	1.6
Lane Grp Delay (d), s/veh	36.2	0.0	343.5	2.5	60.5	66.8
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1704			935	86	
Approach Delay, s/veh	34.7			34.3	63.9	
Approach LOS	C			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	102.0		8.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	98.0		4.0	106.0		
Max Q Clear Time (g_c+I1), s	100.0		6.0	13.3		
Green Ext Time (p_c), s	0.0		0.0	7.4		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			35.4			
HCM 2010 LOS			D			
<b>Notes</b>						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	381	140	268	223	71	25	451	573	135	27	856	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	726	393	334	726	278	98	584	2770	642	40	2153	466
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.29	1.00	1.00	0.02	0.49	0.49
Sat Flow, veh/h	3408	1845	1568	3408	1306	458	3408	4349	1007	1757	4411	954
Grp Volume(v), veh/h	414	152	291	242	0	104	490	527	243	29	777	355
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1764	1704	1845	1667	1757	1845	1676
Q Serve(g_s), s	10.2	6.7	16.9	5.7	0.0	4.6	12.7	0.0	0.0	1.5	12.9	12.9
Cycle Q Clear(g_c), s	10.2	6.7	16.9	5.7	0.0	4.6	12.7	0.0	0.0	1.5	12.9	12.9
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.60	1.00		0.57
Lane Grp Cap(c), veh/h	726	393	334	726	0	376	584	2350	1062	40	1801	818
V/C Ratio(X)	0.57	0.39	0.87	0.33	0.00	0.28	0.84	0.22	0.23	0.73	0.43	0.43
Avail Cap(c_a), veh/h	796	431	366	726	0	376	941	2350	1062	112	1801	818
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	31.8	35.8	31.4	0.0	31.0	32.4	0.0	0.0	45.7	15.6	15.7
Incr Delay (d2), s/veh	0.8	0.6	18.7	0.3	0.0	0.4	3.6	0.2	0.5	22.5	0.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	3.2	8.4	2.5	0.0	2.1	5.3	0.1	0.1	0.9	5.9	5.6
Lane Grp Delay (d), s/veh	34.0	32.4	54.5	31.7	0.0	31.4	36.0	0.2	0.5	68.2	16.4	17.3
Lane Grp LOS	C	C	D	C		C	D	A	A	E	B	B
Approach Vol, veh/h		857			346			1260			1161	
Approach Delay, s/veh		40.7			31.6			14.2			18.0	
Approach LOS		D			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		24.1			24.1		20.2	64.0		6.1		50.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		22.0			16.0		26.0	60.0		6.0		40.0
Max Q Clear Time (g_c+I1), s		18.9			7.7		14.7	2.0		3.5		14.9
Green Ext Time (p_c), s		1.2			3.4		1.4	22.4		0.0		15.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.3								
HCM 2010 LOS				C								
<b>Notes</b>												
























						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	 		 	  	  	
Volume (veh/h)	382	517	337	675	1030	312
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	1299	597	615	3045	1856	526
Arrive On Green	0.38	0.38	0.36	1.00	0.34	0.34
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	415	562	366	734	1120	339
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	10.0	40.2	10.2	0.0	19.6	21.3
Cycle Q Clear(g_c), s	10.0	40.2	10.2	0.0	19.6	21.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1299	597	615	3045	1856	526
V/C Ratio(X)	0.32	0.94	0.59	0.24	0.60	0.64
Avail Cap(c_a), veh/h	1406	647	615	3045	1856	526
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.93	0.79	0.79
Uniform Delay (d), s/veh	25.4	34.7	33.7	0.0	32.2	32.8
Incr Delay (d2), s/veh	0.1	21.2	1.4	0.2	1.2	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.5	4.0	0.0	9.4	9.2
Lane Grp Delay (d), s/veh	25.5	55.9	35.1	0.2	33.4	37.6
Lane Grp LOS	C	E	D	A	C	D
Approach Vol, veh/h	977			1100	1459	
Approach Delay, s/veh	43.0			11.8	34.3	
Approach LOS	D			B	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			25.0	68.0	43.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			21.0	64.0	39.0	
Max Q Clear Time (g_c+I1), s			12.2	2.0	23.3	
Green Ext Time (p_c), s			4.2	8.1	8.3	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			29.7			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
20: Somersville Rd & EB SR-4 Ramps

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	232	457	0	0	0	0	867	732	480	1160	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	568	307	523				0	3130	887	572	4243	0
Arrive On Green	0.17	0.17	0.17				0.00	1.00	1.00	0.34	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	299	252	497				0	942	796	522	1261	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	9.6	15.8	18.8				0.0	0.0	0.0	17.6	0.0	0.0
Cycle Q Clear(g_c), s	9.6	15.8	18.8				0.0	0.0	0.0	17.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	568	307	523				0	3130	887	572	4243	0
V/C Ratio(X)	0.53	0.82	0.95				0.00	0.30	0.90	0.91	0.30	0.00
Avail Cap(c_a), veh/h	568	307	523				0	3130	887	625	4243	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.72	0.72	0.79	0.79	0.00
Uniform Delay (d), s/veh	45.7	48.3	49.5				0.0	0.0	0.0	39.0	0.0	0.0
Incr Delay (d2), s/veh	0.9	16.0	27.5				0.0	0.2	10.5	14.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	8.9	9.6				0.0	0.1	2.6	7.9	0.1	0.0
Lane Grp Delay (d), s/veh	46.6	64.2	77.0				0.0	0.2	10.5	53.1	0.1	0.0
Lane Grp LOS	D	E	E					A	B	D	A	
Approach Vol, veh/h		1048						1738			1783	
Approach Delay, s/veh		65.2						4.9			15.7	
Approach LOS		E						A			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		24.0						71.9		24.1	96.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		20.0						66.0		22.0	92.0	
Max Q Clear Time (g_c+I1), s		20.8						2.0		19.6	2.0	
Green Ext Time (p_c), s		0.0						42.5		0.5	52.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			22.9									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
21: Somersville Rd & Delta Fair Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	438	371	41	55	143	410	59	762	29	429	707	245
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1081	517	58	557	585	497	82	1737	67	693	1788	760
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.02	0.11	0.11	0.41	0.97	0.97
Sat Flow, veh/h	3408	1630	182	1757	1845	1568	1757	5294	204	3408	3689	1568
Grp Volume(v), veh/h	476	0	448	60	155	446	64	576	284	466	768	266
Grp Sat Flow(s),veh/h/ln	1704	0	1813	1757	1845	1568	1757	1845	1809	1704	1845	1568
Q Serve(g_s), s	8.8	0.0	17.8	1.9	5.0	21.5	2.9	11.6	11.7	8.9	0.9	0.6
Cycle Q Clear(g_c), s	8.8	0.0	17.8	1.9	5.0	21.5	2.9	11.6	11.7	8.9	0.9	0.6
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	1081	0	575	557	585	497	82	1211	593	693	1788	760
V/C Ratio(X)	0.44	0.00	0.78	0.11	0.26	0.90	0.78	0.48	0.48	0.67	0.43	0.35
Avail Cap(c_a), veh/h	1505	0	801	557	585	497	155	1211	593	860	1816	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.89	0.89	0.89
Uniform Delay (d), s/veh	21.5	0.0	24.5	19.1	20.2	25.8	38.6	28.9	28.9	21.4	0.6	0.6
Incr Delay (d2), s/veh	0.3	0.0	3.3	0.1	0.2	18.0	14.1	1.3	2.6	1.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	0.0	8.4	0.8	2.3	10.6	1.6	6.1	6.2	3.2	0.3	0.2
Lane Grp Delay (d), s/veh	21.8	0.0	27.8	19.2	20.4	43.8	52.7	30.2	31.6	22.7	0.8	0.9
Lane Grp LOS	C		C	B	C	D	D	C	C	C	A	A
Approach Vol, veh/h		924			661			924			1500	
Approach Delay, s/veh		24.7			36.1			32.2			7.6	
Approach LOS		C			D			C			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		29.1			29.1		7.7	30.0		20.1		42.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0			23.0		7.0	26.0		20.0		39.0
Max Q Clear Time (g_c+I1), s		19.8			23.5		4.9	13.7		10.9		2.9
Green Ext Time (p_c), s		5.4			0.0		0.0	4.5		5.3		10.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Cumulative Plus Project PM With Bypass  
 3/16/2014




























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	407	504	697	54	247	129	260	409	36	264	603	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	472	1449	616	76	309	262	311	813	71	317	908	386
Arrive On Green	0.27	0.39	0.00	0.04	0.17	0.00	0.18	0.24	0.24	0.18	0.25	0.25
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3346	292	1757	3689	1568
Grp Volume(v), veh/h	442	548	0	59	268	0	283	245	239	287	655	443
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1793	1757	1845	1568
Q Serve(g_s), s	28.0	12.0	0.0	3.8	16.1	0.0	18.0	13.2	13.3	18.2	18.5	28.0
Cycle Q Clear(g_c), s	28.0	12.0	0.0	3.8	16.1	0.0	18.0	13.2	13.3	18.2	18.5	28.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	472	1449	616	76	309	262	311	448	436	317	908	386
V/C Ratio(X)	0.94	0.38	0.00	0.78	0.87	0.00	0.91	0.55	0.55	0.91	0.72	1.15
Avail Cap(c_a), veh/h	525	1460	620	139	324	276	340	448	436	371	908	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	24.6	0.0	53.9	46.1	0.0	45.9	37.6	37.6	45.7	39.3	42.9
Incr Delay (d2), s/veh	23.4	0.2	0.0	15.6	20.7	0.0	26.1	1.4	1.5	22.9	2.8	92.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.3	5.4	0.0	2.0	9.4	0.0	10.4	6.4	6.3	10.2	9.1	21.0
Lane Grp Delay (d), s/veh	64.0	24.8	0.0	69.5	66.8	0.0	72.0	38.9	39.1	68.5	42.1	135.3
Lane Grp LOS	E	C		E	E		E	D	D	E	D	F
Approach Vol, veh/h		990			327			767			1385	
Approach Delay, s/veh		42.3			67.3			51.2			77.4	
Approach LOS		D			E			D			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	34.5	48.7		8.9	23.0		24.2	31.6		24.5	32.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	34.0	45.0		9.0	20.0		22.0	26.0		24.0	28.0	
Max Q Clear Time (g_c+I1), s	30.0	14.0		5.8	18.1		20.0	15.3		20.2	30.0	
Green Ext Time (p_c), s	0.6	5.5		0.0	0.9		0.2	6.4		0.3	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				60.6								
HCM 2010 LOS				E								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	94	8	12	614	1416	161
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	138	124	294	2942	2942	1250
Arrive On Green	0.08	0.08	0.80	0.80	0.80	0.80
Sat Flow, veh/h	1757	1568	281	3689	3689	1568
Grp Volume(v), veh/h	102	9	13	667	1539	175
Grp Sat Flow(s),veh/h/ln	1757	1568	281	1845	1845	1568
Q Serve(g_s), s	3.7	0.3	1.1	2.9	9.4	1.6
Cycle Q Clear(g_c), s	3.7	0.3	10.5	2.9	9.4	1.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	138	124	294	2942	2942	1250
V/C Ratio(X)	0.74	0.07	0.04	0.23	0.52	0.14
Avail Cap(c_a), veh/h	598	533	461	5135	5135	2182
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	27.6	4.1	1.6	2.3	1.5
Incr Delay (d2), s/veh	7.4	0.2	0.1	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.1	0.1	0.8	2.6	0.4
Lane Grp Delay (d), s/veh	36.5	27.8	4.2	1.7	2.4	1.5
Lane Grp LOS	D	C	A	A	A	A
Approach Vol, veh/h	111			680	1714	
Approach Delay, s/veh	35.8			1.7	2.3	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				55.6	55.6	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				90.0	90.0	
Max Q Clear Time (g_c+I1), s				12.5	11.4	
Green Ext Time (p_c), s				39.1	39.3	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			3.6			
HCM 2010 LOS			A			
<b>Notes</b>						
























HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

Cumulative Plus Project PM With Bypass  
 3/16/2014





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 		 
Volume (veh/h)	100	1239	0	2	700	392	0	7	4	814	5	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	139	1786	0	4	1503	639	2	50	25	1011	707	1202
Arrive On Green	0.08	0.48	0.00	0.00	0.41	0.00	0.00	0.04	0.04	0.30	0.38	0.38
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	1161	581	3408	1845	3136
Grp Volume(v), veh/h	109	1347	0	2	761	0	0	0	12	885	5	174
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1742	1704	1845	1568
Q Serve(g_s), s	5.6	27.3	0.0	0.1	14.2	0.0	0.0	0.0	0.6	22.7	0.2	3.3
Cycle Q Clear(g_c), s	5.6	27.3	0.0	0.1	14.2	0.0	0.0	0.0	0.6	22.7	0.2	3.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	139	1786	0	4	1503	639	2	0	75	1011	707	1202
V/C Ratio(X)	0.79	0.75	0.00	0.53	0.51	0.00	0.00	0.00	0.16	0.88	0.01	0.14
Avail Cap(c_a), veh/h	286	2004	0	76	1563	664	76	0	303	1259	922	1567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	19.3	0.0	45.9	20.4	0.0	0.0	0.0	42.4	30.8	17.6	18.5
Incr Delay (d2), s/veh	9.4	1.5	0.0	81.8	0.3	0.0	0.0	0.0	1.0	6.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	12.3	0.0	0.1	6.4	0.0	0.0	0.0	0.3	10.4	0.1	1.2
Lane Grp Delay (d), s/veh	51.0	20.8	0.0	127.7	20.6	0.0	0.0	0.0	43.4	36.8	17.6	18.6
Lane Grp LOS	D	C		F	C				D	D	B	B
Approach Vol, veh/h		1456			763			12				1064
Approach Delay, s/veh		23.0			20.9			43.4				33.7
Approach LOS		C			C			D				C
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.3	48.6		4.2	41.5		0.0	8.0		31.3		39.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	15.0	50.0		4.0	39.0		4.0	16.0		34.0		46.0
Max Q Clear Time (g_c+I1), s	7.6	29.3		2.1	16.2		0.0	2.6		24.7		5.3
Green Ext Time (p_c), s	0.1	15.3		0.0	16.4		0.0	0.6		2.6		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				26.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	74	445	163	100	251	80	90	275	27	277	453	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	425	1023	372	292	1068	333	361	823	80	497	916	779
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1008	2585	939	763	2699	841	843	1656	161	1037	1845	1568
Grp Volume(v), veh/h	80	345	316	109	185	175	98	0	328	301	492	62
Grp Sat Flow(s),veh/h/ln	1008	1845	1679	763	1845	1696	843	0	1816	1037	1845	1568
Q Serve(g_s), s	4.3	10.3	10.4	9.2	5.0	5.2	6.7	0.0	8.3	18.7	13.6	1.5
Cycle Q Clear(g_c), s	9.5	10.3	10.4	19.7	5.0	5.2	20.3	0.0	8.3	26.9	13.6	1.5
Prop In Lane	1.00		0.56	1.00		0.50	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	425	730	664	292	730	671	361	0	902	497	916	779
V/C Ratio(X)	0.19	0.47	0.48	0.37	0.25	0.26	0.27	0.00	0.36	0.61	0.54	0.08
Avail Cap(c_a), veh/h	663	1165	1060	472	1165	1071	678	0	1586	888	1611	1369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	16.7	16.7	24.1	15.1	15.2	19.8	0.0	11.5	19.8	12.8	9.8
Incr Delay (d2), s/veh	0.2	0.5	0.5	0.8	0.2	0.2	0.4	0.0	0.2	1.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	4.5	4.1	1.8	2.2	2.1	1.4	0.0	3.4	4.7	5.9	0.6
Lane Grp Delay (d), s/veh	18.6	17.2	17.3	24.9	15.3	15.4	20.2	0.0	11.7	21.0	13.3	9.9
Lane Grp LOS	B	B	B	C	B	B	C		B	C	B	A
Approach Vol, veh/h		741			469			426			855	
Approach Delay, s/veh		17.4			17.5			13.7			15.8	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		33.4			33.4			41.0			41.0	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		47.0			47.0			65.0			65.0	
Max Q Clear Time (g_c+I1), s		12.4			21.7			22.3			28.9	
Green Ext Time (p_c), s		8.4			7.8			8.2			8.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.2								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Cumulative Plus Project PM With Bypass  
 3/16/2014
































												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	117	1635	8	27	658	124	4	19	8	246	21	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	161	2152	11	42	1567	296	71	283	110	397	52	334
Arrive On Green	0.09	0.59	0.59	0.02	0.52	0.52	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1757	3667	19	1757	3019	570	90	1172	454	1361	217	1384
Grp Volume(v), veh/h	127	893	893	29	437	413	34	0	0	267	0	170
Grp Sat Flow(s),veh/h/ln	1757	1845	1841	1757	1845	1744	1716	0	0	1361	0	1600
Q Serve(g_s), s	5.7	31.4	31.5	1.3	12.1	12.1	0.0	0.0	0.0	15.3	0.0	7.3
Cycle Q Clear(g_c), s	5.7	31.4	31.5	1.3	12.1	12.1	1.2	0.0	0.0	16.5	0.0	7.3
Prop In Lane	1.00		0.01	1.00		0.33	0.12		0.26	1.00		0.86
Lane Grp Cap(c), veh/h	161	1082	1080	42	957	905	464	0	0	397	0	386
V/C Ratio(X)	0.79	0.83	0.83	0.70	0.46	0.46	0.07	0.00	0.00	0.67	0.00	0.44
Avail Cap(c_a), veh/h	282	1140	1138	87	957	905	556	0	0	472	0	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	13.4	13.4	39.2	12.3	12.3	23.7	0.0	0.0	30.1	0.0	26.1
Incr Delay (d2), s/veh	8.4	4.9	4.9	18.9	0.3	0.4	0.1	0.0	0.0	2.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	14.4	14.4	0.8	5.1	4.8	0.5	0.0	0.0	5.4	0.0	3.0
Lane Grp Delay (d), s/veh	44.4	18.3	18.4	58.1	12.6	12.6	23.8	0.0	0.0	33.0	0.0	26.8
Lane Grp LOS	D	B	B	E	B	B	C			C		C
Approach Vol, veh/h		1913			879			34				437
Approach Delay, s/veh		20.1			14.1			23.8				30.6
Approach LOS		C			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	11.4	51.5		5.9	46.0			23.5				23.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	13.0	50.0		4.0	41.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	7.7	33.5		3.3	14.1			3.2				18.5
Green Ext Time (p_c), s	0.1	14.0		0.0	22.0			2.0				1.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.9								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	165	135	1162	13	66	77	802	842	10	80	1274	267
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	298	313	1433	51	260	266	978	2358	1002	112	1846	386
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.29	0.64	0.64	0.06	0.42	0.42
Sat Flow, veh/h	1757	1845	3136	298	1532	1568	3408	3689	1568	1757	4442	929
Grp Volume(v), veh/h	179	147	1263	86	0	84	872	915	11	87	1150	525
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1830	0	1568	1704	1845	1568	1757	1845	1681
Q Serve(g_s), s	8.9	6.8	16.0	3.9	0.0	4.4	23.1	11.2	0.2	4.6	24.9	25.0
Cycle Q Clear(g_c), s	8.9	6.8	16.0	3.9	0.0	4.4	23.1	11.2	0.2	4.6	24.9	25.0
Prop In Lane	1.00		1.00	0.16		1.00	1.00		1.00	1.00		0.55
Lane Grp Cap(c), veh/h	298	313	1433	311	0	266	978	2358	1002	112	1534	699
V/C Ratio(X)	0.60	0.47	0.88	0.28	0.00	0.32	0.89	0.39	0.01	0.78	0.75	0.75
Avail Cap(c_a), veh/h	298	313	1433	311	0	266	1122	2358	1002	224	1606	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	35.3	23.3	34.0	0.0	34.3	32.2	8.2	6.2	43.4	23.4	23.4
Incr Delay (d2), s/veh	3.3	1.1	6.8	0.5	0.0	0.7	8.4	0.1	0.0	11.1	1.9	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.3	14.2	1.8	0.0	1.8	11.0	4.5	0.1	2.4	11.7	11.2
Lane Grp Delay (d), s/veh	39.4	36.3	30.0	34.5	0.0	35.0	40.6	8.3	6.2	54.5	25.3	27.6
Lane Grp LOS	D	D	C	C		C	D	A	A	D	C	C
Approach Vol, veh/h		1589			170			1798			1762	
Approach Delay, s/veh		31.7			34.7			23.9			27.4	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		20.0			20.0		31.0	64.2		10.0		43.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		31.0	60.0		12.0		41.0
Max Q Clear Time (g_c+I1), s		18.0			6.4		25.1	13.2		6.6		27.0
Green Ext Time (p_c), s		0.0			5.7		1.9	32.6		0.1		12.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr























Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 	 		  	  
Volume (veh/h)	56	0	47	2	0	1	55	2166	3	0	751	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	102	0	91	289	107	91	76	3085	1311	2	4032	54
Arrive On Green	0.06	0.00	0.06	0.06	0.00	0.06	0.04	0.84	0.84	0.00	0.74	0.74
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5448	73
Grp Volume(v), veh/h	61	0	51	2	0	1	60	2354	3	0	552	275
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1832
Q Serve(g_s), s	2.6	0.0	2.4	0.0	0.0	0.0	2.6	21.9	0.0	0.0	3.5	3.5
Cycle Q Clear(g_c), s	2.6	0.0	2.4	0.0	0.0	0.0	2.6	21.9	0.0	0.0	3.5	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	102	0	91	289	107	91	76	3085	1311	2	2730	1356
V/C Ratio(X)	0.60	0.00	0.56	0.01	0.00	0.01	0.78	0.76	0.00	0.00	0.20	0.20
Avail Cap(c_a), veh/h	371	0	331	1045	389	331	208	3307	1405	93	3064	1521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	0.0	34.8	33.7	0.0	33.7	35.9	2.8	1.0	0.0	3.0	3.0
Incr Delay (d2), s/veh	5.4	0.0	5.2	0.0	0.0	0.0	15.9	1.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	1.1	0.0	0.0	0.0	1.5	5.7	0.0	0.0	1.2	1.2
Lane Grp Delay (d), s/veh	40.3	0.0	40.0	33.7	0.0	33.7	51.9	3.8	1.0	0.0	3.1	3.1
Lane Grp LOS	D		D	C		C	D	A	A		A	A
Approach Vol, veh/h		112			3			2417			827	
Approach Delay, s/veh		40.2			33.7			5.0			3.1	
Approach LOS		D			C			A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		8.4			8.4		7.3	67.4		0.0		60.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		9.0	68.0		4.0		63.0
Max Q Clear Time (g_c+I1), s		4.6			2.0		4.6	23.9		0.0		5.5
Green Ext Time (p_c), s		0.3			0.3		0.0	39.6		0.0		50.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				5.7								
HCM 2010 LOS				A								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Cumulative Plus Project PM With Bypass

3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	319	327	177	222	143	46	160	1496	397	63	539	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	487	425	226	274	243	103	206	1946	509	87	1895	233
Arrive On Green	0.28	0.19	0.19	0.16	0.07	0.07	0.12	0.46	0.46	0.05	0.39	0.39
Sat Flow, veh/h	1757	2271	1206	1757	3689	1568	1757	4232	1107	1757	4835	594
Grp Volume(v), veh/h	347	287	260	241	155	50	174	1414	644	68	445	214
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1649	1757	1845	1740
Q Serve(g_s), s	19.3	16.2	16.7	14.5	4.4	2.9	10.5	36.4	37.4	4.1	9.0	9.2
Cycle Q Clear(g_c), s	19.3	16.2	16.7	14.5	4.4	2.9	10.5	36.4	37.4	4.1	9.0	9.2
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.67	1.00		0.34
Lane Grp Cap(c), veh/h	487	345	305	274	243	103	206	1697	758	87	1446	682
V/C Ratio(X)	0.71	0.83	0.85	0.88	0.64	0.49	0.84	0.83	0.85	0.78	0.31	0.31
Avail Cap(c_a), veh/h	487	409	362	341	545	232	325	1772	792	114	1446	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	42.4	42.6	44.7	49.3	36.8	46.8	25.6	25.9	50.9	22.8	22.8
Incr Delay (d2), s/veh	4.9	11.9	15.3	19.2	2.8	3.5	11.1	3.5	8.4	22.4	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.2	8.9	8.3	8.0	2.2	1.4	5.4	17.3	17.0	2.4	4.2	4.0
Lane Grp Delay (d), s/veh	40.1	54.3	57.9	64.0	52.1	40.3	58.0	29.1	34.3	73.3	22.9	23.1
Lane Grp LOS	D	D	E	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		894			446			2232			727	
Approach Delay, s/veh		49.8			57.2			32.8			27.7	
Approach LOS		D			E			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	34.0	24.2		20.9	11.1		16.7	53.8		9.4	46.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	29.0	24.0		21.0	16.0		20.0	52.0		7.0	39.0	
Max Q Clear Time (g_c+I1), s	21.3	18.7		16.5	6.4		12.5	39.4		6.1	11.2	
Green Ext Time (p_c), s	1.3	1.6		0.4	0.7		0.3	10.3		0.0	22.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.0								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	662	946	30	251	443	161	145	1670	594	279	469	235
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	779	1469	0	328	737	0	215	2214	627	348	2429	688
Arrive On Green	0.23	0.27	0.00	0.10	0.13	0.00	0.06	0.40	0.40	0.10	0.44	0.44
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	720	1028	0	273	482	0	158	1815	646	303	510	255
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	24.3	19.7	0.0	9.2	9.7	0.0	5.4	34.4	47.0	10.3	6.7	12.8
Cycle Q Clear(g_c), s	24.3	19.7	0.0	9.2	9.7	0.0	5.4	34.4	47.0	10.3	6.7	12.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	779	1469	0	328	737	0	215	2214	627	348	2429	688
V/C Ratio(X)	0.92	0.70	0.00	0.83	0.65	0.00	0.73	0.82	1.03	0.87	0.21	0.37
Avail Cap(c_a), veh/h	812	1554	0	348	801	0	290	2214	627	348	2429	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	38.9	0.0	52.2	48.4	0.0	54.1	31.5	35.3	52.0	20.4	22.1
Incr Delay (d2), s/veh	15.8	1.3	0.0	14.9	1.7	0.0	6.3	2.6	43.9	20.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.3	9.5	0.0	4.8	4.8	0.0	2.6	16.5	26.0	5.5	3.0	5.0
Lane Grp Delay (d), s/veh	60.1	40.3	0.0	67.1	50.1	0.0	60.3	34.1	79.1	72.5	20.4	22.4
Lane Grp LOS	E	D		E	D		E	C	F	E	C	C
Approach Vol, veh/h		1748			755			2619			1068	
Approach Delay, s/veh		48.5			56.2			46.7			35.7	
Approach LOS		D			E			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	30.9	35.2		15.3	19.6		11.4	51.0		16.0	55.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	33.0		12.0	17.0		10.0	47.0		12.0	49.0	
Max Q Clear Time (g_c+I1), s	26.3	21.7		11.2	11.7		7.4	49.0		12.3	14.8	
Green Ext Time (p_c), s	0.6	7.3		0.1	3.9		0.1	0.0		0.0	28.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				46.5								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Cumulative Plus Project PM With Bypass  
3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	1413	14	32	756	38	20	0	31	40	0	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	41	2583	25	51	2488	124	196	0	123	189	0	123
Arrive On Green	0.02	0.71	0.71	0.03	0.71	0.71	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1757	3647	36	1757	3485	174	1364	0	1568	1356	0	1568
Grp Volume(v), veh/h	26	776	775	35	435	428	22	0	34	43	0	27
Grp Sat Flow(s),veh/h/ln	1757	1845	1838	1757	1845	1814	1364	0	1568	1356	0	1568
Q Serve(g_s), s	1.0	13.8	13.8	1.3	5.7	5.7	1.0	0.0	1.3	2.0	0.0	1.0
Cycle Q Clear(g_c), s	1.0	13.8	13.8	1.3	5.7	5.7	2.0	0.0	1.3	3.3	0.0	1.0
Prop In Lane	1.00		0.02	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	1306	1302	51	1317	1295	196	0	123	189	0	123
V/C Ratio(X)	0.64	0.59	0.60	0.69	0.33	0.33	0.11	0.00	0.28	0.23	0.00	0.22
Avail Cap(c_a), veh/h	216	2328	2320	216	2328	2289	467	0	434	459	0	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.5	4.8	4.8	31.3	3.5	3.5	29.0	0.0	28.2	29.8	0.0	28.1
Incr Delay (d2), s/veh	15.7	0.4	0.4	15.5	0.1	0.1	0.3	0.0	1.2	0.6	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	3.8	3.8	0.8	1.6	1.6	0.3	0.0	0.6	0.7	0.0	0.4
Lane Grp Delay (d), s/veh	47.2	5.2	5.2	46.7	3.6	3.6	29.3	0.0	29.4	30.4	0.0	29.0
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		1577			898			56			70	
Approach Delay, s/veh		5.9			5.3			29.4			29.8	
Approach LOS		A			A			C			C	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.5	50.0		5.9	50.4			9.1				9.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	82.0		8.0	82.0			18.0				18.0
Max Q Clear Time (g_c+I1), s	3.0	15.8		3.3	7.7			4.0				5.3
Green Ext Time (p_c), s	0.0	30.2		0.0	31.5			0.4				0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				6.9								
HCM 2010 LOS				A								
<b>Notes</b>												























						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			 
Volume (veh/h)	417	1312	482	181	203	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	511	2444	813	304	402	359
Arrive On Green	0.29	0.66	0.32	0.32	0.23	0.23
Sat Flow, veh/h	1757	3689	2561	959	1757	1568
Grp Volume(v), veh/h	453	1426	377	344	221	315
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1675	1757	1568
Q Serve(g_s), s	18.1	15.7	12.9	13.0	8.2	14.3
Cycle Q Clear(g_c), s	18.1	15.7	12.9	13.0	8.2	14.3
Prop In Lane	1.00			0.57	1.00	1.00
Lane Grp Cap(c), veh/h	511	2444	585	532	402	359
V/C Ratio(X)	0.89	0.58	0.64	0.65	0.55	0.88
Avail Cap(c_a), veh/h	811	3158	627	569	453	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	6.8	21.6	21.6	25.0	27.4
Incr Delay (d2), s/veh	7.4	0.2	2.1	2.3	1.2	17.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.7	5.8	6.1	5.6	3.6	1.8
Lane Grp Delay (d), s/veh	32.3	7.1	23.6	23.9	26.2	45.2
Lane Grp LOS	C	A	C	C	C	D
Approach Vol, veh/h		1879	721		536	
Approach Delay, s/veh		13.2	23.8		37.4	
Approach LOS		B	C		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.4	52.8	27.4			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	34.0	63.0	25.0			
Max Q Clear Time (g_c+I1), s	20.1	17.7	15.0			
Green Ext Time (p_c), s	1.3	25.9	8.4			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			19.7			
HCM 2010 LOS			B			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Cumulative Plus Project PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	129	9	580	19	1	2	257	624	14	21	636	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	667	11	666	99	237	473	361	1569	35	33	841	67
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.21	0.44	0.44	0.02	0.25	0.25
Sat Flow, veh/h	1394	25	1547	778	550	1100	1757	3596	80	1757	3374	268
Grp Volume(v), veh/h	140	0	640	21	0	3	279	348	345	23	378	368
Grp Sat Flow(s),veh/h/ln	1394	0	1572	778	0	1650	1757	1845	1831	1757	1845	1797
Q Serve(g_s), s	6.7	0.0	40.9	2.8	0.0	0.1	15.7	13.7	13.7	1.4	20.2	20.2
Cycle Q Clear(g_c), s	6.8	0.0	40.9	43.7	0.0	0.1	15.7	13.7	13.7	1.4	20.2	20.2
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.04	1.00		0.15
Lane Grp Cap(c), veh/h	667	0	676	99	0	710	361	805	799	33	460	448
V/C Ratio(X)	0.21	0.00	0.95	0.21	0.00	0.00	0.77	0.43	0.43	0.70	0.82	0.82
Avail Cap(c_a), veh/h	667	0	676	99	0	710	470	988	980	118	617	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.64	0.64	0.64	0.84	0.84	0.84
Uniform Delay (d), s/veh	18.9	0.0	28.6	49.6	0.0	17.0	39.2	20.5	20.5	51.0	37.0	37.1
Incr Delay (d2), s/veh	0.2	0.0	22.3	1.1	0.0	0.0	3.8	1.1	1.1	20.3	12.9	13.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	0.0	20.0	0.6	0.0	0.0	7.4	6.4	6.4	0.8	11.1	10.9
Lane Grp Delay (d), s/veh	19.1	0.0	51.0	50.7	0.0	17.0	43.0	21.6	21.6	71.4	49.9	50.3
Lane Grp LOS	B		D	D		B	D	C	C	E	D	D
Approach Vol, veh/h		780			24			972			769	
Approach Delay, s/veh		45.2			46.5			27.7			50.8	
Approach LOS		D			D			C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		49.0			49.0		25.5	49.6		5.9		30.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		45.0			45.0		28.0	56.0		7.0		35.0
Max Q Clear Time (g_c+I1), s		42.9			45.7		17.7	15.7		3.4		22.2
Green Ext Time (p_c), s		1.1			0.0		3.8	5.9		0.0		3.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				40.2								
HCM 2010 LOS				D								
<b>Notes</b>												



















HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	928	599	128	384	10	202	20	34	15	11	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	31	1109	677	171	2134	56	274	20	392	59	39	11
Arrive On Green	0.02	0.52	0.52	0.10	0.60	0.60	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1757	2147	1311	1757	3578	94	786	79	1568	0	157	45
Grp Volume(v), veh/h	20	859	801	139	215	213	242	0	37	36	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1613	1757	1845	1828	865	0	1568	201	0	0
Q Serve(g_s), s	1.0	37.1	42.0	6.8	4.7	4.7	0.0	0.0	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	37.1	42.0	6.8	4.7	4.7	22.0	0.0	1.6	22.0	0.0	0.0
Prop In Lane	1.00		0.81	1.00		0.05	0.91		1.00	0.44		0.22
Lane Grp Cap(c), veh/h	31	953	834	171	1100	1090	294	0	392	109	0	0
V/C Ratio(X)	0.65	0.90	0.96	0.81	0.20	0.20	0.82	0.00	0.09	0.33	0.00	0.00
Avail Cap(c_a), veh/h	100	963	843	199	1100	1090	294	0	392	109	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.0	19.3	20.4	39.0	8.1	8.1	34.2	0.0	25.4	27.5	0.0	0.0
Incr Delay (d2), s/veh	20.5	11.4	21.9	19.5	0.1	0.1	17.0	0.0	0.1	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	19.0	20.9	4.0	1.9	1.9	6.8	0.0	0.6	0.7	0.0	0.0
Lane Grp Delay (d), s/veh	63.5	30.6	42.3	58.5	8.2	8.2	51.2	0.0	25.5	29.2	0.0	0.0
Lane Grp LOS	E	C	D	E	A	A	D		C	C		
Approach Vol, veh/h	1680			567			279			36		
Approach Delay, s/veh	36.6			20.5			47.8			29.2		
Approach LOS	D			C			D			C		
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.5	49.5		12.6	56.5			26.0				26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	5.0	46.0		10.0	51.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	3.0	44.0		8.8	6.7			24.0				24.0
Green Ext Time (p_c), s	0.0	1.5		0.0	25.6			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				34.2								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

No Bypass Cumulative +Project AM





















3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	166	323	194	757	827	155	268	827	324
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				213	431	274	874	1342	251	322	1367	581
Arrive On Green				0.26	0.26	0.26	0.34	0.59	0.59	0.18	0.37	0.00
Sat Flow, veh/h				806	1626	1034	3408	3025	565	1757	3689	1568
Grp Volume(v), veh/h				403	0	339	823	548	519	291	899	0
Grp Sat Flow(s),veh/h/ln				1804	0	1662	1704	1845	1745	1757	1845	1568
Q Serve(g_s), s				23.4	0.0	20.9	25.9	22.3	22.3	17.9	22.4	0.0
Cycle Q Clear(g_c), s				23.4	0.0	20.9	25.9	22.3	22.3	17.9	22.4	0.0
Prop In Lane				0.45		0.62	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h				478	0	440	874	818	774	322	1367	581
V/C Ratio(X)				0.84	0.00	0.77	0.94	0.67	0.67	0.90	0.66	0.00
Avail Cap(c_a), veh/h				619	0	571	893	818	774	381	1367	581
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.56	0.56	0.56	1.00	1.00	0.00
Uniform Delay (d), s/veh				38.5	0.0	37.6	35.7	17.2	17.2	44.2	29.0	0.0
Incr Delay (d2), s/veh				8.2	0.0	4.8	11.4	2.5	2.6	21.9	2.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				11.8	0.0	9.4	12.1	9.5	9.1	10.0	10.8	0.0
Lane Grp Delay (d), s/veh				46.7	0.0	42.4	47.1	19.7	19.8	66.2	31.5	0.0
Lane Grp LOS				D		D	D	B	B	E	C	
Approach Vol, veh/h					742			1890			1190	
Approach Delay, s/veh					44.7			31.6			40.0	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					33.3		32.4	53.1		24.3	45.0	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					25.4		27.9	24.3		19.9	24.4	
Green Ext Time (p_c), s					3.9		0.4	14.3		0.3	11.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					36.8							
HCM 2010 LOS					D							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

No Bypass Cumulative +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	329	0	486	0	0	0	0	1100	290	281	678	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	415	436	741				0	1651	435	468	2555	0
Arrive On Green	0.24	0.00	0.24				0.00	0.39	0.39	0.53	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4225	1113	1757	3689	0
Grp Volume(v), veh/h	358	0	528				0	1044	467	305	737	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1648	1757	1845	0
Q Serve(g_s), s	22.0	0.0	17.4				0.0	27.1	27.1	14.0	0.0	0.0
Cycle Q Clear(g_c), s	22.0	0.0	17.4				0.0	27.1	27.1	14.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.68	1.00		0.00
Lane Grp Cap(c), veh/h	415	436	741				0	1441	644	468	2555	0
V/C Ratio(X)	0.86	0.00	0.71				0.00	0.72	0.72	0.65	0.29	0.00
Avail Cap(c_a), veh/h	530	557	947				0	1441	644	468	2555	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.63	0.63	0.00
Uniform Delay (d), s/veh	41.2	0.0	39.5				0.0	29.2	29.2	22.6	0.0	0.0
Incr Delay (d2), s/veh	11.2	0.0	1.8				0.0	3.2	7.0	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	11.1	0.0	7.1				0.0	13.1	12.4	5.2	0.1	0.0
Lane Grp Delay (d), s/veh	52.5	0.0	41.3				0.0	32.4	36.1	24.6	0.2	0.0
Lane Grp LOS	D		D					C	D	C	A	
Approach Vol, veh/h		886						1511			1042	
Approach Delay, s/veh		45.8						33.5			7.3	
Approach LOS		D						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		30.6						48.0		34.0	82.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		34.0						44.0		30.0	78.0	
Max Q Clear Time (g_c+I1), s		24.0						29.1		16.0	2.0	
Green Ext Time (p_c), s		2.6						9.1		5.2	7.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.8									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd

No Bypass Cumulative +Project AM

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	476	5	93	580	322	128	808	66	152	353	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	336	1261	12	128	838	356	171	1090	463	220	1193	507
Arrive On Green	0.19	0.35	0.35	0.07	0.23	0.23	0.10	0.30	0.30	0.13	0.32	0.32
Sat Flow, veh/h	1757	3648	35	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	299	261	261	101	630	350	139	878	72	165	384	297
Grp Sat Flow(s),veh/h/ln	1757	1845	1838	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.5	10.8	10.8	5.6	15.9	16.2	7.7	21.9	2.6	9.0	7.8	15.8
Cycle Q Clear(g_c), s	16.5	10.8	10.8	5.6	15.9	16.2	7.7	21.9	2.6	9.0	7.8	15.8
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	638	636	128	838	356	171	1090	463	220	1193	507
V/C Ratio(X)	0.89	0.41	0.41	0.79	0.75	0.98	0.81	0.81	0.16	0.75	0.32	0.59
Avail Cap(c_a), veh/h	458	704	701	229	926	393	300	1407	598	264	1333	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	24.8	24.8	45.4	35.9	20.6	44.1	32.5	15.9	42.0	25.4	28.1
Incr Delay (d2), s/veh	15.0	0.4	0.4	10.3	3.2	39.3	8.9	2.7	0.2	9.2	0.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.8	5.0	5.0	2.9	7.7	10.1	3.9	10.5	1.3	4.6	3.7	6.3
Lane Grp Delay (d), s/veh	54.3	25.3	25.3	55.7	39.0	59.9	53.0	35.2	16.0	51.3	25.6	29.4
Lane Grp LOS	D	C	C	E	D	E	D	D	B	D	C	C
Approach Vol, veh/h		821			1081			1089			846	
Approach Delay, s/veh		35.8			47.3			36.2			31.9	
Approach LOS		D			D			D			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	23.1	38.4		11.3	26.6		13.7	33.4		16.5	36.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	26.0	38.0		13.0	25.0		17.0	38.0		15.0	36.0	
Max Q Clear Time (g_c+I1), s	18.5	12.8		7.6	18.2		9.7	23.9		11.0	17.8	
Green Ext Time (p_c), s	0.5	10.1		0.1	4.4		0.2	5.5		1.6	3.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.3								
HCM 2010 LOS				D								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 4: Railroad Ave & Buchanan Rd

No Bypass Cumulative +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	94	102	30	1153	57	137	8	486	485	99	567	73
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	757	795	676	1469	795	676	79	1311	557	137	1432	609
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.05	0.36	0.36	0.08	0.39	0.39
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	102	111	33	1253	62	149	9	528	527	108	616	79
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.1	3.2	1.1	29.3	1.8	5.3	0.4	9.5	28.9	5.3	10.8	2.9
Cycle Q Clear(g_c), s	3.1	3.2	1.1	29.3	1.8	5.3	0.4	9.5	28.9	5.3	10.8	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	757	795	676	1469	795	676	79	1311	557	137	1432	609
V/C Ratio(X)	0.13	0.14	0.05	0.85	0.08	0.22	0.11	0.40	0.95	0.79	0.43	0.13
Avail Cap(c_a), veh/h	757	795	676	2081	1127	958	318	1335	567	219	1432	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	15.2	14.6	22.6	14.8	15.8	40.5	21.4	27.7	40.1	19.9	17.4
Incr Delay (d2), s/veh	0.1	0.1	0.0	2.6	0.0	0.2	0.6	0.2	24.8	9.6	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	1.4	0.4	12.0	0.7	2.0	0.2	4.3	14.8	2.7	4.9	1.1
Lane Grp Delay (d), s/veh	15.3	15.3	14.7	25.2	14.9	16.0	41.1	21.6	52.4	49.7	20.1	17.5
Lane Grp LOS	B	B	B	C	B	B	D	C	D	D	C	B
Approach Vol, veh/h		246			1464			1064			803	
Approach Delay, s/veh		15.2			23.8			37.1			23.8	
Approach LOS		B			C			D			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		42.1			42.1		8.0	35.4		10.9		38.3
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			54.0		16.0	32.0		11.0		27.0
Max Q Clear Time (g_c+I1), s		5.2			31.3		2.4	30.9		7.3		12.8
Green Ext Time (p_c), s		5.8			6.8		0.0	0.6		0.1		8.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.2								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance





























No Bypass Cumulative +Project AM  
3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	177	44	14	801	1689	59
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	239	213	25	2804	2459	85
Arrive On Green	0.14	0.14	0.01	0.76	0.69	0.69
Sat Flow, veh/h	1757	1568	1757	3689	3545	123
Grp Volume(v), veh/h	192	48	15	871	951	949
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1823
Q Serve(g_s), s	8.1	2.1	0.7	5.7	25.0	25.6
Cycle Q Clear(g_c), s	8.1	2.1	0.7	5.7	25.0	25.6
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	239	213	25	2804	1280	1265
V/C Ratio(X)	0.80	0.23	0.60	0.31	0.74	0.75
Avail Cap(c_a), veh/h	366	327	91	3169	1392	1376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	29.6	37.7	2.9	7.4	7.5
Incr Delay (d2), s/veh	7.3	0.5	20.8	0.1	2.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.1	0.0	0.4	1.8	10.0	10.0
Lane Grp Delay (d), s/veh	39.5	30.1	58.4	3.0	9.4	9.7
Lane Grp LOS	D	C	E	A	A	A
Approach Vol, veh/h	240			886	1900	
Approach Delay, s/veh	37.7			3.9	9.6	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			5.1	62.4	57.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			4.0	66.0	58.0	
Max Q Clear Time (g_c+I1), s			2.7	7.7	27.6	
Green Ext Time (p_c), s			0.0	43.3	25.7	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			10.1			
HCM 2010 LOS			B			
<b>Notes</b>						



HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd
























No Bypass Cumulative +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	159	612	129	115	557	199	227	657	241	249	314	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	211	945	402	157	832	353	293	1000	425	314	746	254
Arrive On Green	0.12	0.26	0.26	0.09	0.23	0.23	0.17	0.27	0.27	0.18	0.28	0.28
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2635	896
Grp Volume(v), veh/h	173	665	140	125	605	216	247	714	262	271	237	222
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1686
Q Serve(g_s), s	7.5	12.8	5.7	5.5	11.9	9.7	10.7	13.7	11.4	11.7	8.3	8.5
Cycle Q Clear(g_c), s	7.5	12.8	5.7	5.5	11.9	9.7	10.7	13.7	11.4	11.7	8.3	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	211	945	402	157	832	353	293	1000	425	314	522	477
V/C Ratio(X)	0.82	0.70	0.35	0.79	0.73	0.61	0.84	0.71	0.62	0.86	0.45	0.47
Avail Cap(c_a), veh/h	269	1038	441	202	896	381	472	1179	501	404	522	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	26.4	23.8	34.9	28.1	27.2	31.6	25.8	25.0	31.2	23.1	23.2
Incr Delay (d2), s/veh	14.4	2.0	0.5	15.3	2.8	2.5	7.5	1.7	1.7	14.1	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.1	6.1	2.2	3.1	5.7	3.9	5.3	6.5	4.6	6.3	3.8	3.6
Lane Grp Delay (d), s/veh	48.0	28.4	24.3	50.2	30.8	29.8	39.1	27.5	26.7	45.3	23.7	23.9
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		978			946			1223			730	
Approach Delay, s/veh		31.2			33.2			29.7			31.7	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.4	24.0		11.0	21.6		17.1	25.2		18.0	26.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	22.0		9.0	19.0		21.0	25.0		18.0	22.0	
Max Q Clear Time (g_c+I1), s	9.5	14.8		7.5	13.9		12.7	15.7		13.7	10.5	
Green Ext Time (p_c), s	0.1	5.0		0.0	3.7		0.5	5.5		0.3	6.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.3								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

No Bypass Cumulative +Project AM
























3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	546	5	2	1138	120	103	110	3	149	36	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	122	1180	10	54	1121	953	135	220	6	135	34	164
Arrive On Green	0.07	0.65	0.65	0.03	0.61	0.61	0.08	0.12	0.12	0.08	0.12	0.12
Sat Flow, veh/h	1757	1827	15	1757	1845	1568	1757	1792	45	1757	275	1334
Grp Volume(v), veh/h	138	0	598	2	1237	130	112	0	123	162	0	228
Grp Sat Flow(s),veh/h/ln	1757	0	1842	1757	1845	1568	1757	0	1837	1757	0	1609
Q Serve(g_s), s	9.0	0.0	22.1	0.1	79.0	3.0	8.2	0.0	8.2	10.0	0.0	16.0
Cycle Q Clear(g_c), s	9.0	0.0	22.1	0.1	79.0	3.0	8.2	0.0	8.2	10.0	0.0	16.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.02	1.00		0.83
Lane Grp Cap(c), veh/h	122	0	1190	54	1121	953	135	0	226	135	0	198
V/C Ratio(X)	1.13	0.00	0.50	0.04	1.10	0.14	0.83	0.00	0.54	1.20	0.00	1.15
Avail Cap(c_a), veh/h	122	0	1190	54	1121	953	135	0	226	135	0	198
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.00	0.69	0.31	0.31	0.31	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.5	0.0	12.0	61.1	25.5	4.6	59.2	0.0	53.6	60.0	0.0	57.0
Incr Delay (d2), s/veh	108.7	0.0	1.1	0.1	51.3	0.1	33.1	0.0	2.7	140.5	0.0	110.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.7	0.0	9.3	0.1	49.3	1.7	5.0	0.0	4.1	9.9	0.0	12.8
Lane Grp Delay (d), s/veh	169.2	0.0	13.1	61.2	76.8	4.7	92.3	0.0	56.3	200.5	0.0	167.6
Lane Grp LOS	F		B	E	F	A	F		E	F		F
Approach Vol, veh/h		736			1369			235				390
Approach Delay, s/veh		42.4			69.9			73.4				181.3
Approach LOS		D			E			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	13.0	88.0		8.0	83.0		14.0	20.0		14.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	9.0	84.0		4.0	79.0		10.0	16.0		10.0		16.0
Max Q Clear Time (g_c+I1), s	11.0	24.1		2.1	81.0		10.2	10.2		12.0		18.0
Green Ext Time (p_c), s	0.0	4.5		0.1	0.0		0.0	0.5		0.0		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				78.7								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

No Bypass Cumulative +Project AM























3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	300	24	759	370	150	23	55	93	85	104	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	63	938	74	1622	2650	1126	188	198	168	188	168	25
Arrive On Green	0.04	0.28	0.28	0.48	0.72	0.72	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1757	3374	268	3408	3689	1568	1757	1845	1568	1757	1567	236
Grp Volume(v), veh/h	39	177	175	825	402	163	25	60	101	92	0	130
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1803
Q Serve(g_s), s	1.9	6.6	6.7	14.5	3.0	2.8	1.1	2.6	5.3	4.3	0.0	6.0
Cycle Q Clear(g_c), s	1.9	6.6	6.7	14.5	3.0	2.8	1.1	2.6	5.3	4.3	0.0	6.0
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	63	513	500	1622	2650	1126	188	198	168	188	0	193
V/C Ratio(X)	0.62	0.35	0.35	0.51	0.15	0.14	0.13	0.30	0.60	0.49	0.00	0.67
Avail Cap(c_a), veh/h	142	513	500	1777	2650	1126	346	363	309	366	0	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.1	24.9	24.9	15.6	3.8	3.8	34.9	35.6	36.8	36.3	0.0	37.1
Incr Delay (d2), s/veh	9.8	1.8	1.9	0.1	0.1	0.1	0.3	0.9	3.4	2.0	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	3.3	3.3	5.9	1.1	0.9	0.5	1.3	2.2	2.0	0.0	3.0
Lane Grp Delay (d), s/veh	50.8	26.7	26.8	15.8	3.9	4.0	35.2	36.4	40.2	38.3	0.0	41.1
Lane Grp LOS	D	C	C	B	A	A	D	D	D	D		D
Approach Vol, veh/h		391			1390			186			222	
Approach Delay, s/veh		29.2			11.0			38.3			39.9	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	7.1	28.0		45.1	66.0			13.2			13.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	7.0	24.0		45.0	62.0			17.0			18.0	
Max Q Clear Time (g_c+I1), s	3.9	8.7		16.5	5.0			7.3			8.0	
Green Ext Time (p_c), s	1.2	1.8		3.5	3.6			1.2			1.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.5								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 9: Loveridge Rd & California Ave/N Park Blvd

No Bypass Cumulative +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	66	297	49	169	3	652	329	103	8	240	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	189	365	310	111	633	10	894	1584	488	16	1224	520
Arrive On Green	0.06	0.20	0.20	0.03	0.17	0.17	0.26	0.59	0.59	0.01	0.33	0.33
Sat Flow, veh/h	3408	1845	1568	3408	3620	59	3408	2707	835	1757	3689	1568
Grp Volume(v), veh/h	124	72	323	53	94	93	709	242	228	9	261	621
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1834	1704	1845	1697	1757	1845	1568
Q Serve(g_s), s	3.2	3.0	18.0	1.4	4.0	4.0	17.6	5.7	5.9	0.5	4.6	23.7
Cycle Q Clear(g_c), s	3.2	3.0	18.0	1.4	4.0	4.0	17.6	5.7	5.9	0.5	4.6	23.7
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	189	365	310	111	322	321	894	1079	993	16	1224	520
V/C Ratio(X)	0.66	0.20	1.04	0.48	0.29	0.29	0.79	0.22	0.23	0.57	0.21	1.19
Avail Cap(c_a), veh/h	225	365	310	150	324	322	1123	1581	1455	77	2108	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	30.5	36.5	43.3	32.6	32.7	31.3	9.0	9.0	44.9	21.9	18.8
Incr Delay (d2), s/veh	5.3	0.3	62.4	3.2	0.5	0.5	3.1	0.1	0.1	28.9	0.1	97.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	1.4	12.4	0.7	1.9	1.9	8.0	2.4	2.2	0.3	2.1	22.8
Lane Grp Delay (d), s/veh	47.4	30.7	98.9	46.5	33.1	33.2	34.4	9.1	9.2	73.8	22.0	116.1
Lane Grp LOS	D	C	F	D	C	C	C	A	A	E	C	F
Approach Vol, veh/h		519			240			1179			891	
Approach Delay, s/veh		77.1			36.1			24.3			88.1	
Approach LOS		E			D			C			F	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	9.0	22.0		7.0	19.9		27.9	57.3		4.8	34.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	18.0		4.0	16.0		30.0	78.0		4.0	52.0	
Max Q Clear Time (g_c+I1), s	5.2	20.0		3.4	6.0		19.6	7.9		2.5	25.7	
Green Ext Time (p_c), s	0.0	0.0		0.1	0.8		4.2	6.8		0.0	4.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				55.1								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

No Bypass Cumulative +Project AM

























3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	462	0	411	0	0	0	0	758	220	141	526	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1121	0	516				0	1834	780	217	2205	0
Arrive On Green	0.33	0.00	0.33				0.00	0.50	0.50	0.06	0.60	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	502	0	447				0	824	239	153	572	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	12.6	0.0	29.1				0.0	15.7	9.8	4.8	8.0	0.0
Cycle Q Clear(g_c), s	12.6	0.0	29.1				0.0	15.7	9.8	4.8	8.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1121	0	516				0	1834	780	217	2205	0
V/C Ratio(X)	0.45	0.00	0.87				0.00	0.45	0.31	0.71	0.26	0.00
Avail Cap(c_a), veh/h	1473	0	677				0	1834	780	376	2205	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	28.7	0.0	34.3				0.0	17.7	16.2	49.9	10.4	0.0
Incr Delay (d2), s/veh	0.3	0.0	9.2				0.0	0.8	1.0	3.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.4	0.0	12.7				0.0	7.2	3.9	2.2	3.5	0.0
Lane Grp Delay (d), s/veh	29.0	0.0	43.4				0.0	18.5	17.2	53.7	10.7	0.0
Lane Grp LOS	C		D					B	B	D	B	
Approach Vol, veh/h		949						1063			725	
Approach Delay, s/veh		35.8						18.2			19.8	
Approach LOS		D						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		39.8						58.1		10.9	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						49.0		12.0	65.0	
Max Q Clear Time (g_c+I1), s		31.1						17.7		6.8	10.0	
Green Ext Time (p_c), s		4.7						13.6		0.2	16.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.7									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd













No Bypass Cumulative +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	201	259	185	193	739	197	278	652	151	198	393	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	304	1186	504	294	1175	499	350	1165	495	301	757	322
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.20	0.32	0.32	0.09	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	218	282	201	210	803	214	302	709	164	215	427	185
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.3	4.8	8.5	5.1	16.1	9.2	14.1	13.8	6.8	5.2	8.9	9.0
Cycle Q Clear(g_c), s	5.3	4.8	8.5	5.1	16.1	9.2	14.1	13.8	6.8	5.2	8.9	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1186	504	294	1175	499	350	1165	495	301	757	322
V/C Ratio(X)	0.72	0.24	0.40	0.71	0.68	0.43	0.86	0.61	0.33	0.71	0.56	0.58
Avail Cap(c_a), veh/h	521	1648	700	481	1604	682	661	1778	756	521	954	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	21.2	22.5	37.9	25.3	22.9	33.0	24.6	22.2	37.7	30.4	30.5
Incr Delay (d2), s/veh	3.2	0.1	0.5	3.2	0.7	0.6	6.4	0.5	0.4	3.2	0.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	2.2	3.3	2.3	7.4	3.6	6.8	6.4	2.6	2.4	4.1	3.7
Lane Grp Delay (d), s/veh	40.9	21.3	23.0	41.1	26.0	23.5	39.3	25.2	22.6	40.9	31.1	32.1
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		701			1227			1175			827	
Approach Delay, s/veh		27.9			28.1			28.5			33.8	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.6	31.4		11.3	31.1		20.9	30.9		11.5	21.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	38.0		12.0	37.0		32.0	41.0		13.0	22.0	
Max Q Clear Time (g_c+I1), s	7.3	10.5		7.1	18.1		16.1	15.8		7.2	11.0	
Green Ext Time (p_c), s	0.3	10.7		0.3	9.0		0.8	10.3		0.3	6.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.4								
HCM 2010 LOS				C								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

No Bypass Cumulative +Project AM  
 3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	295	477	1201	402	225	208
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	270	1504	1164	989	216	193
Arrive On Green	0.15	0.82	0.63	0.63	0.12	0.12
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	321	518	1305	437	245	226
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	20.0	9.4	82.0	18.5	16.0	16.0
Cycle Q Clear(g_c), s	20.0	9.4	82.0	18.5	16.0	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	270	1504	1164	989	216	193
V/C Ratio(X)	1.19	0.34	1.12	0.44	1.13	1.17
Avail Cap(c_a), veh/h	270	1504	1164	989	216	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.83	0.83	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	55.0	3.1	24.0	12.3	57.0	57.0
Incr Delay (d2), s/veh	111.0	0.5	56.0	0.1	101.6	118.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	17.3	3.1	52.0	6.6	13.4	19.4
Lane Grp Delay (d), s/veh	166.0	3.6	80.0	12.4	158.6	175.5
Lane Grp LOS	F	A	F	B	F	F
Approach Vol, veh/h		839	1742		471	
Approach Delay, s/veh		65.7	63.0		166.7	
Approach LOS		E	E		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	24.0	110.0	86.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	20.0	106.0	82.0			
Max Q Clear Time (g_c+I1), s	22.0	11.4	84.0			
Green Ext Time (p_c), s	0.0	4.8	0.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			79.8			
HCM 2010 LOS			E			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

No Bypass Cumulative +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	600	110	37	1341	12	274	118	78	15	11	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	7	1253	1065	51	1285	11	296	196	130	148	114	199
Arrive On Green	0.00	0.68	0.68	0.03	0.70	0.70	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	1845	1568	1757	1826	16	1357	1036	688	1152	603	1055
Grp Volume(v), veh/h	11	652	120	40	0	1471	298	0	213	16	0	33
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1842	1357	0	1723	1152	0	1658
Q Serve(g_s), s	0.5	20.4	3.1	2.6	0.0	82.0	20.1	0.0	13.3	1.5	0.0	1.9
Cycle Q Clear(g_c), s	0.5	20.4	3.1	2.6	0.0	82.0	22.0	0.0	13.3	14.8	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.40	1.00		0.64
Lane Grp Cap(c), veh/h	7	1253	1065	51	0	1297	296	0	326	148	0	313
V/C Ratio(X)	1.59	0.52	0.11	0.79	0.00	1.13	1.01	0.00	0.65	0.11	0.00	0.11
Avail Cap(c_a), veh/h	60	1253	1065	106	0	1297	296	0	326	148	0	313
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.20	0.00	0.20	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	9.3	6.5	56.2	0.0	17.2	50.3	0.0	43.7	50.6	0.0	39.1
Incr Delay (d2), s/veh	353.2	1.2	0.2	5.4	0.0	62.7	54.2	0.0	4.7	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	8.4	1.1	1.3	0.0	53.9	13.3	0.0	6.3	0.5	0.0	0.8
Lane Grp Delay (d), s/veh	411.2	10.5	6.7	61.5	0.0	79.9	104.5	0.0	48.4	50.9	0.0	39.2
Lane Grp LOS	F	B	A	E		F	F		D	D		D
Approach Vol, veh/h		783			1511			511				49
Approach Delay, s/veh		15.5			79.4			81.1				43.0
Approach LOS		B			E			F				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.5	83.1		7.4	86.0			26.0				26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	79.0		7.0	82.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	2.5	22.4		4.6	84.0			24.0				16.8
Green Ext Time (p_c), s	0.0	5.6		0.0	0.0			0.0				1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				61.6								
HCM 2010 LOS				E								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

No Bypass Cumulative +Project AM

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	230	0	0	77	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	29	61	0	29	61	0	29	625	0	29	625	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.34	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	1845	0	1757	1845	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	250	0	0	84	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	1845	0	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	29	61	0	29	61	0	29	625	0	29	625	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.13	0.00
Avail Cap(c_a), veh/h	1162	9758	0	1162	9758	0	1162	15247	0	1162	15247	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.5	0.0
Lane Grp LOS								A			A	
Approach Vol, veh/h		0			0			250			84	
Approach Delay, s/veh		0.0			0.0			1.9			1.5	
Approach LOS								A			A	
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7	4	
Phs Duration (G+Y+Rc), s	0.0	0.0		0.0	0.0		0.0	6.0		0.0	6.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0		4.0	50.0		4.0	50.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0		0.0	2.6		0.0	2.2	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	2.1		0.0	2.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				1.8								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 15: Tuscany Meadows Dr & Buchanan Rd

No Bypass Cumulative +Project AM






















3/16/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	711	25	36	1182	74	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	998	848	50	1107	595	531
Arrive On Green	0.54	0.54	0.03	0.60	0.34	0.34
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	773	27	39	1285	80	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	43.1	1.0	2.9	78.0	4.1	6.9
Cycle Q Clear(g_c), s	43.1	1.0	2.9	78.0	4.1	6.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	998	848	50	1107	595	531
V/C Ratio(X)	0.77	0.03	0.78	1.16	0.13	0.22
Avail Cap(c_a), veh/h	998	848	95	1107	595	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	13.9	62.8	26.0	29.8	30.7
Incr Delay (d2), s/veh	3.9	0.0	22.9	82.7	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	19.8	0.4	1.6	58.3	1.9	2.9
Lane Grp Delay (d), s/veh	27.4	14.0	85.7	108.7	30.3	31.7
Lane Grp LOS	C	B	F	F	C	C
Approach Vol, veh/h	800			1324	196	
Approach Delay, s/veh	27.0			108.0	31.1	
Approach LOS	C			F	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	74.3		7.7	82.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	67.0		7.0	78.0		
Max Q Clear Time (g_c+I1), s	45.1		4.9	80.0		
Green Ext Time (p_c), s	16.6		0.0	0.0		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			73.6			
HCM 2010 LOS			E			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

No Bypass Cumulative +Project AM























3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	25	0	0	0	0	67	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	20	41	0	51	107	0	20	0	116	20	137	0
Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	27	0	0	0	0	73	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	20	41	0	51	107	0	20	0	116	20	137	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00
Avail Cap(c_a), veh/h	788	6617	0	4530	14475	0	788	0	5449	788	6410	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	9.5	0.0	0.0	0.0
Lane Grp LOS	B						A					
Approach Vol, veh/h	0			27			73			0		
Approach Delay, s/veh	0.0			12.5			9.5			0.0		
Approach LOS	B			B			A			B		
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.3	4.3		0.0	4.7		0.0	4.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		23.0	35.0		4.0	31.0		4.0	31.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.1	0.0		0.0	2.4		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	0.4		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 17: Proposed Apartments & Buchanan Rd













No Bypass Cumulative +Project AM  
 3/16/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	802	16	22	1156	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	942	801	304	1323	380	339
Arrive On Green	0.51	0.51	0.17	0.72	0.22	0.22
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	872	17	24	1257	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	52.7	0.6	1.4	72.7	3.7	6.2
Cycle Q Clear(g_c), s	52.7	0.6	1.4	72.7	3.7	6.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	942	801	304	1323	380	339
V/C Ratio(X)	0.93	0.02	0.08	0.95	0.18	0.29
Avail Cap(c_a), veh/h	1244	1057	304	1474	380	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	14.5	41.6	15.1	38.3	39.3
Incr Delay (d2), s/veh	9.8	0.0	0.1	12.8	1.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	25.3	0.2	0.6	31.9	1.8	2.7
Lane Grp Delay (d), s/veh	37.1	14.6	41.8	27.9	39.3	41.4
Lane Grp LOS	D	B	D	C	D	D
Approach Vol, veh/h	889			1281	164	
Approach Delay, s/veh	36.6			28.1	40.6	
Approach LOS	D			C	D	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	65.3		24.8	90.1		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	81.0		11.0	96.0		
Max Q Clear Time (g_c+I1), s	54.7		3.4	74.7		
Green Ext Time (p_c), s	6.6		5.4	11.4		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			32.2			
HCM 2010 LOS			C			
<b>Notes</b>						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	34	42	223	83	32	222	513	160	26	564	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	407	220	187	407	151	59	595	2879	874	41	2047	870
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.06	0.23	0.23	0.02	0.55	0.55
Sat Flow, veh/h	3408	1845	1568	3408	1266	492	3408	4078	1238	1757	3689	1568
Grp Volume(v), veh/h	124	37	46	242	0	125	241	503	229	28	613	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1626	1757	1845	1568
Q Serve(g_s), s	2.6	1.4	2.1	5.3	0.0	5.3	5.4	8.7	9.0	1.3	7.0	8.8
Cycle Q Clear(g_c), s	2.6	1.4	2.1	5.3	0.0	5.3	5.4	8.7	9.0	1.3	7.0	8.8
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	407	220	187	407	0	210	595	2605	1148	41	2047	870
V/C Ratio(X)	0.30	0.17	0.25	0.59	0.00	0.60	0.41	0.19	0.20	0.69	0.30	0.36
Avail Cap(c_a), veh/h	774	419	356	945	0	488	859	2605	1148	177	2047	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	31.4	31.7	33.1	0.0	33.1	33.4	12.3	12.4	38.4	9.4	9.8
Incr Delay (d2), s/veh	0.4	0.4	0.7	1.4	0.0	2.7	0.4	0.2	0.4	18.5	0.4	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.7	0.8	2.3	0.0	2.5	2.5	4.5	4.1	0.8	3.0	3.4
Lane Grp Delay (d), s/veh	32.3	31.7	32.4	34.5	0.0	35.8	33.8	12.4	12.8	56.9	9.8	11.0
Lane Grp LOS	C	C	C	C		D	C	B	B	E	A	B
Approach Vol, veh/h		207			367			973			953	
Approach Delay, s/veh		32.2			34.9			17.8			11.6	
Approach LOS		C			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.5			13.5		17.8	60.0		5.8		48.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			22.0		20.0	56.0		8.0		44.0
Max Q Clear Time (g_c+I1), s		4.6			7.3		7.4	11.0		3.3		10.8
Green Ext Time (p_c), s		2.0			2.1		4.7	6.9		0.0		7.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.1								
HCM 2010 LOS				B								
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

No Bypass Cumulative +Project AM  
 3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	236	283	635	585	455	316
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	740	340	811	3952	2444	693
Arrive On Green	0.22	0.22	0.08	0.24	0.44	0.44
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	257	308	690	636	495	343
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	7.4	22.2	23.2	10.6	6.4	18.2
Cycle Q Clear(g_c), s	7.4	22.2	23.2	10.6	6.4	18.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	740	340	811	3952	2444	693
V/C Ratio(X)	0.35	0.91	0.85	0.16	0.20	0.50
Avail Cap(c_a), veh/h	850	391	1202	3952	2444	693
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.93	0.91	0.91
Uniform Delay (d), s/veh	38.5	44.3	51.5	16.8	19.9	23.2
Incr Delay (d2), s/veh	0.3	22.1	3.7	0.1	0.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.2	2.1	11.2	5.4	2.9	7.5
Lane Grp Delay (d), s/veh	38.8	66.5	55.2	16.8	20.1	25.5
Lane Grp LOS	D	E	E	B	C	C
Approach Vol, veh/h	565			1326	838	
Approach Delay, s/veh	53.9			36.8	22.3	
Approach LOS	D			D	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			31.7	87.0	55.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			41.0	83.0	38.0	
Max Q Clear Time (g_c+I1), s			25.2	12.6	20.2	
Green Ext Time (p_c), s			2.4	13.1	8.8	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			35.9			
HCM 2010 LOS			D			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

No Bypass Cumulative +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	228	0	281	0	0	0	0	1038	463	148	626	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	436	236	401				0	3859	1093	224	4424	0
Arrive On Green	0.13	0.00	0.13				0.00	1.00	1.00	0.13	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	248	0	305				0	1128	503	161	680	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.5	0.0	10.3				0.0	0.0	0.0	5.0	0.0	0.0
Cycle Q Clear(g_c), s	7.5	0.0	10.3				0.0	0.0	0.0	5.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	436	236	401				0	3859	1093	224	4424	0
V/C Ratio(X)	0.57	0.00	0.76				0.00	0.29	0.46	0.72	0.15	0.00
Avail Cap(c_a), veh/h	743	402	684				0	3859	1093	495	4424	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.75	0.75	0.94	0.94	0.00
Uniform Delay (d), s/veh	45.2	0.0	46.4				0.0	0.0	0.0	46.8	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	3.0				0.0	0.1	1.0	4.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	0.0	4.3				0.0	0.1	0.3	2.2	0.0	0.0
Lane Grp Delay (d), s/veh	46.3	0.0	49.4				0.0	0.1	1.0	50.8	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		553						1631			841	
Approach Delay, s/veh		48.0						0.4			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		18.1						80.8		11.2	92.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		24.0						68.0		16.0	88.0	
Max Q Clear Time (g_c+I1), s		12.3						2.0		7.0	2.0	
Green Ext Time (p_c), s		1.7						29.1		0.3	31.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			11.7									
HCM 2010 LOS			B									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

No Bypass Cumulative +Project AM  
 3/16/2014



























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	288	126	5	45	345	452	95	820	17	150	377	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1253	650	24	646	678	577	193	2218	45	248	1376	585
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.04	0.14	0.14	0.12	0.62	0.62
Sat Flow, veh/h	3408	1769	65	1757	1845	1568	1757	5406	109	3408	3689	1568
Grp Volume(v), veh/h	313	0	142	49	375	491	103	608	301	163	410	335
Grp Sat Flow(s),veh/h/ln	1704	0	1833	1757	1845	1568	1757	1845	1825	1704	1845	1568
Q Serve(g_s), s	5.1	0.0	4.3	1.5	13.0	23.2	4.6	12.1	12.1	3.7	4.1	10.1
Cycle Q Clear(g_c), s	5.1	0.0	4.3	1.5	13.0	23.2	4.6	12.1	12.1	3.7	4.1	10.1
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	1253	0	674	646	678	577	193	1514	749	248	1376	585
V/C Ratio(X)	0.25	0.00	0.21	0.08	0.55	0.85	0.53	0.40	0.40	0.66	0.30	0.57
Avail Cap(c_a), veh/h	1253	0	674	961	1009	858	284	1514	749	424	1376	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.75	0.75	0.96	0.96	0.96	0.98	0.98	0.98
Uniform Delay (d), s/veh	17.7	0.0	17.4	16.5	20.2	23.4	36.7	25.7	25.8	34.4	10.3	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.5	4.2	2.2	0.8	1.5	2.9	0.5	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.1	0.0	1.9	0.6	5.8	9.2	2.3	6.2	6.3	1.6	1.7	3.4
Lane Grp Delay (d), s/veh	17.8	0.0	17.6	16.6	20.7	27.6	38.9	26.5	27.3	37.3	10.8	15.4
Lane Grp LOS	B		B	B	C	C	D	C	C	D	B	B
Approach Vol, veh/h		455			915			1012			908	
Approach Delay, s/veh		17.7			24.2			28.0			17.3	
Approach LOS		B			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		33.6			33.6		12.9	37.0		9.9	34.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		17.0			44.0		13.0	33.0		10.0	30.0	
Max Q Clear Time (g_c+I1), s		7.1			25.2		6.6	14.1		5.7	12.1	
Green Ext Time (p_c), s		4.6			4.4		0.4	5.9		0.3	3.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.6								
HCM 2010 LOS				C								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd













No Bypass Cumulative +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	434	242	202	26	383	433	648	1146	54	43	160	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	383	1440	612	36	355	302	559	1475	70	59	506	215
Arrive On Green	0.22	0.39	0.00	0.02	0.19	0.00	0.32	0.42	0.42	0.03	0.14	0.14
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3495	165	1757	3689	1568
Grp Volume(v), veh/h	472	263	0	28	416	0	704	657	648	47	174	163
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1815	1757	1845	1568
Q Serve(g_s), s	26.0	5.6	0.0	1.9	23.0	0.0	38.0	38.2	38.3	3.2	5.1	11.9
Cycle Q Clear(g_c), s	26.0	5.6	0.0	1.9	23.0	0.0	38.0	38.2	38.3	3.2	5.1	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	383	1440	612	36	355	302	559	778	766	59	506	215
V/C Ratio(X)	1.23	0.18	0.00	0.79	1.17	0.00	1.26	0.84	0.85	0.80	0.34	0.76
Avail Cap(c_a), veh/h	383	1440	612	88	355	302	559	788	776	59	525	223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	23.9	0.0	58.2	48.2	0.0	40.7	31.0	31.0	57.3	46.6	49.6
Incr Delay (d2), s/veh	125.9	0.1	0.0	30.5	102.7	0.0	130.5	8.3	8.5	52.5	0.4	13.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	24.9	2.5	0.0	1.2	21.1	0.0	37.4	19.3	19.1	2.3	2.4	5.6
Lane Grp Delay (d), s/veh	172.6	24.0	0.0	88.7	150.9	0.0	171.2	39.3	39.5	109.8	47.0	63.0
Lane Grp LOS	F	C		F	F		F	D	D	F	D	E
Approach Vol, veh/h		735			444			2009			384	
Approach Delay, s/veh		119.4			147.0			85.6			61.5	
Approach LOS		F			F			F			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	30.0	50.6		6.4	27.0		42.0	54.4		8.0	20.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	26.0	43.0		6.0	23.0		38.0	51.0		4.0	17.0	
Max Q Clear Time (g_c+I1), s	28.0	7.6		3.9	25.0		40.0	40.3		5.2	13.9	
Green Ext Time (p_c), s	0.0	4.7		0.0	0.0		0.0	7.2		0.0	2.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				97.6								
HCM 2010 LOS				F								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 23: Sequoia Dr & Somersville Rd























No Bypass Cumulative +Project AM  
 3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	263	11	4	1587	301	87
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	341	304	734	2583	2583	1098
Arrive On Green	0.19	0.19	0.70	0.70	0.70	0.70
Sat Flow, veh/h	1757	1568	952	3689	3689	1568
Grp Volume(v), veh/h	286	12	4	1725	327	95
Grp Sat Flow(s),veh/h/ln	1757	1568	952	1845	1845	1568
Q Serve(g_s), s	11.8	0.5	0.1	19.9	2.2	1.5
Cycle Q Clear(g_c), s	11.8	0.5	2.3	19.9	2.2	1.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	341	304	734	2583	2583	1098
V/C Ratio(X)	0.84	0.04	0.01	0.67	0.13	0.09
Avail Cap(c_a), veh/h	768	685	1064	3861	3861	1641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	24.7	4.1	6.4	3.7	3.6
Incr Delay (d2), s/veh	5.5	0.1	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.6	0.2	0.0	7.3	0.8	0.5
Lane Grp Delay (d), s/veh	34.8	24.8	4.1	6.7	3.7	3.6
Lane Grp LOS	C	C	A	A	A	A
Approach Vol, veh/h	298			1729	422	
Approach Delay, s/veh	34.4			6.7	3.7	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				56.8	56.8	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				79.0	79.0	
Max Q Clear Time (g_c+I1), s				21.9	4.2	
Green Ext Time (p_c), s				31.0	35.0	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			9.5			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd






















No Bypass Cumulative +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	10	0	11	14	1483	0	1	2	304	9	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	154	412	0	22	137	58	7	30	61	584	717	1219
Arrive On Green	0.09	0.11	0.00	0.01	0.04	0.00	0.00	0.06	0.06	0.17	0.39	0.39
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	113	11	0	12	15	0	0	0	3	330	10	48
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	1.5	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	2.2	0.1	0.1
Cycle Q Clear(g_c), s	1.5	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	2.2	0.1	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	154	412	0	22	137	58	7	0	91	584	717	1219
V/C Ratio(X)	0.74	0.03	0.00	0.53	0.11	0.00	0.00	0.00	0.03	0.57	0.01	0.04
Avail Cap(c_a), veh/h	427	10771	0	285	10472	4451	285	0	1272	1244	1795	3052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.0	9.8	0.0	12.1	11.5	0.0	0.0	0.0	11.0	9.4	4.6	0.5
Incr Delay (d2), s/veh	6.7	0.0	0.0	18.2	0.3	0.0	0.0	0.0	0.1	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
Lane Grp Delay (d), s/veh	17.7	9.8	0.0	30.3	11.8	0.0	0.0	0.0	11.2	10.2	4.6	0.5
Lane Grp LOS	B	A		C	B				B	B	A	A
Approach Vol, veh/h		124			27			3			388	
Approach Delay, s/veh		17.0			20.0			11.2			8.9	
Approach LOS		B			C			B			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	6.2	6.8		4.3	4.9		0.0	5.4		8.2	13.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	72.0		4.0	70.0		4.0	19.0		9.0	24.0	
Max Q Clear Time (g_c+I1), s	3.5	2.1		2.2	2.1		0.0	2.0		4.2	2.1	
Green Ext Time (p_c), s	0.1	0.4		0.0	0.1		0.0	0.1		0.5	0.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				11.3								
HCM 2010 LOS				B								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

No Bypass Cumulative +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	43	230	59	55	430	223	137	461	57	69	114	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	300	1109	278	476	894	460	657	750	93	318	859	730
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	730	2849	714	1051	2298	1183	1233	1610	199	836	1845	1568
Grp Volume(v), veh/h	47	160	154	60	374	335	149	0	563	75	124	15
Grp Sat Flow(s),veh/h/ln	730	1845	1719	1051	1845	1636	1233	0	1809	836	1845	1568
Q Serve(g_s), s	2.9	3.2	3.3	2.2	8.6	8.7	4.3	0.0	13.3	4.2	2.1	0.3
Cycle Q Clear(g_c), s	11.6	3.2	3.3	5.6	8.6	8.7	6.5	0.0	13.3	17.5	2.1	0.3
Prop In Lane	1.00		0.42	1.00		0.72	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	300	718	669	476	718	637	657	0	843	318	859	730
V/C Ratio(X)	0.16	0.22	0.23	0.13	0.52	0.53	0.23	0.00	0.67	0.24	0.14	0.02
Avail Cap(c_a), veh/h	585	1439	1341	887	1439	1276	1626	0	2265	975	2309	1963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	11.3	11.3	13.2	12.9	12.9	10.3	0.0	11.4	18.2	8.4	7.9
Incr Delay (d2), s/veh	0.2	0.2	0.2	0.1	0.6	0.7	0.2	0.0	0.9	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	1.3	1.3	0.5	3.5	3.2	1.2	0.0	5.4	0.8	0.8	0.1
Lane Grp Delay (d), s/veh	17.6	11.4	11.5	13.3	13.5	13.6	10.5	0.0	12.3	18.6	8.5	8.0
Lane Grp LOS	B	B	B	B	B	B	B		B	B	A	A
Approach Vol, veh/h		361			769			712			214	
Approach Delay, s/veh		12.2			13.5			12.0			12.0	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		25.5			25.5			29.7			29.7	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		43.0			43.0			69.0			69.0	
Max Q Clear Time (g_c+I1), s		13.6			10.7			15.3			19.5	
Green Ext Time (p_c), s		7.9			8.1			6.2			6.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.6								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

No Bypass Cumulative +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	475	2	10	1068	235	7	10	13	226	14	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	254	2144	8	19	1321	288	119	161	168	330	38	385
Arrive On Green	0.14	0.58	0.58	0.01	0.45	0.45	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1757	3673	14	1757	2937	640	252	604	631	1367	144	1446
Grp Volume(v), veh/h	217	259	259	11	726	690	33	0	0	246	0	166
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1732	1487	0	0	1367	0	1590
Q Serve(g_s), s	10.4	5.9	5.9	0.5	30.8	31.5	0.0	0.0	0.0	15.5	0.0	7.4
Cycle Q Clear(g_c), s	10.4	5.9	5.9	0.5	30.8	31.5	7.4	0.0	0.0	22.9	0.0	7.4
Prop In Lane	1.00		0.01	1.00		0.37	0.24		0.42	1.00		0.91
Lane Grp Cap(c), veh/h	254	1077	1075	19	830	779	448	0	0	330	0	423
V/C Ratio(X)	0.85	0.24	0.24	0.58	0.87	0.89	0.07	0.00	0.00	0.75	0.00	0.39
Avail Cap(c_a), veh/h	305	1090	1088	81	855	802	448	0	0	330	0	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	8.7	8.7	42.5	21.5	21.7	23.7	0.0	0.0	35.3	0.0	25.9
Incr Delay (d2), s/veh	17.8	0.1	0.1	25.4	9.8	11.5	0.1	0.0	0.0	8.9	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.8	2.4	2.4	0.4	15.8	15.5	0.5	0.0	0.0	6.1	0.0	3.0
Lane Grp Delay (d), s/veh	53.8	8.8	8.8	67.9	31.4	33.2	23.8	0.0	0.0	44.2	0.0	26.5
Lane Grp LOS	D	A	A	E	C	C	C			D		C
Approach Vol, veh/h		735			1427			33				412
Approach Delay, s/veh		22.1			32.5			23.8				37.1
Approach LOS		C			C			C				D
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	16.5	54.4		4.9	42.8			27.0				27.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	15.0	51.0		4.0	40.0			23.0				23.0
Max Q Clear Time (g_c+I1), s	12.4	7.9		2.5	33.5			9.4				24.9
Green Ext Time (p_c), s	0.2	21.1		0.0	5.4			1.7				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.2								
HCM 2010 LOS				C								
<b>Notes</b>												





























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

No Bypass Cumulative +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	214	55	533	12	124	85	1004	1270	10	54	950	164
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	297	312	1670	27	284	265	1237	2410	1024	76	1533	264
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.36	0.65	0.65	0.04	0.33	0.33
Sat Flow, veh/h	1757	1845	3136	161	1675	1568	3408	3689	1568	1757	4603	792
Grp Volume(v), veh/h	233	60	579	148	0	92	1091	1380	11	59	828	383
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1837	0	1568	1704	1845	1568	1757	1845	1705
Q Serve(g_s), s	11.3	2.5	9.4	6.5	0.0	4.6	26.8	18.5	0.2	3.0	17.2	17.3
Cycle Q Clear(g_c), s	11.3	2.5	9.4	6.5	0.0	4.6	26.8	18.5	0.2	3.0	17.2	17.3
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	297	312	1670	311	0	265	1237	2410	1024	76	1229	568
V/C Ratio(X)	0.78	0.19	0.35	0.48	0.00	0.35	0.88	0.57	0.01	0.78	0.67	0.67
Avail Cap(c_a), veh/h	335	351	1736	329	0	281	1528	2604	1107	157	1282	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	31.8	12.0	33.5	0.0	32.7	26.6	8.6	5.4	42.3	25.6	25.6
Incr Delay (d2), s/veh	10.4	0.3	0.1	1.1	0.0	0.8	5.4	0.3	0.0	15.9	1.3	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.9	1.2	3.4	3.1	0.0	1.9	12.0	7.4	0.1	1.7	8.0	7.7
Lane Grp Delay (d), s/veh	45.9	32.1	12.1	34.6	0.0	33.5	32.0	8.8	5.4	58.1	26.9	28.5
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		872			240			2482			1270	
Approach Delay, s/veh		22.5			34.2			19.0			28.8	
Approach LOS		C			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		19.1			19.1		36.4	62.3		7.8		33.7
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			16.0		40.0	63.0		8.0		31.0
Max Q Clear Time (g_c+I1), s		13.3			8.5		28.8	20.5		5.0		19.3
Green Ext Time (p_c), s		1.8			3.0		3.6	30.8		0.0		10.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr



























No Bypass Cumulative +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	26	0	107	0	0	0	61	558	3	0	1786	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	176	0	157	495	184	157	84	2897	1231	3	3687	65
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.05	0.79	0.79	0.00	0.68	0.68
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5422	95
Grp Volume(v), veh/h	28	0	116	0	0	0	66	607	3	0	1320	655
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	2.9	0.0	0.0	12.4	12.5
Cycle Q Clear(g_c), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	2.9	0.0	0.0	12.4	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	176	0	157	495	184	157	84	2897	1231	3	2508	1243
V/C Ratio(X)	0.16	0.00	0.74	0.00	0.00	0.00	0.78	0.21	0.00	0.00	0.53	0.53
Avail Cap(c_a), veh/h	403	0	360	1137	423	360	252	3597	1529	101	3280	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	30.5	0.0	0.0	0.0	32.8	1.9	1.6	0.0	5.6	5.6
Incr Delay (d2), s/veh	0.4	0.0	6.7	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.0	2.2	0.0	0.0	0.0	1.5	0.8	0.0	0.0	4.5	4.5
Lane Grp Delay (d), s/veh	29.1	0.0	37.2	0.0	0.0	0.0	47.3	2.0	1.6	0.0	5.7	5.9
Lane Grp LOS	C		D				D	A	A		A	A
Approach Vol, veh/h		144			0			676			1975	
Approach Delay, s/veh		35.6			0.0			6.4			5.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2			1	6
Phs Duration (G+Y+Rc), s		11.0			11.0		7.3	58.8			0.0	51.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0			16.0		10.0	68.0			4.0	62.0
Max Q Clear Time (g_c+I1), s		7.0			0.0		4.6	4.9			0.0	14.5
Green Ext Time (p_c), s		0.4			0.0		0.0	39.5			0.0	33.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				7.5								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

No Bypass Cumulative +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	72	75	136	412	421	98	73	455	86	55	1678	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	99	209	177	450	1153	490	90	2051	376	77	1919	454
Arrive On Green	0.06	0.11	0.11	0.26	0.31	0.31	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4551	835	1757	4329	1024
Grp Volume(v), veh/h	78	82	148	448	458	107	79	399	189	60	1547	720
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1697	1757	1845	1664
Q Serve(g_s), s	5.1	4.8	10.8	29.8	11.4	5.9	5.2	7.8	8.1	4.0	47.1	49.7
Cycle Q Clear(g_c), s	5.1	4.8	10.8	29.8	11.4	5.9	5.2	7.8	8.1	4.0	47.1	49.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		0.62
Lane Grp Cap(c), veh/h	99	209	177	450	1153	490	90	1662	765	77	1635	737
V/C Ratio(X)	0.79	0.39	0.83	1.00	0.40	0.22	0.88	0.24	0.25	0.78	0.95	0.98
Avail Cap(c_a), veh/h	180	252	214	450	1153	490	90	1662	765	135	1637	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	48.2	50.9	43.5	31.6	29.7	55.2	19.8	19.9	55.5	31.3	32.0
Incr Delay (d2), s/veh	12.7	1.2	20.7	41.4	0.2	0.2	57.2	0.1	0.2	15.4	11.9	27.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	2.4	5.4	18.6	5.4	2.4	3.8	3.6	3.4	2.1	24.4	26.1
Lane Grp Delay (d), s/veh	67.2	49.4	71.6	84.9	31.8	29.9	112.4	19.9	20.1	70.9	43.2	59.1
Lane Grp LOS	E	D	E	F	C	C	F	B	C	E	D	E
Approach Vol, veh/h		308			1013			667			2327	
Approach Delay, s/veh		64.6			55.1			30.9			48.8	
Approach LOS		E			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.6	17.3		34.0	40.6		10.0	56.8		9.1	55.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	16.0		30.0	34.0		6.0	49.0		9.0	52.0	
Max Q Clear Time (g_c+I1), s	7.1	12.8		31.8	13.4		7.2	10.1		6.0	51.7	
Green Ext Time (p_c), s	0.1	0.4		0.0	4.9		0.0	31.7		0.0	0.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				48.7								
HCM 2010 LOS				D								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd






















No Bypass Cumulative +Project AM

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	230	384	37	485	1277	150	165	346	183	300	1182	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	306	1261	0	605	1748	0	234	1887	535	393	2146	608
Arrive On Green	0.09	0.23	0.00	0.18	0.32	0.00	0.07	0.34	0.34	0.12	0.39	0.39
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	250	417	0	527	1388	0	179	376	199	326	1285	621
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Cycle Q Clear(g_c), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	1261	0	605	1748	0	234	1887	535	393	2146	608
V/C Ratio(X)	0.82	0.33	0.00	0.87	0.79	0.00	0.77	0.20	0.37	0.83	0.60	1.02
Avail Cap(c_a), veh/h	323	1261	0	764	1908	0	235	1887	535	529	2146	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	37.4	0.0	46.4	36.2	0.0	53.1	27.0	28.9	50.2	28.3	35.5
Incr Delay (d2), s/veh	14.4	0.2	0.0	8.9	2.2	0.0	13.9	0.1	0.4	8.0	0.5	42.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.5	0.0	8.4	12.8	0.0	3.1	2.6	4.5	5.2	10.1	24.7
Lane Grp Delay (d), s/veh	66.3	37.5	0.0	55.3	38.5	0.0	67.0	27.1	29.3	58.2	28.8	77.5
Lane Grp LOS	E	D		E	D		E	C	C	E	C	F
Approach Vol, veh/h		667			1915			754			2232	
Approach Delay, s/veh		48.3			43.1			37.1			46.6	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	14.4	30.4		24.6	40.6		12.0	43.6		17.4	49.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	25.0		26.0	40.0		8.0	35.0		18.0	45.0	
Max Q Clear Time (g_c+I1), s	10.4	9.3		19.5	28.6		8.0	13.1		12.9	47.0	
Green Ext Time (p_c), s	0.1	10.9		1.2	8.1		0.0	16.0		0.5	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			44.3									
HCM 2010 LOS			D									
<b>Notes</b>												














HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

No Bypass Cumulative +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	823	5	10	1260	12	7	0	31	8	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	18	2637	15	20	2628	25	191	0	66	164	0	66
Arrive On Green	0.01	0.72	0.72	0.01	0.72	0.72	0.04	0.00	0.04	0.04	0.00	0.04
Sat Flow, veh/h	1757	3665	20	1757	3649	35	1393	0	1568	1356	0	1568
Grp Volume(v), veh/h	10	450	450	11	692	691	8	0	34	9	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1841	1757	1845	1839	1393	0	1568	1356	0	1568
Q Serve(g_s), s	0.3	4.8	4.8	0.3	8.9	8.9	0.3	0.0	1.1	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.3	4.8	4.8	0.3	8.9	8.9	0.4	0.0	1.1	1.5	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1327	1325	20	1329	1324	191	0	66	164	0	66
V/C Ratio(X)	0.55	0.34	0.34	0.55	0.52	0.52	0.04	0.00	0.52	0.05	0.00	0.06
Avail Cap(c_a), veh/h	200	2935	2930	200	2935	2926	608	0	535	570	0	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.0	2.7	2.7	26.0	3.3	3.3	24.5	0.0	24.8	25.5	0.0	24.3
Incr Delay (d2), s/veh	23.5	0.2	0.2	22.0	0.3	0.3	0.1	0.0	6.2	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.9	0.9	0.3	1.8	1.8	0.1	0.0	0.5	0.1	0.0	0.1
Lane Grp Delay (d), s/veh	49.5	2.9	2.9	48.0	3.6	3.6	24.6	0.0	30.9	25.6	0.0	24.7
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		910			1394			42				13
Approach Delay, s/veh		3.4			4.0			29.7				25.3
Approach LOS		A			A			C				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.5	42.0		4.6	42.0			6.2				6.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	84.0		6.0	84.0			18.0				18.0
Max Q Clear Time (g_c+I1), s	2.3	6.8		2.3	10.9			3.1				3.5
Green Ext Time (p_c), s	0.0	27.5		0.0	27.1			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.3								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd























No Bypass Cumulative +Project AM  
 3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			
Volume (veh/h)	110	325	782	110	116	326
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	157	2167	1351	191	475	424
Arrive On Green	0.09	0.59	0.43	0.43	0.27	0.27
Sat Flow, veh/h	1757	3689	3164	447	1757	1568
Grp Volume(v), veh/h	120	353	496	474	126	354
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1766	1757	1568
Q Serve(g_s), s	3.8	2.5	11.8	11.8	3.2	12.0
Cycle Q Clear(g_c), s	3.8	2.5	11.8	11.8	3.2	12.0
Prop In Lane	1.00			0.25	1.00	1.00
Lane Grp Cap(c), veh/h	157	2167	788	754	475	424
V/C Ratio(X)	0.77	0.16	0.63	0.63	0.27	0.84
Avail Cap(c_a), veh/h	438	3807	1313	1257	750	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	5.3	12.6	12.6	16.1	19.3
Incr Delay (d2), s/veh	7.6	0.0	0.8	0.9	0.3	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.9	5.0	4.8	1.3	0.6
Lane Grp Delay (d), s/veh	32.6	5.3	13.4	13.5	16.4	24.6
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		473	970		480	
Approach Delay, s/veh		12.3	13.5		22.4	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	9.0	37.0	28.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	58.0	40.0			
Max Q Clear Time (g_c+I1), s	5.8	4.5	13.8			
Green Ext Time (p_c), s	0.2	12.3	10.2			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			15.4			
HCM 2010 LOS			B			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

No Bypass Cumulative +Project AM





















3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	111	0	0	0	874	829	0	2	257	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	234	0	151	65	178	0	993	2936	0	2	757	78
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.56	0.80	0.00	0.00	0.23	0.23
Sat Flow, veh/h	1757	0	1568	1253	1845	0	1757	3689	0	1757	3290	339
Grp Volume(v), veh/h	50	0	121	0	0	0	950	901	0	2	155	153
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1253	1845	0	1757	1845	0	1757	1845	1785
Q Serve(g_s), s	2.9	0.0	8.4	0.0	0.0	0.0	56.6	7.3	0.0	0.1	7.8	8.0
Cycle Q Clear(g_c), s	2.9	0.0	8.4	0.0	0.0	0.0	56.6	7.3	0.0	0.1	7.8	8.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.19
Lane Grp Cap(c), veh/h	234	0	151	65	178	0	993	2936	0	2	425	411
V/C Ratio(X)	0.21	0.00	0.80	0.00	0.00	0.00	0.96	0.31	0.00	1.26	0.37	0.37
Avail Cap(c_a), veh/h	319	0	227	126	267	0	1208	2936	0	64	425	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.11	0.11	0.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	46.5	0.0	48.9	0.0	0.0	0.0	22.8	3.0	0.0	55.3	35.8	35.8
Incr Delay (d2), s/veh	0.4	0.0	11.4	0.0	0.0	0.0	2.6	0.0	0.0	428.0	2.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	3.8	0.0	0.0	0.0	24.7	2.6	0.0	0.2	4.0	3.9
Lane Grp Delay (d), s/veh	46.9	0.0	60.4	0.0	0.0	0.0	25.3	3.1	0.0	483.3	38.1	38.3
Lane Grp LOS	D		E				C	A		F	D	D
Approach Vol, veh/h		171			0			1851			310	
Approach Delay, s/veh		56.4			0.0			14.5			41.1	
Approach LOS		E						B			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		14.6			14.6		66.5	92.0		3.9		29.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		76.0	88.0		4.0		16.0
Max Q Clear Time (g_c+I1), s		10.4			0.0		58.6	9.3		2.1		10.0
Green Ext Time (p_c), s		0.3			0.0		3.8	8.3		0.0		0.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

No Bypass Cumulative +Project AM



















3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	376	169	24	500	8	668	7	32	9	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	22	519	231	39	810	13	891	9	944	190	38	24
Arrive On Green	0.01	0.21	0.21	0.02	0.22	0.22	0.60	0.60	0.60	0.60	0.60	0.60
Sat Flow, veh/h	1757	2423	1077	1757	3619	60	1320	15	1568	177	63	40
Grp Volume(v), veh/h	13	310	283	26	277	275	734	0	35	14	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1655	1757	1845	1834	1334	0	1568	280	0	0
Q Serve(g_s), s	0.5	11.8	12.0	1.1	10.2	10.2	0.0	0.0	0.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	11.8	12.0	1.1	10.2	10.2	36.9	0.0	0.7	37.3	0.0	0.0
Prop In Lane	1.00		0.65	1.00		0.03	0.99		1.00	0.71		0.14
Lane Grp Cap(c), veh/h	22	395	354	39	413	411	899	0	944	252	0	0
V/C Ratio(X)	0.58	0.79	0.80	0.66	0.67	0.67	0.82	0.00	0.04	0.06	0.00	0.00
Avail Cap(c_a), veh/h	95	423	379	95	423	420	1132	0	1204	489	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.4	27.5	27.6	36.0	26.3	26.3	13.2	0.0	6.0	14.8	0.0	0.0
Incr Delay (d2), s/veh	22.0	8.9	10.8	17.4	4.0	4.0	3.8	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	6.3	5.9	0.7	5.0	5.0	11.4	0.0	0.2	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	58.4	36.5	38.4	53.4	30.2	30.3	17.0	0.0	6.0	14.9	0.0	0.0
Lane Grp LOS	E	D	D	D	C	C	B		A	B		
Approach Vol, veh/h		606			578			769				14
Approach Delay, s/veh		37.8			31.3			16.5				14.9
Approach LOS		D			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.9	19.9		5.7	20.6			48.7				48.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	17.0		4.0	17.0			57.0				57.0
Max Q Clear Time (g_c+I1), s	2.5	14.0		3.1	12.2			38.9				39.3
Green Ext Time (p_c), s	0.0	1.9		0.0	2.8			5.4				5.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

No Bypass Cumulative +Project PM





















3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	141	262	58	536	775	392	258	820	321
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				202	397	91	683	1148	576	320	1757	747
Arrive On Green				0.19	0.19	0.19	0.33	0.83	0.83	0.18	0.48	0.00
Sat Flow, veh/h				1039	2047	468	3408	2320	1164	1757	3689	1568
Grp Volume(v), veh/h				264	0	237	583	668	600	280	891	0
Grp Sat Flow(s),veh/h/ln				1793	0	1762	1704	1845	1639	1757	1845	1568
Q Serve(g_s), s				12.9	0.0	11.6	14.8	14.8	15.2	14.4	15.5	0.0
Cycle Q Clear(g_c), s				12.9	0.0	11.6	14.8	14.8	15.2	14.4	15.5	0.0
Prop In Lane				0.58		0.27	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h				348	0	342	683	913	811	320	1757	747
V/C Ratio(X)				0.76	0.00	0.69	0.85	0.73	0.74	0.88	0.51	0.00
Avail Cap(c_a), veh/h				733	0	720	1063	913	811	454	1757	747
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.64	0.64	0.64	1.00	1.00	0.00
Uniform Delay (d), s/veh				35.4	0.0	34.9	29.7	5.4	5.4	37.0	16.8	0.0
Incr Delay (d2), s/veh				3.4	0.0	2.5	2.8	3.4	3.9	12.9	1.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				6.1	0.0	5.4	6.0	3.7	3.5	7.6	7.1	0.0
Lane Grp Delay (d), s/veh				38.8	0.0	37.4	32.4	8.7	9.3	49.9	17.9	0.0
Lane Grp LOS				D		D	C	A	A	D	B	
Approach Vol, veh/h					501			1851			1171	
Approach Delay, s/veh					38.1			16.4			25.5	
Approach LOS					D			B			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					22.0		22.6	50.0		20.9	48.3	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					14.9		16.8	17.2		16.4	17.5	
Green Ext Time (p_c), s					3.1		1.8	19.4		0.5	16.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					22.5							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

No Bypass Cumulative +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	575	0	869	0	0	0	0	983	122	83	615	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	726	762	1295				0	1719	214	203	1882	0
Arrive On Green	0.41	0.00	0.41				0.00	0.36	0.36	0.23	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4828	600	1757	3689	0
Grp Volume(v), veh/h	625	0	945				0	816	385	90	668	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1739	1757	1845	0
Q Serve(g_s), s	33.7	0.0	26.3				0.0	19.0	19.0	4.6	0.0	0.0
Cycle Q Clear(g_c), s	33.7	0.0	26.3				0.0	19.0	19.0	4.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.35	1.00		0.00
Lane Grp Cap(c), veh/h	726	762	1295				0	1314	619	203	1882	0
V/C Ratio(X)	0.86	0.00	0.73				0.00	0.62	0.62	0.44	0.36	0.00
Avail Cap(c_a), veh/h	997	1047	1780				0	1314	619	203	1882	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.84	0.84	0.00
Uniform Delay (d), s/veh	27.8	0.0	25.6				0.0	27.7	27.7	37.1	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.0	1.0				0.0	2.2	4.7	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.9	0.0	10.4				0.0	9.1	9.0	2.0	0.1	0.0
Lane Grp Delay (d), s/veh	33.6	0.0	26.6				0.0	29.9	32.3	38.4	0.4	0.0
Lane Grp LOS	C		C					C	C	D	A	
Approach Vol, veh/h		1570						1201			758	
Approach Delay, s/veh		29.4						30.7			4.9	
Approach LOS		C						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		46.9						41.0		16.0		57.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		59.0						37.0		12.0		53.0
Max Q Clear Time (g_c+I1), s		35.7						21.0		6.6		2.0
Green Ext Time (p_c), s		7.2						7.5		2.2		5.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd

No Bypass Cumulative +Project PM

3/14/2014




























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	226	867	182	104	336	252	78	603	148	544	920	281
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	273	888	186	117	780	332	107	676	287	556	1619	688
Arrive On Green	0.16	0.30	0.30	0.07	0.21	0.21	0.06	0.18	0.18	0.32	0.44	0.44
Sat Flow, veh/h	1757	2959	621	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	246	587	553	113	365	274	85	655	161	591	1000	305
Grp Sat Flow(s),veh/h/ln	1757	1845	1735	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.5	36.0	36.0	7.7	10.4	10.3	5.7	21.2	9.4	38.0	25.0	16.3
Cycle Q Clear(g_c), s	16.5	36.0	36.0	7.7	10.4	10.3	5.7	21.2	9.4	38.0	25.0	16.3
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	553	521	117	780	332	107	676	287	556	1619	688
V/C Ratio(X)	0.90	1.06	1.06	0.96	0.47	0.83	0.79	0.97	0.56	1.06	0.62	0.44
Avail Cap(c_a), veh/h	293	553	521	117	780	332	176	676	287	556	1619	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	42.0	42.0	55.9	41.4	11.9	55.6	48.7	31.2	41.0	25.9	23.4
Incr Delay (d2), s/veh	28.0	55.3	57.1	71.9	0.4	15.6	12.2	26.8	2.4	55.8	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.6	25.4	24.2	5.9	5.0	5.2	3.0	12.5	3.9	25.5	11.7	6.4
Lane Grp Delay (d), s/veh	77.8	97.3	99.1	127.7	41.8	27.6	67.8	75.5	33.7	96.8	26.6	23.9
Lane Grp LOS	E	F	F	F	D	C	E	E	C	F	C	C
Approach Vol, veh/h		1386			752			901			1896	
Approach Delay, s/veh		94.6			49.5			67.3			48.1	
Approach LOS		F			D			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.6	40.0		12.0	29.4		11.3	26.0		42.0	56.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	20.0	36.0		8.0	24.0		12.0	22.0		38.0	48.0	
Max Q Clear Time (g_c+I1), s	18.5	38.0		9.7	12.4		7.7	23.2		40.0	27.0	
Green Ext Time (p_c), s	0.1	0.0		0.0	7.9		0.1	0.0		0.0	11.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				64.9								
HCM 2010 LOS				E								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 4: Railroad Ave & Buchanan Rd

No Bypass Cumulative +Project PM













3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	62	55	3	489	117	138	38	744	1151	147	584	127
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	303	319	271	589	319	271	73	2272	966	178	2491	1059
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.04	0.62	0.62	0.10	0.68	0.68
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	67	60	3	532	127	150	41	809	1251	160	635	138
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.6	3.0	0.2	16.6	6.7	9.5	2.5	11.7	67.0	9.8	7.3	3.4
Cycle Q Clear(g_c), s	3.6	3.0	0.2	16.6	6.7	9.5	2.5	11.7	67.0	9.8	7.3	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	319	271	589	319	271	73	2272	966	178	2491	1059
V/C Ratio(X)	0.22	0.19	0.01	0.90	0.40	0.55	0.56	0.36	1.30	0.90	0.25	0.13
Avail Cap(c_a), veh/h	303	319	271	595	322	274	258	2272	966	178	2491	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	38.5	37.3	44.1	40.0	41.2	51.2	10.3	20.9	48.4	6.9	6.3
Incr Delay (d2), s/veh	0.4	0.3	0.0	17.1	0.8	2.4	6.5	0.1	140.7	40.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	1.4	0.1	8.4	3.1	4.0	1.3	5.0	62.2	6.5	3.1	1.2
Lane Grp Delay (d), s/veh	39.1	38.8	37.3	61.2	40.8	43.5	57.7	10.4	161.6	89.0	7.0	6.3
Lane Grp LOS	D	D	D	E	D	D	E	B	F	F	A	A
Approach Vol, veh/h		130			809			2101			933	
Approach Delay, s/veh		38.9			54.7			101.4			21.0	
Approach LOS		D			D			F			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		22.8			22.8		8.5	71.0		15.0		77.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			19.0		16.0	67.0		11.0		62.0
Max Q Clear Time (g_c+I1), s		5.6			18.6		4.5	69.0		11.8		9.3
Green Ext Time (p_c), s		3.0			0.1		0.0	0.0		0.0		34.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				70.9								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance





























No Bypass Cumulative +Project PM

3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	108	28	48	1825	890	186
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	159	142	65	2958	2106	439
Arrive On Green	0.09	0.09	0.04	0.80	0.71	0.71
Sat Flow, veh/h	1757	1568	1757	3689	2962	618
Grp Volume(v), veh/h	117	30	52	1984	602	567
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1736
Q Serve(g_s), s	4.8	1.3	2.2	17.1	10.4	10.4
Cycle Q Clear(g_c), s	4.8	1.3	2.2	17.1	10.4	10.4
Prop In Lane	1.00	1.00	1.00			0.36
Lane Grp Cap(c), veh/h	159	142	65	2958	1311	1234
V/C Ratio(X)	0.74	0.21	0.80	0.67	0.46	0.46
Avail Cap(c_a), veh/h	378	338	166	3278	1366	1285
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	31.3	35.5	3.2	4.6	4.6
Incr Delay (d2), s/veh	6.5	0.7	19.2	0.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	0.0	1.3	4.9	3.8	3.6
Lane Grp Delay (d), s/veh	39.4	32.1	54.7	3.6	4.9	4.9
Lane Grp LOS	D	C	D	A	A	A
Approach Vol, veh/h	147			2036	1169	
Approach Delay, s/veh	37.9			4.9	4.9	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			6.8	63.6	56.8	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			7.0	66.0	55.0	
Max Q Clear Time (g_c+I1), s			4.2	19.1	12.4	
Green Ext Time (p_c), s			0.0	40.4	37.2	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			6.4			
HCM 2010 LOS			A			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

No Bypass Cumulative +Project PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	104	1190	195	191	323	121	93	277	298	263	458	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	143	1312	557	215	1463	622	128	656	279	293	743	221
Arrive On Green	0.08	0.36	0.36	0.12	0.40	0.40	0.07	0.18	0.18	0.17	0.27	0.27
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2733	813
Grp Volume(v), veh/h	113	1293	212	208	351	132	101	301	324	286	335	312
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1701
Q Serve(g_s), s	5.7	31.3	9.1	10.6	5.7	5.0	5.1	6.6	16.0	14.6	14.6	14.7
Cycle Q Clear(g_c), s	5.7	31.3	9.1	10.6	5.7	5.0	5.1	6.6	16.0	14.6	14.6	14.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	143	1312	557	215	1463	622	128	656	279	293	501	462
V/C Ratio(X)	0.79	0.99	0.38	0.97	0.24	0.21	0.79	0.46	1.16	0.98	0.67	0.67
Avail Cap(c_a), veh/h	234	1312	557	215	1463	622	156	656	279	293	501	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	28.8	21.6	39.3	18.1	17.9	41.1	33.1	37.0	37.3	29.2	29.2
Incr Delay (d2), s/veh	9.4	21.4	0.4	52.3	0.1	0.2	19.7	0.5	105.2	46.1	3.4	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	17.9	3.5	7.8	2.6	1.9	3.0	3.1	14.4	10.2	7.2	6.7
Lane Grp Delay (d), s/veh	50.0	50.2	22.0	91.7	18.2	18.1	60.8	33.6	142.2	83.4	32.6	33.1
Lane Grp LOS	D	D	C	F	B	B	E	C	F	F	C	C
Approach Vol, veh/h		1618			691			726			933	
Approach Delay, s/veh		46.5			40.3			85.8			48.3	
Approach LOS		D			D			F			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.3	36.0		15.0	39.7		10.5	20.0		19.0		28.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	32.0		11.0	31.0		8.0	16.0		15.0		23.0
Max Q Clear Time (g_c+I1), s	7.7	33.3		12.6	7.7		7.1	18.0		16.6		16.7
Green Ext Time (p_c), s	0.1	0.0		0.0	14.7		0.0	0.0		0.0		3.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				53.0								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St
























No Bypass Cumulative +Project PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	1186	31	24	668	108	18	43	9	164	83	95
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	109	1248	33	32	1207	1026	29	84	18	162	105	120
Arrive On Green	0.06	0.70	0.70	0.02	0.65	0.65	0.02	0.06	0.06	0.09	0.13	0.13
Sat Flow, veh/h	1757	1789	47	1757	1845	1568	1757	1475	314	1757	786	900
Grp Volume(v), veh/h	86	0	1323	26	726	117	20	0	57	178	0	193
Grp Sat Flow(s),veh/h/ln	1757	0	1836	1757	1845	1568	1757	0	1789	1757	0	1686
Q Serve(g_s), s	5.7	0.0	83.0	1.8	26.7	3.3	1.3	0.0	3.7	11.0	0.0	13.3
Cycle Q Clear(g_c), s	5.7	0.0	83.0	1.8	26.7	3.3	1.3	0.0	3.7	11.0	0.0	13.3
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	109	0	1281	32	1207	1026	29	0	102	162	0	225
V/C Ratio(X)	0.79	0.00	1.03	0.81	0.60	0.11	0.70	0.00	0.56	1.10	0.00	0.86
Avail Cap(c_a), veh/h	177	0	1281	59	1207	1026	74	0	241	162	0	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.00	0.09	0.63	0.63	0.63	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.1	0.0	18.0	58.2	11.7	7.7	58.2	0.0	54.6	54.0	0.0	50.5
Incr Delay (d2), s/veh	1.2	0.0	18.0	25.3	1.4	0.1	26.6	0.0	4.7	98.6	0.0	15.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.6	0.0	38.1	1.0	11.4	1.2	0.8	0.0	1.9	9.5	0.0	6.8
Lane Grp Delay (d), s/veh	56.3	0.0	36.0	83.5	13.1	7.8	84.8	0.0	59.3	152.6	0.0	66.1
Lane Grp LOS	E		F	F	B	A	F		E	F		E
Approach Vol, veh/h		1409			869			77				371
Approach Delay, s/veh		37.2			14.5			65.9				107.6
Approach LOS		D			B			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	11.3	87.0		6.2	81.8		5.9	10.8		15.0		19.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	83.0		4.0	75.0		5.0	16.0		11.0		22.0
Max Q Clear Time (g_c+I1), s	7.7	85.0		3.8	28.7		3.3	5.7		13.0		15.3
Green Ext Time (p_c), s	0.1	0.0		0.0	6.5		0.0	0.2		0.0		0.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				40.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

No Bypass Cumulative +Project PM























3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	721	25	668	284	90	44	26	268	78	65	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	51	1355	47	1050	2439	1036	327	343	291	327	290	45
Arrive On Green	0.03	0.38	0.38	0.31	0.66	0.66	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3546	122	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	35	408	403	726	309	98	48	28	291	85	0	82
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.9	17.0	17.0	18.1	3.0	2.2	2.2	1.2	18.0	4.0	0.0	3.8
Cycle Q Clear(g_c), s	1.9	17.0	17.0	18.1	3.0	2.2	2.2	1.2	18.0	4.0	0.0	3.8
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	51	705	697	1050	2439	1036	327	343	291	327	0	335
V/C Ratio(X)	0.68	0.58	0.58	0.69	0.13	0.09	0.15	0.08	1.00	0.26	0.00	0.24
Avail Cap(c_a), veh/h	109	705	697	1162	2439	1036	327	343	291	327	0	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.6	23.7	23.7	29.5	6.1	5.9	33.0	32.6	39.4	33.7	0.0	33.6
Incr Delay (d2), s/veh	14.7	3.4	3.5	1.3	0.1	0.1	0.2	0.1	52.2	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	8.4	8.3	7.8	1.2	0.8	1.0	0.6	11.3	1.8	0.0	1.7
Lane Grp Delay (d), s/veh	61.3	27.2	27.2	30.7	6.2	6.1	33.2	32.7	91.6	34.1	0.0	34.0
Lane Grp LOS	E	C	C	C	A	A	C	C	F	C		C
Approach Vol, veh/h		846			1133			367				167
Approach Delay, s/veh		28.6			21.9			79.5				34.1
Approach LOS		C			C			E				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.8	41.0		33.8	68.0			22.0				22.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	37.0		33.0	64.0			18.0				16.0
Max Q Clear Time (g_c+I1), s	3.9	19.0		20.1	5.0			20.0				6.0
Green Ext Time (p_c), s	0.7	5.0		2.5	2.6			0.0				1.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				33.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 9: Loveridge Rd & California Ave/N Park Blvd

No Bypass Cumulative +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	333	315	390	94	174	19	502	617	230	19	196	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	470	583	496	178	753	83	887	1079	402	32	660	281
Arrive On Green	0.14	0.32	0.32	0.05	0.23	0.23	0.26	0.42	0.42	0.02	0.18	0.18
Sat Flow, veh/h	3408	1845	1568	3408	3267	359	3408	2565	956	1757	3689	1568
Grp Volume(v), veh/h	362	342	424	102	106	104	546	482	439	21	213	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1781	1704	1845	1676	1757	1845	1568
Q Serve(g_s), s	8.5	12.9	21.1	2.4	3.9	4.0	11.7	17.1	17.1	1.0	4.2	10.6
Cycle Q Clear(g_c), s	8.5	12.9	21.1	2.4	3.9	4.0	11.7	17.1	17.1	1.0	4.2	10.6
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	470	583	496	178	425	410	887	776	705	32	660	281
V/C Ratio(X)	0.77	0.59	0.86	0.57	0.25	0.25	0.62	0.62	0.62	0.65	0.32	1.11
Avail Cap(c_a), veh/h	861	821	698	287	510	493	1270	1220	1108	106	1286	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	23.9	26.7	38.5	26.1	26.2	27.1	18.9	18.9	40.5	29.8	17.4
Incr Delay (d2), s/veh	2.7	0.9	7.4	2.9	0.3	0.3	0.7	0.8	0.9	19.5	0.3	66.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.8	5.9	9.0	1.1	1.8	1.8	5.0	7.7	7.0	0.6	1.9	9.1
Lane Grp Delay (d), s/veh	37.3	24.8	34.1	41.4	26.4	26.5	27.8	19.7	19.8	60.1	30.0	83.7
Lane Grp LOS	D	C	C	D	C	C	C	B	B	E	C	F
Approach Vol, veh/h		1128			312			1467			546	
Approach Delay, s/veh		32.3			31.3			22.8			61.9	
Approach LOS		C			C			C			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	15.5	30.3		8.4	23.2		25.6	39.0		5.5		18.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	21.0	37.0		7.0	23.0		31.0	55.0		5.0		29.0
Max Q Clear Time (g_c+I1), s	10.5	23.1		4.4	6.0		13.7	19.1		3.0		12.6
Green Ext Time (p_c), s	1.0	3.2		0.4	1.4		7.9	10.5		0.0		2.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				32.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

No Bypass Cumulative +Project PM

























3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	856	0	533	0	0	0	0	728	409	139	543	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1425	0	656				0	1431	608	301	1887	0
Arrive On Green	0.42	0.00	0.42				0.00	0.39	0.39	0.09	0.51	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	930	0	579				0	791	445	151	590	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	24.8	0.0	38.6				0.0	18.9	27.5	4.8	10.5	0.0
Cycle Q Clear(g_c), s	24.8	0.0	38.6				0.0	18.9	27.5	4.8	10.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1425	0	656				0	1431	608	301	1887	0
V/C Ratio(X)	0.65	0.00	0.88				0.00	0.55	0.73	0.50	0.31	0.00
Avail Cap(c_a), veh/h	1623	0	747				0	1431	608	301	1887	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.88	0.88	0.00
Uniform Delay (d), s/veh	26.4	0.0	30.4				0.0	27.0	29.7	49.3	16.1	0.0
Incr Delay (d2), s/veh	0.8	0.0	11.1				0.0	1.5	7.6	1.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.6	0.0	17.0				0.0	9.1	12.0	2.2	4.9	0.0
Lane Grp Delay (d), s/veh	27.2	0.0	41.6				0.0	28.6	37.3	50.5	16.5	0.0
Lane Grp LOS	C		D					C	D	D	B	
Approach Vol, veh/h		1509						1236			741	
Approach Delay, s/veh		32.7						31.7			23.4	
Approach LOS		C						C			C	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		51.4						48.0		14.0	62.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		54.0						44.0		10.0	58.0	
Max Q Clear Time (g_c+I1), s		40.6						29.5		6.8	12.5	
Green Ext Time (p_c), s		6.8						6.3		1.4	5.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			30.4									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

No Bypass Cumulative +Project PM

3/14/2014













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	567	1167	277	234	430	148	238	507	166	260	453	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	711	1509	641	315	1080	459	291	911	387	354	683	290
Arrive On Green	0.21	0.41	0.41	0.09	0.29	0.29	0.17	0.25	0.25	0.10	0.19	0.19
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	616	1268	301	254	467	161	259	551	180	283	492	143
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	18.9	33.5	15.2	7.9	11.1	8.8	15.6	14.3	10.6	8.8	13.6	8.9
Cycle Q Clear(g_c), s	18.9	33.5	15.2	7.9	11.1	8.8	15.6	14.3	10.6	8.8	13.6	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	711	1509	641	315	1080	459	291	911	387	354	683	290
V/C Ratio(X)	0.87	0.84	0.47	0.81	0.43	0.35	0.89	0.60	0.46	0.80	0.72	0.49
Avail Cap(c_a), veh/h	945	1636	695	346	1080	459	357	988	420	504	784	333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	28.8	23.4	48.2	31.0	30.2	44.2	36.1	34.7	47.4	41.5	39.5
Incr Delay (d2), s/veh	6.7	3.9	0.5	12.1	0.3	0.5	20.3	0.9	0.9	6.0	2.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.9	16.0	5.9	4.0	5.2	3.5	8.7	6.9	4.3	4.2	6.7	3.6
Lane Grp Delay (d), s/veh	48.1	32.7	23.9	60.3	31.3	30.6	64.5	37.0	35.5	53.4	44.2	40.8
Lane Grp LOS	D	C	C	E	C	C	E	D	D	D	D	D
Approach Vol, veh/h		2185			882			990			918	
Approach Delay, s/veh		35.8			39.5			43.9			46.5	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	26.6	48.3		14.0	35.7		21.9	30.7		15.2	24.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	30.0	48.0		11.0	29.0		22.0	29.0		16.0	23.0	
Max Q Clear Time (g_c+I1), s	20.9	35.5		9.9	13.1		17.6	16.3		10.8	15.6	
Green Ext Time (p_c), s	1.7	8.8		0.1	11.9		0.3	6.5		0.5	4.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				40.1								
HCM 2010 LOS				D								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

No Bypass Cumulative +Project PM






















3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	152	1142	565	301	551	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	190	1149	893	759	554	495
Arrive On Green	0.11	0.62	0.48	0.48	0.32	0.32
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	165	1241	614	327	599	315
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	12.0	81.0	33.5	17.7	41.0	22.4
Cycle Q Clear(g_c), s	12.0	81.0	33.5	17.7	41.0	22.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	190	1149	893	759	554	495
V/C Ratio(X)	0.87	1.08	0.69	0.43	1.08	0.64
Avail Cap(c_a), veh/h	216	1149	893	759	554	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.65	0.65	1.00	1.00
Uniform Delay (d), s/veh	57.1	24.5	25.9	21.9	44.5	38.1
Incr Delay (d2), s/veh	16.6	45.0	2.8	1.2	62.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.3	48.2	15.7	7.0	27.9	19.4
Lane Grp Delay (d), s/veh	73.7	69.5	28.8	23.0	106.5	40.8
Lane Grp LOS	E	F	C	C	F	D
Approach Vol, veh/h		1406	941		914	
Approach Delay, s/veh		70.0	26.8		83.9	
Approach LOS		E	C		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	18.1	85.0	66.9			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	16.0	81.0	61.0			
Max Q Clear Time (g_c+I1), s	14.0	83.0	35.5			
Green Ext Time (p_c), s	0.1	0.0	18.8			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			61.4			
HCM 2010 LOS			E			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
13: Ventura Dr & Buchanan Rd

No Bypass Cumulative +Project PM






















3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	1429	260	70	727	12	175	23	76	199	104	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	59	1307	1111	59	1282	21	173	60	198	185	242	43
Arrive On Green	0.03	0.71	0.71	0.03	0.71	0.71	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1757	1845	1568	1757	1810	30	1239	376	1248	1268	1527	270
Grp Volume(v), veh/h	8	1553	283	76	0	803	190	0	108	216	0	133
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1839	1239	0	1624	1268	0	1797
Q Serve(g_s), s	0.5	85.0	7.7	4.0	0.0	27.1	10.9	0.0	7.2	11.8	0.0	8.1
Cycle Q Clear(g_c), s	0.5	85.0	7.7	4.0	0.0	27.1	19.0	0.0	7.2	19.0	0.0	8.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.77	1.00		0.15
Lane Grp Cap(c), veh/h	59	1307	1111	59	0	1303	173	0	257	185	0	285
V/C Ratio(X)	0.14	1.19	0.25	1.30	0.00	0.62	1.10	0.00	0.42	1.17	0.00	0.47
Avail Cap(c_a), veh/h	59	1307	1111	59	0	1303	173	0	257	185	0	285
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.81	0.00	0.81	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	17.5	6.2	58.0	0.0	9.1	56.4	0.0	45.5	56.0	0.0	45.9
Incr Delay (d2), s/veh	0.1	85.6	0.0	205.1	0.0	1.8	97.5	0.0	1.1	119.2	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	63.4	2.5	5.1	0.0	10.9	10.1	0.0	3.1	11.9	0.0	3.8
Lane Grp Delay (d), s/veh	56.4	103.1	6.3	263.1	0.0	10.8	153.9	0.0	46.6	175.2	0.0	47.1
Lane Grp LOS	E	F	A	F		B	F		D	F		D
Approach Vol, veh/h		1844			879			298				349
Approach Delay, s/veh		88.1			32.7			115.0				126.4
Approach LOS		F			C			F				F
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	8.0	89.0		8.0	89.0			23.0				23.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	85.0		4.0	85.0			19.0				19.0
Max Q Clear Time (g_c+I1), s	2.5	87.0		6.0	29.1			21.0				21.0
Green Ext Time (p_c), s	1.4	0.0		0.0	7.1			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				80.0								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

No Bypass Cumulative +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	128	0	0	216	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	27	57	0	27	57	0	27	697	0	27	697	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.38	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	1845	0	1757	1845	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	139	0	0	235	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	1845	0	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	27	57	0	27	57	0	27	697	0	27	697	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.34	0.00
Avail Cap(c_a), veh/h	1093	9179	0	1093	9179	0	1093	14341	0	1093	14341	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.7	0.0
Lane Grp LOS								A			A	
Approach Vol, veh/h		0			0			139			235	
Approach Delay, s/veh		0.0			0.0			1.5			1.7	
Approach LOS								A			A	
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7	4	
Phs Duration (G+Y+Rc), s	0.0	0.0		0.0	0.0		0.0	6.4		0.0	6.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0		4.0	50.0		4.0	50.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0		0.0	2.3		0.0	2.6	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	2.4		0.0	2.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				1.6								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 15: Tuscany Meadows Dr & Buchanan Rd

No Bypass Cumulative +Project PM






















3/14/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1686	77	94	855	45	55
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1485	1262	73	1622	95	85
Arrive On Green	0.80	0.80	0.08	1.00	0.05	0.05
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1833	84	102	929	49	60
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	97.0	1.3	5.0	0.0	3.3	4.5
Cycle Q Clear(g_c), s	97.0	1.3	5.0	0.0	3.3	4.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1485	1262	73	1622	95	85
V/C Ratio(X)	1.23	0.07	1.40	0.57	0.51	0.71
Avail Cap(c_a), veh/h	1485	1262	73	1622	233	208
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.74	0.74	1.00	1.00
Uniform Delay (d), s/veh	11.8	2.4	55.3	0.0	55.5	56.1
Incr Delay (d2), s/veh	106.2	0.0	229.8	1.1	4.3	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	75.1	0.4	6.8	0.5	1.6	2.1
Lane Grp Delay (d), s/veh	118.0	2.4	285.1	1.1	59.7	66.3
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1917			1031	109	
Approach Delay, s/veh	112.9			29.2	63.3	
Approach LOS	F			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	101.0		9.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	97.0		5.0	106.0		
Max Q Clear Time (g_c+I1), s	99.0		7.0	2.0		
Green Ext Time (p_c), s	0.0		0.0	97.9		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			82.9			
HCM 2010 LOS			F			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

No Bypass Cumulative +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	76	0	0	0	0	61	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	19	39	0	146	306	0	19	0	106	19	124	0
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	83	0	0	0	0	66	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	19	39	0	146	306	0	19	0	106	19	124	0
V/C Ratio(X)	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00
Avail Cap(c_a), veh/h	746	6270	0	5225	15675	0	746	0	4330	746	5094	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	7.6	0.0	0.0	0.0	0.0	10.2	0.0	0.0	0.0
Lane Grp LOS	A						B					
Approach Vol, veh/h	0			83			66			0		
Approach Delay, s/veh	0.0			7.6			10.2			0.0		
Approach LOS				A			B					
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.8	4.8		0.0	4.6		0.0	4.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		28.0	40.0		4.0	26.0		4.0	26.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.4	0.0		0.0	2.4		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0		0.0	0.3		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				8.8								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 17: Proposed Apartments & Buchanan Rd

No Bypass Cumulative +Project PM

3/14/2014













	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1787	66	80	970	36	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1515	1288	59	1639	78	70
Arrive On Green	1.00	1.00	0.03	0.89	0.04	0.04
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1942	72	87	1054	39	47
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	98.0	0.0	4.0	17.8	2.6	3.5
Cycle Q Clear(g_c), s	98.0	0.0	4.0	17.8	2.6	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1515	1288	59	1639	78	70
V/C Ratio(X)	1.28	0.06	1.48	0.64	0.50	0.67
Avail Cap(c_a), veh/h	1515	1288	59	1639	236	210
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	57.7	1.7	55.7	56.1
Incr Delay (d2), s/veh	127.3	0.0	285.8	2.0	4.8	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	53.6	0.0	6.5	4.1	1.3	1.6
Lane Grp Delay (d), s/veh	127.3	0.0	343.5	3.7	60.5	66.8
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	2014			1141	86	
Approach Delay, s/veh	122.8			29.6	63.9	
Approach LOS	F			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	102.0		8.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	98.0		4.0	106.0		
Max Q Clear Time (g_c+I1), s	100.0		6.0	19.8		
Green Ext Time (p_c), s	0.0		0.0	11.6		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			88.4			
HCM 2010 LOS			F			
<b>Notes</b>						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	381	140	262	220	71	25	447	567	133	27	846	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	717	388	330	717	275	96	803	2781	642	40	1875	410
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.39	1.00	1.00	0.02	0.43	0.43
Sat Flow, veh/h	3408	1845	1568	3408	1306	458	3408	4351	1005	1757	4402	962
Grp Volume(v), veh/h	414	152	285	239	0	104	486	520	241	29	770	352
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1764	1704	1845	1667	1757	1845	1675
Q Serve(g_s), s	10.2	6.7	16.5	5.6	0.0	4.6	10.7	0.0	0.0	1.5	14.2	14.3
Cycle Q Clear(g_c), s	10.2	6.7	16.5	5.6	0.0	4.6	10.7	0.0	0.0	1.5	14.2	14.3
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.60	1.00		0.57
Lane Grp Cap(c), veh/h	717	388	330	717	0	371	803	2358	1066	40	1572	714
V/C Ratio(X)	0.58	0.39	0.86	0.33	0.00	0.28	0.61	0.22	0.23	0.73	0.49	0.49
Avail Cap(c_a), veh/h	799	432	367	717	0	371	944	2358	1066	112	1572	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	31.9	35.8	31.5	0.0	31.1	25.0	0.0	0.0	45.6	19.5	19.6
Incr Delay (d2), s/veh	0.8	0.6	17.4	0.3	0.0	0.4	0.8	0.2	0.5	22.4	1.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	3.2	8.0	2.5	0.0	2.1	4.1	0.1	0.1	0.9	6.6	6.2
Lane Grp Delay (d), s/veh	34.1	32.5	53.2	31.7	0.0	31.5	25.8	0.2	0.5	68.0	20.6	22.0
Lane Grp LOS	C	C	D	C		C	C	A	A	E	C	C
Approach Vol, veh/h		851			343			1247			1151	
Approach Delay, s/veh		40.2			31.7			10.2			22.2	
Approach LOS		D			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		23.8			23.8		26.1	64.0		6.1	44.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		22.0			16.0		26.0	60.0		6.0	40.0	
Max Q Clear Time (g_c+I1), s		18.5			7.6		12.7	2.0		3.5	16.3	
Green Ext Time (p_c), s		1.3			3.4		5.8	8.8		0.0	8.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.2								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

No Bypass Cumulative +Project PM




























3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	382	484	321	663	1012	312
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	1232	567	415	3146	2278	646
Arrive On Green	0.36	0.36	0.24	1.00	0.41	0.41
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	415	526	349	721	1100	339
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	10.1	36.9	11.1	0.0	16.7	18.6
Cycle Q Clear(g_c), s	10.1	36.9	11.1	0.0	16.7	18.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1232	567	415	3146	2278	646
V/C Ratio(X)	0.34	0.93	0.84	0.23	0.48	0.53
Avail Cap(c_a), veh/h	1401	645	626	3146	2278	646
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.93	0.76	0.76
Uniform Delay (d), s/veh	26.5	35.1	42.2	0.0	24.7	25.2
Incr Delay (d2), s/veh	0.2	18.5	6.0	0.2	0.6	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.4	2.9	4.8	0.0	7.9	7.7
Lane Grp Delay (d), s/veh	26.7	53.6	48.2	0.2	25.3	27.6
Lane Grp LOS	C	D	D	A	C	C
Approach Vol, veh/h	941			1070	1439	
Approach Delay, s/veh	41.7			15.8	25.8	
Approach LOS	D			B	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			17.9	69.0	51.1	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			21.0	65.0	40.0	
Max Q Clear Time (g_c+I1), s			13.1	2.0	20.6	
Green Ext Time (p_c), s			0.8	26.5	13.7	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			27.1			
HCM 2010 LOS			C			
<b>Notes</b>						


























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

No Bypass Cumulative +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 		  					 		 	 	 
Volume (veh/h)	275	232	485	0	0	0	0	840	713	480	1109	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	596	323	549				0	3073	871	578	4197	0
Arrive On Green	0.17	0.17	0.17				0.00	1.00	1.00	0.23	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	299	252	527				0	913	775	522	1205	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	9.5	15.7	20.0				0.0	0.0	0.0	17.9	0.0	0.0
Cycle Q Clear(g_c), s	9.5	15.7	20.0				0.0	0.0	0.0	17.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	596	323	549				0	3073	871	578	4197	0
V/C Ratio(X)	0.50	0.78	0.96				0.00	0.30	0.89	0.90	0.29	0.00
Avail Cap(c_a), veh/h	596	323	549				0	3073	871	625	4197	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.74	0.74	0.82	0.82	0.00
Uniform Delay (d), s/veh	44.8	47.3	49.1				0.0	0.0	0.0	45.5	0.0	0.0
Incr Delay (d2), s/veh	0.7	11.6	28.6				0.0	0.2	10.2	13.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.2	8.5	10.2				0.0	0.1	2.5	8.7	0.1	0.0
Lane Grp Delay (d), s/veh	45.4	58.9	77.7				0.0	0.2	10.2	59.0	0.1	0.0
Lane Grp LOS	D	E	E					A	B	E	A	
Approach Vol, veh/h		1078						1688			1727	
Approach Delay, s/veh		64.4						4.8			17.9	
Approach LOS		E						A			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		25.0						70.6		24.4	95.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		21.0						65.0		22.0	91.0	
Max Q Clear Time (g_c+I1), s		22.0						2.0		19.9	2.0	
Green Ext Time (p_c), s		0.0						40.0		0.5	48.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.1									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

























No Bypass Cumulative +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	438	371	39	53	143	410	57	715	27	429	737	245
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1098	529	55	566	594	505	74	1906	71	565	1782	757
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.01	0.12	0.12	0.33	0.97	0.97
Sat Flow, veh/h	3408	1643	171	1757	1845	1568	1757	5302	197	3408	3689	1568
Grp Volume(v), veh/h	476	0	445	58	155	446	62	540	266	466	801	266
Grp Sat Flow(s),veh/h/ln	1704	0	1814	1757	1845	1568	1757	1845	1810	1704	1845	1568
Q Serve(g_s), s	8.7	0.0	17.3	1.8	4.9	21.2	2.8	10.7	10.7	9.9	1.0	0.7
Cycle Q Clear(g_c), s	8.7	0.0	17.3	1.8	4.9	21.2	2.8	10.7	10.7	9.9	1.0	0.7
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	1098	0	585	566	594	505	74	1326	651	565	1782	757
V/C Ratio(X)	0.43	0.00	0.76	0.10	0.26	0.88	0.84	0.41	0.41	0.83	0.45	0.35
Avail Cap(c_a), veh/h	1517	0	807	566	594	505	156	1326	651	867	1782	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.89	0.89	0.89
Uniform Delay (d), s/veh	21.0	0.0	23.9	18.7	19.7	25.3	38.5	26.9	26.9	25.2	0.7	0.7
Incr Delay (d2), s/veh	0.3	0.0	2.8	0.1	0.2	16.0	20.1	0.9	1.8	3.5	0.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.6	0.0	8.1	0.8	2.2	10.2	1.7	5.5	5.6	3.7	0.4	0.4
Lane Grp Delay (d), s/veh	21.3	0.0	26.8	18.8	19.9	41.2	58.6	27.8	28.7	28.8	1.4	1.8
Lane Grp LOS	C		C	B	B	D	E	C	C	C	A	A
Approach Vol, veh/h		921			659			868			1533	
Approach Delay, s/veh		23.9			34.2			30.3			9.8	
Approach LOS		C			C			C			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		29.3			29.3		7.3	32.3		17.0		42.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0			24.0		7.0	25.0		20.0		38.0
Max Q Clear Time (g_c+I1), s		19.3			23.2		4.8	12.7		11.9		3.0
Green Ext Time (p_c), s		6.0			0.6		0.1	4.4		1.1		7.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

No Bypass Cumulative +Project PM













3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	412	502	814	50	245	129	336	348	33	264	723	415
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	454	1361	578	69	277	235	381	919	87	319	892	379
Arrive On Green	0.26	0.37	0.00	0.04	0.15	0.00	0.22	0.28	0.28	0.18	0.24	0.24
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3319	314	1757	3689	1568
Grp Volume(v), veh/h	448	546	0	54	266	0	365	209	205	287	786	391
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1789	1757	1845	1568
Q Serve(g_s), s	30.5	13.2	0.0	3.7	17.2	0.0	24.7	11.1	11.2	19.2	24.6	29.0
Cycle Q Clear(g_c), s	30.5	13.2	0.0	3.7	17.2	0.0	24.7	11.1	11.2	19.2	24.6	29.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	454	1361	578	69	277	235	381	511	495	319	892	379
V/C Ratio(X)	0.99	0.40	0.00	0.78	0.96	0.00	0.96	0.41	0.41	0.90	0.88	1.03
Avail Cap(c_a), veh/h	454	1361	578	132	277	235	381	511	495	454	892	379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	28.1	0.0	57.1	50.7	0.0	46.5	35.4	35.4	48.0	43.8	45.5
Incr Delay (d2), s/veh	38.8	0.2	0.0	16.8	43.4	0.0	35.4	0.5	0.6	15.9	10.3	54.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	18.2	6.0	0.0	2.0	11.5	0.0	14.8	5.3	5.2	10.1	12.8	17.3
Lane Grp Delay (d), s/veh	83.1	28.2	0.0	73.9	94.1	0.0	81.9	35.9	36.0	63.9	54.1	100.2
Lane Grp LOS	F	C		E	F		F	D	D	E	D	F
Approach Vol, veh/h		994			320			779			1464	
Approach Delay, s/veh		52.9			90.7			57.5			68.3	
Approach LOS		D			F			E			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	35.0	48.3		8.7	22.0		30.0	37.2		25.8	33.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	31.0	40.0		9.0	18.0		26.0	24.0		31.0	29.0	
Max Q Clear Time (g_c+I1), s	32.5	15.2		5.7	19.2		26.7	13.2		21.2	31.0	
Green Ext Time (p_c), s	0.0	5.2		0.0	0.0		0.0	6.6		0.6	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				63.7								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 23: Sequoia Dr & Somersville Rd

No Bypass Cumulative +Project PM























3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	143	26	39	575	1343	243
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	207	184	275	2824	2824	1200
Arrive On Green	0.12	0.12	0.77	0.77	0.77	0.77
Sat Flow, veh/h	1757	1568	278	3689	3689	1568
Grp Volume(v), veh/h	155	28	42	625	1460	264
Grp Sat Flow(s),veh/h/ln	1757	1568	278	1845	1845	1568
Q Serve(g_s), s	5.8	1.1	4.7	3.3	10.5	3.2
Cycle Q Clear(g_c), s	5.8	1.1	15.2	3.3	10.5	3.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	207	184	275	2824	2824	1200
V/C Ratio(X)	0.75	0.15	0.15	0.22	0.52	0.22
Avail Cap(c_a), veh/h	668	596	412	4639	4639	1972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	27.1	6.1	2.3	3.1	2.3
Incr Delay (d2), s/veh	5.4	0.4	0.3	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	0.4	0.3	1.1	3.3	0.9
Lane Grp Delay (d), s/veh	34.6	27.5	6.3	2.3	3.3	2.4
Lane Grp LOS	C	C	A	A	A	A
Approach Vol, veh/h	183			667	1724	
Approach Delay, s/veh	33.5			2.6	3.1	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				56.3	56.3	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				86.0	86.0	
Max Q Clear Time (g_c+I1), s				17.2	12.5	
Green Ext Time (p_c), s				35.1	36.2	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			5.1			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

No Bypass Cumulative +Project PM






















3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	73	18	0	13	14	397	0	7	4	1261	5	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	101	306	0	25	146	62	4	77	38	1745	1216	2067
Arrive On Green	0.06	0.08	0.00	0.01	0.04	0.00	0.00	0.07	0.07	0.51	0.66	0.66
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	1161	581	3408	1845	3136
Grp Volume(v), veh/h	79	20	0	14	15	0	0	0	12	1371	5	105
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1742	1704	1845	1568
Q Serve(g_s), s	2.2	0.2	0.0	0.4	0.2	0.0	0.0	0.0	0.3	16.2	0.0	0.2
Cycle Q Clear(g_c), s	2.2	0.2	0.0	0.4	0.2	0.0	0.0	0.0	0.3	16.2	0.0	0.2
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	101	306	0	25	146	62	4	0	115	1745	1216	2067
V/C Ratio(X)	0.78	0.07	0.00	0.56	0.10	0.00	0.00	0.00	0.10	0.79	0.00	0.05
Avail Cap(c_a), veh/h	321	2023	0	143	1649	701	143	0	602	3877	2585	4395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	20.8	0.0	24.1	22.8	0.0	0.0	0.0	21.6	9.8	2.9	0.4
Incr Delay (d2), s/veh	12.3	0.1	0.0	18.4	0.3	0.0	0.0	0.0	0.4	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.1	5.9	0.0	0.1
Lane Grp Delay (d), s/veh	35.2	20.9	0.0	42.5	23.1	0.0	0.0	0.0	22.0	10.6	2.9	0.4
Lane Grp LOS	D	C		D	C				C	B	A	A
Approach Vol, veh/h		99			29			12			1481	
Approach Delay, s/veh		32.3			32.5			22.0			9.9	
Approach LOS		C			C			C			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	6.8	8.1		4.7	6.0		0.0	7.2		29.2	36.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	9.0	27.0		4.0	22.0		4.0	17.0		56.0	69.0	
Max Q Clear Time (g_c+I1), s	4.2	2.2		2.4	2.2		0.0	2.3		18.2	2.2	
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0		0.0	0.3		7.0	0.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				11.7								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 25: Buchanan Rd & Delta Fair Blvd

No Bypass Cumulative +Project PM




















3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	444	163	100	251	80	90	275	27	277	453	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	425	1022	372	292	1067	333	363	823	80	497	916	779
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1008	2583	940	764	2699	841	848	1656	161	1037	1845	1568
Grp Volume(v), veh/h	76	344	316	109	185	175	98	0	328	301	492	55
Grp Sat Flow(s),veh/h/ln	1008	1845	1679	764	1845	1696	848	0	1816	1037	1845	1568
Q Serve(g_s), s	4.1	10.3	10.4	9.2	5.0	5.2	6.7	0.0	8.2	18.6	13.6	1.4
Cycle Q Clear(g_c), s	9.3	10.3	10.4	19.6	5.0	5.2	20.2	0.0	8.2	26.9	13.6	1.4
Prop In Lane	1.00		0.56	1.00		0.50	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	425	729	664	292	729	671	363	0	902	497	916	779
V/C Ratio(X)	0.18	0.47	0.48	0.37	0.25	0.26	0.27	0.00	0.36	0.61	0.54	0.07
Avail Cap(c_a), veh/h	665	1168	1063	474	1168	1074	684	0	1591	890	1615	1373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	16.7	16.7	24.0	15.1	15.1	19.8	0.0	11.5	19.7	12.8	9.7
Incr Delay (d2), s/veh	0.2	0.5	0.5	0.8	0.2	0.2	0.4	0.0	0.2	1.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	4.5	4.1	1.8	2.2	2.1	1.4	0.0	3.4	4.7	5.9	0.5
Lane Grp Delay (d), s/veh	18.4	17.1	17.2	24.8	15.3	15.3	20.2	0.0	11.7	20.9	13.3	9.8
Lane Grp LOS	B	B	B	C	B	B	C		B	C	B	A
Approach Vol, veh/h		736			469			426			848	
Approach Delay, s/veh		17.3			17.5			13.7			15.8	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		33.4			33.4			40.9			40.9	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		47.0			47.0			65.0			65.0	
Max Q Clear Time (g_c+I1), s		12.4			21.6			22.2			28.9	
Green Ext Time (p_c), s		8.4			7.7			8.2			8.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.2								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

No Bypass Cumulative +Project PM
























3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	117	1166	8	27	643	124	4	19	8	246	21	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	164	1937	14	44	1387	268	84	307	118	445	56	359
Arrive On Green	0.09	0.53	0.53	0.03	0.46	0.46	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1757	3659	26	1757	3007	580	82	1183	455	1361	217	1384
Grp Volume(v), veh/h	127	639	637	29	429	405	34	0	0	267	0	170
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1742	1720	0	0	1361	0	1600
Q Serve(g_s), s	4.5	16.0	16.1	1.1	10.5	10.5	0.0	0.0	0.0	11.9	0.0	5.7
Cycle Q Clear(g_c), s	4.5	16.0	16.1	1.1	10.5	10.5	0.9	0.0	0.0	12.8	0.0	5.7
Prop In Lane	1.00		0.01	1.00		0.33	0.12		0.26	1.00		0.86
Lane Grp Cap(c), veh/h	164	976	974	44	851	803	508	0	0	445	0	415
V/C Ratio(X)	0.77	0.65	0.65	0.66	0.50	0.50	0.07	0.00	0.00	0.60	0.00	0.41
Avail Cap(c_a), veh/h	355	1204	1201	136	974	920	878	0	0	747	0	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	10.9	10.9	31.1	12.2	12.2	18.0	0.0	0.0	22.9	0.0	19.8
Incr Delay (d2), s/veh	7.6	0.9	0.9	15.3	0.5	0.5	0.1	0.0	0.0	1.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	6.6	6.6	0.6	4.4	4.2	0.4	0.0	0.0	4.0	0.0	2.2
Lane Grp Delay (d), s/veh	36.1	11.8	11.8	46.4	12.6	12.7	18.1	0.0	0.0	24.2	0.0	20.4
Lane Grp LOS	D	B	B	D	B	B	B			C		C
Approach Vol, veh/h		1403			863			34				437
Approach Delay, s/veh		14.0			13.8			18.1				22.7
Approach LOS		B			B			B				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	10.0	38.1		5.6	33.7			20.7				20.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	13.0	42.0		5.0	34.0			31.0				31.0
Max Q Clear Time (g_c+I1), s	6.5	18.1		3.1	12.5			2.9				14.8
Green Ext Time (p_c), s	0.1	16.0		0.0	14.8			2.1				1.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				15.4								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

No Bypass Cumulative +Project PM

3/14/2014
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	162	135	1156	13	66	77	792	842	10	80	1274	262
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	299	314	1426	51	261	267	969	2354	1001	112	1860	382
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.28	0.64	0.64	0.06	0.42	0.42
Sat Flow, veh/h	1757	1845	3136	298	1532	1568	3408	3689	1568	1757	4457	916
Grp Volume(v), veh/h	176	147	1257	86	0	84	861	915	11	87	1146	524
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1830	0	1568	1704	1845	1568	1757	1845	1683
Q Serve(g_s), s	8.7	6.7	16.0	3.8	0.0	4.4	22.7	11.2	0.2	4.6	24.7	24.7
Cycle Q Clear(g_c), s	8.7	6.7	16.0	3.8	0.0	4.4	22.7	11.2	0.2	4.6	24.7	24.7
Prop In Lane	1.00		1.00	0.16		1.00	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	299	314	1426	312	0	267	969	2354	1001	112	1540	702
V/C Ratio(X)	0.59	0.47	0.88	0.28	0.00	0.31	0.89	0.39	0.01	0.78	0.74	0.75
Avail Cap(c_a), veh/h	299	314	1426	312	0	267	1126	2358	1002	225	1611	735
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	35.1	23.3	33.9	0.0	34.1	32.2	8.2	6.2	43.3	23.1	23.1
Incr Delay (d2), s/veh	3.0	1.1	6.8	0.5	0.0	0.7	8.0	0.1	0.0	11.1	1.8	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.1	3.2	14.1	1.8	0.0	1.8	10.8	4.5	0.1	2.4	11.4	10.8
Lane Grp Delay (d), s/veh	38.9	36.2	30.0	34.4	0.0	34.8	40.2	8.3	6.2	54.4	25.0	27.1
Lane Grp LOS	D	D	C	C		C	D	A	A	D	C	C
Approach Vol, veh/h		1580			170			1787			1757	
Approach Delay, s/veh		31.6			34.6			23.6			27.1	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		20.0			20.0		30.7	63.9		10.0		43.2
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		31.0	60.0		12.0		41.0
Max Q Clear Time (g_c+I1), s		18.0			6.4		24.7	13.2		6.6		26.7
Green Ext Time (p_c), s		0.0			5.6		2.0	32.6		0.1		12.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.5								
HCM 2010 LOS				C								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 28: Kirker Pass Rd & Myrtle Dr

No Bypass Cumulative +Project PM























3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	0	47	2	0	1	55	2169	3	0	753	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	102	0	91	289	107	91	76	3086	1311	2	4033	54
Arrive On Green	0.06	0.00	0.06	0.06	0.00	0.06	0.04	0.84	0.84	0.00	0.74	0.74
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5448	73
Grp Volume(v), veh/h	61	0	51	2	0	1	60	2358	3	0	554	275
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1832
Q Serve(g_s), s	2.6	0.0	2.4	0.0	0.0	0.0	2.6	22.0	0.0	0.0	3.5	3.5
Cycle Q Clear(g_c), s	2.6	0.0	2.4	0.0	0.0	0.0	2.6	22.0	0.0	0.0	3.5	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	102	0	91	289	107	91	76	3086	1311	2	2731	1356
V/C Ratio(X)	0.60	0.00	0.56	0.01	0.00	0.01	0.78	0.76	0.00	0.00	0.20	0.20
Avail Cap(c_a), veh/h	370	0	330	1044	389	330	208	3304	1404	93	3061	1520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	0.0	34.8	33.7	0.0	33.7	36.0	2.8	1.0	0.0	3.0	3.0
Incr Delay (d2), s/veh	5.4	0.0	5.2	0.0	0.0	0.0	15.9	1.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	1.1	0.0	0.0	0.0	1.5	5.7	0.0	0.0	1.2	1.2
Lane Grp Delay (d), s/veh	40.3	0.0	40.1	33.7	0.0	33.7	51.9	3.8	1.0	0.0	3.1	3.1
Lane Grp LOS	D		D	C		C	D	A	A		A	A
Approach Vol, veh/h		112			3			2421			829	
Approach Delay, s/veh		40.2			33.7			5.0			3.1	
Approach LOS		D			C			A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		8.4			8.4		7.3	67.5		0.0		60.2
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		9.0	68.0		4.0		63.0
Max Q Clear Time (g_c+I1), s		4.6			2.0		4.6	24.0		0.0		5.5
Green Ext Time (p_c), s		0.3			0.3		0.0	39.5		0.0		50.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				5.7								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

No Bypass Cumulative +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	320	327	177	222	143	46	160	1498	397	63	540	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	381	434	230	273	476	202	206	1937	506	87	1885	231
Arrive On Green	0.22	0.19	0.19	0.16	0.13	0.13	0.12	0.46	0.46	0.05	0.39	0.39
Sat Flow, veh/h	1757	2271	1206	1757	3689	1568	1757	4233	1106	1757	4836	594
Grp Volume(v), veh/h	348	287	260	241	155	50	174	1416	644	68	446	214
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1650	1757	1845	1740
Q Serve(g_s), s	21.1	16.3	16.7	14.6	4.2	3.1	10.6	36.8	37.9	4.2	9.1	9.3
Cycle Q Clear(g_c), s	21.1	16.3	16.7	14.6	4.2	3.1	10.6	36.8	37.9	4.2	9.1	9.3
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.67	1.00		0.34
Lane Grp Cap(c), veh/h	381	352	312	273	476	202	206	1688	755	87	1438	678
V/C Ratio(X)	0.91	0.81	0.83	0.88	0.33	0.25	0.85	0.84	0.85	0.78	0.31	0.32
Avail Cap(c_a), veh/h	468	406	359	339	542	230	322	1761	787	113	1438	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	42.2	42.4	45.1	43.1	42.7	47.1	26.0	26.3	51.2	23.1	23.1
Incr Delay (d2), s/veh	19.7	10.8	13.8	20.0	0.4	0.6	11.4	3.7	8.8	22.8	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	11.6	8.8	8.2	8.1	2.0	1.3	5.4	17.6	17.2	2.4	4.2	4.1
Lane Grp Delay (d), s/veh	61.3	53.0	56.2	65.1	43.5	43.3	58.5	29.7	35.1	74.0	23.2	23.4
Lane Grp LOS	E	D	E	E	D	D	E	C	D	E	C	C
Approach Vol, veh/h		895			446			2234			728	
Approach Delay, s/veh		57.2			55.1			33.5			28.0	
Approach LOS		E			E			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	27.7	24.8		20.9	18.1		16.8	53.9		9.4	46.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	29.0	24.0		21.0	16.0		20.0	52.0		7.0	39.0	
Max Q Clear Time (g_c+I1), s	23.1	18.7		16.6	6.2		12.6	39.9		6.2	11.3	
Green Ext Time (p_c), s	0.6	2.1		0.3	3.3		0.3	10.0		0.0	22.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.7								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd

No Bypass Cumulative +Project PM






















3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	664	946	30	251	443	161	145	1670	594	280	469	235
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	780	1470	0	328	736	0	215	2212	627	348	2428	688
Arrive On Green	0.23	0.27	0.00	0.10	0.13	0.00	0.06	0.40	0.40	0.10	0.44	0.44
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	722	1028	0	273	482	0	158	1815	646	304	510	255
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	24.4	19.7	0.0	9.3	9.7	0.0	5.4	34.4	47.0	10.3	6.7	12.8
Cycle Q Clear(g_c), s	24.4	19.7	0.0	9.3	9.7	0.0	5.4	34.4	47.0	10.3	6.7	12.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	780	1470	0	328	736	0	215	2212	627	348	2428	688
V/C Ratio(X)	0.93	0.70	0.00	0.83	0.65	0.00	0.73	0.82	1.03	0.87	0.21	0.37
Avail Cap(c_a), veh/h	812	1553	0	348	800	0	290	2212	627	348	2428	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	38.9	0.0	52.2	48.4	0.0	54.1	31.5	35.3	52.0	20.4	22.1
Incr Delay (d2), s/veh	16.0	1.3	0.0	15.0	1.7	0.0	6.3	2.6	44.0	21.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.4	9.5	0.0	4.8	4.8	0.0	2.6	16.5	26.0	5.6	3.0	5.0
Lane Grp Delay (d), s/veh	60.3	40.2	0.0	67.1	50.1	0.0	60.4	34.1	79.3	73.0	20.4	22.5
Lane Grp LOS	E	D		E	D		E	C	F	E	C	C
Approach Vol, veh/h		1750			755			2619			1069	
Approach Delay, s/veh		48.5			56.3			46.8			35.9	
Approach LOS		D			E			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	30.9	35.2		15.3	19.6		11.4	51.0		16.0	55.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	33.0		12.0	17.0		10.0	47.0		12.0	49.0	
Max Q Clear Time (g_c+I1), s	26.4	21.7		11.3	11.7		7.4	49.0		12.3	14.8	
Green Ext Time (p_c), s	0.6	7.3		0.1	3.9		0.1	0.0		0.0	28.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				46.6								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd














No Bypass Cumulative +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	1632	14	32	919	38	20	0	31	40	0	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	38	2746	23	47	2663	109	168	0	117	162	0	117
Arrive On Green	0.02	0.75	0.75	0.03	0.76	0.76	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1757	3653	31	1757	3519	144	1364	0	1568	1356	0	1568
Grp Volume(v), veh/h	26	895	894	35	524	516	22	0	34	43	0	27
Grp Sat Flow(s),veh/h/ln	1757	1845	1839	1757	1845	1819	1364	0	1568	1356	0	1568
Q Serve(g_s), s	1.2	19.2	19.2	1.6	7.9	7.9	1.3	0.0	1.7	2.5	0.0	1.3
Cycle Q Clear(g_c), s	1.2	19.2	19.2	1.6	7.9	7.9	2.6	0.0	1.7	4.2	0.0	1.3
Prop In Lane	1.00		0.02	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	1387	1383	47	1396	1377	168	0	117	162	0	117
V/C Ratio(X)	0.68	0.65	0.65	0.74	0.38	0.38	0.13	0.00	0.29	0.27	0.00	0.23
Avail Cap(c_a), veh/h	129	1936	1931	129	1936	1910	332	0	306	325	0	306
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.8	4.9	4.9	39.6	3.4	3.4	36.9	0.0	35.8	37.8	0.0	35.7
Incr Delay (d2), s/veh	19.0	0.5	0.5	20.3	0.2	0.2	0.3	0.0	1.3	0.9	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	5.9	5.9	1.0	2.2	2.2	0.5	0.0	0.7	0.9	0.0	0.6
Lane Grp Delay (d), s/veh	58.7	5.4	5.4	59.9	3.6	3.6	37.2	0.0	37.2	38.7	0.0	36.7
Lane Grp LOS	E	A	A	E	A	A	D		D	D		D
Approach Vol, veh/h		1815			1075			56			70	
Approach Delay, s/veh		6.2			5.4			37.2			37.9	
Approach LOS		A			A			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.8	65.6		6.2	66.0			10.1				10.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	86.0		6.0	86.0			16.0				16.0
Max Q Clear Time (g_c+I1), s	3.2	21.2		3.6	9.9			4.6				6.2
Green Ext Time (p_c), s	0.0	40.4		0.0	44.2			0.3				0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				7.2								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd






















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 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			
Volume (veh/h)	417	1313	482	179	198	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	510	2460	830	307	397	354
Arrive On Green	0.29	0.67	0.32	0.32	0.23	0.23
Sat Flow, veh/h	1757	3689	2569	952	1757	1568
Grp Volume(v), veh/h	453	1427	376	343	215	315
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1677	1757	1568
Q Serve(g_s), s	18.4	15.7	12.9	13.0	8.1	14.5
Cycle Q Clear(g_c), s	18.4	15.7	12.9	13.0	8.1	14.5
Prop In Lane	1.00			0.57	1.00	1.00
Lane Grp Cap(c), veh/h	510	2460	596	542	397	354
V/C Ratio(X)	0.89	0.58	0.63	0.63	0.54	0.89
Avail Cap(c_a), veh/h	801	3165	643	584	424	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	6.7	21.5	21.5	25.5	28.0
Incr Delay (d2), s/veh	7.8	0.2	1.8	2.0	1.2	21.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.8	5.8	6.0	5.6	3.6	2.1
Lane Grp Delay (d), s/veh	33.1	7.0	23.2	23.5	26.7	49.1
Lane Grp LOS	C	A	C	C	C	D
Approach Vol, veh/h		1880	719		530	
Approach Delay, s/veh		13.3	23.4		40.0	
Approach LOS		B	C		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.7	53.7	28.1			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	34.0	64.0	26.0			
Max Q Clear Time (g_c+I1), s	20.4	17.7	15.0			
Green Ext Time (p_c), s	1.3	26.2	9.1			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			20.1			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr





















No Bypass Cumulative +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	129	9	574	19	1	2	254	571	14	21	711	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	672	11	666	109	237	474	315	817	20	385	910	65
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.18	0.23	0.23	0.44	0.53	0.53
Sat Flow, veh/h	1394	25	1547	782	550	1100	1757	3587	87	1757	3404	242
Grp Volume(v), veh/h	140	0	634	21	0	3	276	319	317	23	419	409
Grp Sat Flow(s),veh/h/ln	1394	0	1572	782	0	1650	1757	1845	1829	1757	1845	1802
Q Serve(g_s), s	6.2	0.0	37.6	2.6	0.0	0.1	14.9	15.8	15.8	0.7	18.9	18.9
Cycle Q Clear(g_c), s	6.3	0.0	37.6	40.1	0.0	0.1	14.9	15.8	15.8	0.7	18.9	18.9
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.05	1.00		0.13
Lane Grp Cap(c), veh/h	672	0	676	109	0	710	315	420	416	385	493	482
V/C Ratio(X)	0.21	0.00	0.94	0.19	0.00	0.00	0.88	0.76	0.76	0.06	0.85	0.85
Avail Cap(c_a), veh/h	672	0	676	109	0	710	486	1134	1125	385	737	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.66	0.66	0.66	0.82	0.82	0.82
Uniform Delay (d), s/veh	17.7	0.0	26.5	45.7	0.0	15.9	39.0	35.2	35.2	21.6	21.0	21.0
Incr Delay (d2), s/veh	0.2	0.0	20.7	0.8	0.0	0.0	7.6	8.4	8.5	0.1	14.1	14.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.1	0.0	18.3	0.5	0.0	0.0	7.3	8.3	8.3	0.3	8.6	8.5
Lane Grp Delay (d), s/veh	17.8	0.0	47.2	46.5	0.0	15.9	46.6	43.6	43.7	21.7	35.1	35.4
Lane Grp LOS	B		D	D		B	D	D	D	C	D	D
Approach Vol, veh/h		774			24			912			851	
Approach Delay, s/veh		41.9			42.7			44.5			34.9	
Approach LOS		D			D			D			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		46.0			46.0		21.5	26.2		25.4	30.1	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		42.0			42.0		27.0	60.0		6.0	39.0	
Max Q Clear Time (g_c+I1), s		39.6			42.1		16.9	17.8		2.7	20.9	
Green Ext Time (p_c), s		1.2			0.0		0.6	4.4		1.6	5.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				40.5								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
34: Fairview Dr & Delta Fair Blvd

No Bypass Cumulative +Project PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	928	588	128	384	10	195	20	34	15	11	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	31	1116	671	171	2133	56	274	20	392	59	39	11
Arrive On Green	0.02	0.52	0.52	0.10	0.60	0.60	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1757	2161	1299	1757	3578	94	785	81	1568	0	157	45
Grp Volume(v), veh/h	20	853	795	139	215	213	234	0	37	36	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1615	1757	1845	1828	866	0	1568	201	0	0
Q Serve(g_s), s	1.0	36.6	41.2	6.8	4.7	4.7	0.0	0.0	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	36.6	41.2	6.8	4.7	4.7	22.0	0.0	1.6	22.0	0.0	0.0
Prop In Lane	1.00		0.80	1.00		0.05	0.91		1.00	0.44		0.22
Lane Grp Cap(c), veh/h	31	952	834	171	1099	1090	295	0	392	109	0	0
V/C Ratio(X)	0.65	0.90	0.95	0.81	0.20	0.20	0.79	0.00	0.09	0.33	0.00	0.00
Avail Cap(c_a), veh/h	100	964	845	200	1099	1090	295	0	392	109	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.0	19.2	20.3	38.9	8.1	8.1	33.8	0.0	25.3	27.4	0.0	0.0
Incr Delay (d2), s/veh	20.5	10.8	20.3	19.4	0.1	0.1	13.9	0.0	0.1	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	18.5	20.1	4.0	1.9	1.9	6.3	0.0	0.6	0.7	0.0	0.0
Lane Grp Delay (d), s/veh	63.5	30.0	40.5	58.4	8.2	8.2	47.7	0.0	25.4	29.2	0.0	0.0
Lane Grp LOS	E	C	D	E	A	A	D		C	C		
Approach Vol, veh/h		1668			567			271				36
Approach Delay, s/veh		35.4			20.5			44.7				29.2
Approach LOS		D			C			D				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.5	49.4		12.6	56.4			26.0				26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	5.0	46.0		10.0	51.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	3.0	43.2		8.8	6.7			24.0				24.0
Green Ext Time (p_c), s	0.0	2.2		0.0	25.4			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				33.0								
HCM 2010 LOS				C								
<b>Notes</b>												

## MEMORANDUM

Date: May 2, 2014

To: Paul Reinders  
City Traffic Engineer  
City of Pittsburg  
65 Civic Avenue  
Pittsburg CA 94565

From: Steve Abrams

**Subject: Analysis of Level-of-Service Conditions for Tuscany Meadows with and without Standard Oil Road**

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The purpose of this memorandum is to review the difference in level of service (LOS) at the Tuscany Meadows Transportation Impact Analysis (TIA) study intersections both with and without the planned Standard Oil Road. Based on the Countywide Transportation Plan and consistent with other traffic studies prepared in the area the James Donlon Boulevard Extension was assumed to be in place under cumulative plus project conditions. It is our understanding that Standard Oil Avenue is not a project in any nexus fee study nor has a source of funding been identified for it. All the information we have reviewed indicates there is no reasonable expectation of Standard Oil Avenue ever being constructed. However, although not required for the environmental review, it was requested that we also provide a comparison of the project's future traffic operations both with and without Standard Oil Road to assist in the City's review of the project application. The attached **Table A-3** presents a summary of the cumulative plus project conditions at each of the project study intersections both with and without Standard Oil Road. Please note that the detailed Synchro Calculations for each of the scenarios presented in Tables A-3 are attached to this memorandum.

### Summary and Findings

As shown in **Table A-1**, at the intersection of Delta Fair Boulevard with Century Boulevard the addition of the fourth leg at this intersection (Standard Oil Road) and the diversion of traffic from Buchanan Road would cause this intersection to deteriorate to LOS E during the AM and PM peak commute periods. The intersection of Tuscany Meadows Drive and Buchanan Road would form the southern terminus of the planned Standard Oil Road. With the addition of this new roadway connection its intersection with Buchanan Road and Tuscany Meadows Drive is forecast to degrade to LOS F. There do not appear to be any feasible mitigations address the poor operations at either of these intersections. It should also be noted that including Standard Oil Road in the future roadway network also results in unacceptable traffic operations at Somersville Road and Buchanan Road and at the Tuscany Meadows Apartments entrance intersection on Buchanan Road. All these intersections would continue to have acceptable traffic operations in the future if Standard Oil Road were excluded from the future roadway network.















**TABLE A-3**  
**CUMULATIVE PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS**  
**WITH AND WITHOUT STANDARD OIL ROAD**

INTERSECTION	CONTROL		WITHOUT STANDARD OIL RD		WITH STANDARD OIL RD	
			Delay	LOS	Delay	LOS
11 LOVERIDGE RD & E. LELAND RD	Traffic Signal	AM	28.7	C	28.2	C
		PM	38.1	D	35.7	D
12 LOVERIDGE RD & BUCHANAN RD	Traffic Signal	AM	30.4	C	23.0	C
		PM	26.3	C	22.0	C
13 BUCHANAN RD & VENTURA DR	Traffic Signal	AM	20.1	C	19.3	B
		PM	31.2	C	27.0	C
15 BUCHANAN RD & TUSCANY MEADOWS DR/STANDARD OIL RD	Traffic Signal	AM	31.3	C	28.1	C
		PM	39.0	D	> 80.0	F
17 BUCHANAN RD & TUSCANY MEADOWS APARTMENTS	Traffic Signal	AM	24.0	C	33.1	C
		PM	45.0	D	> 80.0	F
22 SOMERSVILLE RD & BUCHANAN RD	Traffic Signal	AM	62.7	E	> 80.0	F
		PM	60.6	E	> 80.0	F
31 BUCHANAN RD & CHATEAU MOBILE PARK	Side Street Stop	AM	4.6	A	4.3	A
		PM	6.9	A	7.9	A
32 DELTA FAIR BLVD/STANDARD OIL RD & CENTURY BLVD	Traffic Signal	AM	15.5	B	63.8	E
		PM	19.7	B	62.2	E
33 SOMERSVILLE RD & FAIRVIEW DR	Traffic Signal	AM	27.6	C	21.3	C
		PM	40.2	D	29.6	C
34 DELTA FAIR BLVD & FAIRVIEW DR	Traffic Signal	AM	29.6	C	9.7	A
		PM	34.2	C	10.2	B

HCM 2010 Signalized Intersection Summary Cumulative Plus Project AM With Bypass & Std Oil Dr  
 11: Loveridge Rd & Leland Rd 3/16/2014

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	199	267	170	147	756	247	239	571	80	229	352	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	305	1310	557	240	1239	527	308	1032	439	341	755	321
Arrive On Green	0.09	0.35	0.35	0.07	0.34	0.34	0.18	0.28	0.28	0.10	0.20	0.20
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	216	290	185	160	822	268	260	621	87	249	383	185
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.1	4.5	7.1	3.8	15.6	11.2	11.8	12.0	3.5	5.8	7.6	8.7
Cycle Q Clear(g_c), s	5.1	4.5	7.1	3.8	15.6	11.2	11.8	12.0	3.5	5.8	7.6	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	305	1310	557	240	1239	527	308	1032	439	341	755	321
V/C Ratio(X)	0.71	0.22	0.33	0.67	0.66	0.51	0.84	0.60	0.20	0.73	0.51	0.58
Avail Cap(c_a), veh/h	539	1886	802	415	1751	744	620	1706	725	581	1033	439
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	18.5	19.4	37.3	23.3	21.9	32.8	25.6	22.6	35.9	29.0	29.5
Incr Delay (d2), s/veh	3.0	0.1	0.3	3.2	0.6	0.8	6.3	0.6	0.2	3.0	0.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	2.0	2.7	1.7	7.1	4.3	5.7	5.5	1.4	2.6	3.5	3.5
Lane Grp Delay (d), s/veh	39.4	18.6	19.7	40.4	23.9	22.6	39.1	26.2	22.8	38.9	29.5	31.1
Lane Grp LOS	D	B	B	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		691			1250			968			817	
Approach Delay, s/veh		25.4			25.8			29.4			32.7	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.4	33.2		9.8	31.6		18.4	27.0		12.2	20.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	42.0		10.0	39.0		29.0	38.0		14.0	23.0	
Max Q Clear Time (g_c+I1), s	7.1	9.1		5.8	17.6		13.8	14.0		7.8	10.7	
Green Ext Time (p_c), s	0.3	11.9		0.2	10.0		0.7	8.6		0.4	6.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					28.2							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary Cumulative Plus Project AM With Bypass & Std Oil Dr  
 12: Buchanan Rd & Loveridge Rd 3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	236	313	868	269	162	166
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	325	1493	1095	931	226	202
Arrive On Green	0.19	0.81	1.00	1.00	0.13	0.13
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	257	340	943	292	176	180
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	18.1	5.6	0.0	0.0	12.6	14.7
Cycle Q Clear(g_c), s	18.1	5.6	0.0	0.0	12.6	14.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	325	1493	1095	931	226	202
V/C Ratio(X)	0.79	0.23	0.86	0.31	0.78	0.89
Avail Cap(c_a), veh/h	325	1493	1095	931	230	206
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.55	0.55	1.00	1.00
Uniform Delay (d), s/veh	50.5	2.9	0.0	0.0	54.7	55.6
Incr Delay (d2), s/veh	10.6	0.3	5.2	0.5	15.2	34.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.0	1.9	1.6	0.1	6.7	1.9
Lane Grp Delay (d), s/veh	61.0	3.2	5.2	0.5	70.0	90.1
Lane Grp LOS	E	A	A	A	E	F
Approach Vol, veh/h		597	1235		356	
Approach Delay, s/veh		28.1	4.1		80.2	
Approach LOS		C	A		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	28.0	109.0	81.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	24.0	105.0	77.0			
Max Q Clear Time (g_c+I1), s	20.1	7.6	2.0			
Green Ext Time (p_c), s	1.1	2.9	11.5			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			23.0			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary Cumulative Plus Project AM With Bypass & Std Oil Dr  
 15: Buchanan Rd & Standard Oil Drive

3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	59	508	12	36	844	521	34	40	107	157	13	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Cap, veh/h	82	1106	940	50	1072	911	47	52	142	202	78	258
Arrive On Green	0.05	0.59	0.59	0.03	0.58	0.58	0.03	0.12	0.12	0.11	0.20	0.20
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	446	1204	1774	383	1258
Grp Volume(v), veh/h	64	552	13	39	917	566	37	0	159	171	0	60
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	0	1650	1774	0	1641
Q Serve(g_s), s	3.9	18.6	0.4	2.4	44.8	25.7	2.3	0.0	10.2	10.3	0.0	3.3
Cycle Q Clear(g_c), s	3.9	18.6	0.4	2.4	44.8	25.7	2.3	0.0	10.2	10.3	0.0	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		0.77
Lane Grp Cap(c), veh/h	82	1106	940	50	1072	911	47	0	194	202	0	336
V/C Ratio(X)	0.78	0.50	0.01	0.79	0.86	0.62	0.79	0.00	0.82	0.85	0.00	0.18
Avail Cap(c_a), veh/h	114	1248	1061	114	1248	1061	98	0	273	261	0	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.4	12.8	9.1	52.6	19.3	15.3	52.7	0.0	46.9	47.4	0.0	35.7
Incr Delay (d2), s/veh	20.0	0.3	0.0	23.4	5.4	0.9	24.8	0.0	12.6	18.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	8.4	0.1	1.4	21.5	9.7	1.4	0.0	5.1	5.7	0.0	1.4
Lane Grp Delay (d), s/veh	71.4	13.1	9.1	76.0	24.7	16.1	77.6	0.0	59.5	65.6	0.0	36.0
Lane Grp LOS	E	B	A	E	C	B	E		E	E		D
Approach Vol, veh/h		629			1522			196			231	
Approach Delay, s/veh		19.0			22.8			62.9			57.9	
Approach LOS		B			C			E			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	9.0	68.7		7.0	66.7		6.9	16.8		16.4		26.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	7.0	73.0		7.0	73.0		6.0	18.0		16.0		28.0
Max Q Clear Time (g_c+I1), s	5.9	20.6		4.4	46.8		4.3	12.2		12.3		5.3
Green Ext Time (p_c), s	0.0	22.4		0.0	15.9		0.0	0.6		0.1		1.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.1								
HCM 2010 LOS				C								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary Cumulative Plus Project AM With Bypass & Std Oil Dr  
 17: Proposed Apartments & Buchanan Rd 3/16/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	756	16	22	1339	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	890	757	520	1495	222	198
Arrive On Green	0.48	0.48	0.30	0.81	0.13	0.13
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	822	17	24	1455	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	52.6	0.7	1.2	89.6	4.4	7.3
Cycle Q Clear(g_c), s	52.6	0.7	1.2	89.6	4.4	7.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	890	757	520	1495	222	198
V/C Ratio(X)	0.92	0.02	0.05	0.97	0.30	0.49
Avail Cap(c_a), veh/h	1327	1128	520	1546	222	198
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	17.1	31.8	10.8	50.2	51.4
Incr Delay (d2), s/veh	8.0	0.0	0.0	16.7	3.5	8.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	25.3	0.3	0.6	37.3	2.2	3.4
Lane Grp Delay (d), s/veh	38.5	17.1	31.8	27.5	53.6	59.8
Lane Grp LOS	D	B	C	C	D	E
Approach Vol, veh/h	839			1479	164	
Approach Delay, s/veh	38.1			27.6	57.3	
Approach LOS	D			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	65.1		41.4	106.5		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	91.0		11.0	106.0		
Max Q Clear Time (g_c+I1), s	54.6		3.2	91.6		
Green Ext Time (p_c), s	6.5		6.4	10.9		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			33.1			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary Cumulative Plus Project AM With Bypass & Std Oil Dr  
 22: Somersville Rd & Buchanan Rd 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	425	244	153	27	384	433	870	245	58	43	81	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	318	1258	535	37	334	284	651	1349	314	60	477	203
Arrive On Green	0.18	0.34	0.00	0.02	0.18	0.00	0.37	0.47	0.47	0.03	0.13	0.13
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	2897	674	1757	3689	1568
Grp Volume(v), veh/h	462	265	0	29	417	0	946	168	161	47	88	161
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1726	1757	1845	1568
Q Serve(g_s), s	21.0	5.9	0.0	1.9	21.0	0.0	43.0	6.2	6.4	3.1	2.5	11.6
Cycle Q Clear(g_c), s	21.0	5.9	0.0	1.9	21.0	0.0	43.0	6.2	6.4	3.1	2.5	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	318	1258	535	37	334	284	651	859	804	60	477	203
V/C Ratio(X)	1.45	0.21	0.00	0.79	1.25	0.00	1.45	0.20	0.20	0.78	0.18	0.79
Avail Cap(c_a), veh/h	318	1258	535	91	334	284	651	859	804	121	604	257
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	27.1	0.0	56.5	47.5	0.0	36.5	18.2	18.3	55.6	45.0	49.0
Incr Delay (d2), s/veh	220.5	0.1	0.0	30.0	134.5	0.0	212.2	0.1	0.1	19.3	0.2	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	28.8	2.7	0.0	1.2	22.5	0.0	57.6	2.8	2.7	1.7	1.2	5.4
Lane Grp Delay (d), s/veh	268.0	27.2	0.0	86.5	182.0	0.0	248.7	18.3	18.4	74.8	45.2	61.5
Lane Grp LOS	F	C		F	F		F	B	B	E	D	E
Approach Vol, veh/h	727			446			1275			296		
Approach Delay, s/veh	180.2			175.8			189.3			58.8		
Approach LOS	F			F			F			E		
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	25.0	43.6		6.4	25.0		47.0	58.0		8.0	19.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	21.0	36.0		6.0	21.0		43.0	54.0		8.0	19.0	
Max Q Clear Time (g_c+I1), s	23.0	7.9		3.9	23.0		45.0	8.4		5.1	13.6	
Green Ext Time (p_c), s	0.0	4.5		0.0	0.0		0.0	3.4		0.0	1.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				170.6								
HCM 2010 LOS				F								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary Cumulative Plus Project AM With Bypass & Std Oil Dr  
 31: Un Rd & Buchanan Rd 3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	808	5	10	1453	12	7	0	31	8	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	18	2767	16	20	2762	23	168	0	62	141	0	62
Arrive On Green	0.01	0.75	0.75	0.01	0.76	0.76	0.04	0.00	0.04	0.04	0.00	0.04
Sat Flow, veh/h	1757	3665	21	1757	3654	30	1393	0	1568	1356	0	1568
Grp Volume(v), veh/h	10	442	441	11	797	795	8	0	34	9	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1841	1757	1845	1839	1393	0	1568	1356	0	1568
Q Serve(g_s), s	0.3	4.8	4.8	0.4	11.5	11.5	0.3	0.0	1.3	0.4	0.0	0.2
Cycle Q Clear(g_c), s	0.3	4.8	4.8	0.4	11.5	11.5	0.5	0.0	1.3	1.7	0.0	0.2
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1393	1390	20	1394	1390	168	0	62	141	0	62
V/C Ratio(X)	0.56	0.32	0.32	0.56	0.57	0.57	0.05	0.00	0.55	0.06	0.00	0.06
Avail Cap(c_a), veh/h	114	2628	2623	114	2628	2621	474	0	406	439	0	406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.4	2.4	2.4	30.4	3.2	3.2	28.8	0.0	29.1	30.0	0.0	28.6
Incr Delay (d2), s/veh	24.3	0.1	0.1	22.9	0.4	0.4	0.1	0.0	7.3	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	1.2	1.2	0.3	2.8	2.8	0.1	0.0	0.6	0.1	0.0	0.1
Lane Grp Delay (d), s/veh	54.8	2.6	2.6	53.2	3.6	3.6	28.9	0.0	36.5	30.1	0.0	29.0
Lane Grp LOS	D	A	A	D	A	A	C		D	C		C
Approach Vol, veh/h		893			1603			42				13
Approach Delay, s/veh		3.2			4.0			35.0				29.8
Approach LOS		A			A			D				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.6	50.6		4.7	50.7			6.4				6.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	88.0		4.0	88.0			16.0				16.0
Max Q Clear Time (g_c+I1), s	2.3	6.8		2.4	13.5			3.3				3.7
Green Ext Time (p_c), s	0.0	34.2		0.0	33.2			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.3								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary Cumulative Plus Project AM With Bypass & Std Oil Dr  
 32: Standard Oil Drive & Delta Fair Blvd 3/15/2014




















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	106	268	41	42	402	110	521	100	59	112	100	312
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Cap, veh/h	137	770	327	59	460	125	596	593	348	149	115	356
Arrive On Green	0.08	0.21	0.21	0.03	0.16	0.16	0.34	0.54	0.54	0.08	0.29	0.29
Sat Flow, veh/h	1774	3725	1583	1774	2822	768	1774	1102	647	1774	400	1243
Grp Volume(v), veh/h	115	291	45	46	287	270	566	0	173	122	0	448
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1727	1774	0	1749	1774	0	1643
Q Serve(g_s), s	7.5	7.8	1.3	3.0	17.8	18.1	36.3	0.0	5.9	7.9	0.0	31.2
Cycle Q Clear(g_c), s	7.5	7.8	1.3	3.0	17.8	18.1	36.3	0.0	5.9	7.9	0.0	31.2
Prop In Lane	1.00		1.00	1.00		0.44	1.00		0.37	1.00		0.76
Lane Grp Cap(c), veh/h	137	770	327	59	303	281	596	0	942	149	0	471
V/C Ratio(X)	0.84	0.38	0.14	0.78	0.95	0.96	0.95	0.00	0.18	0.82	0.00	0.95
Avail Cap(c_a), veh/h	137	770	327	122	303	281	639	0	942	228	0	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.1	39.8	9.1	56.0	48.3	48.4	37.8	0.0	13.8	52.5	0.0	40.8
Incr Delay (d2), s/veh	34.9	0.3	0.2	19.3	37.5	42.5	23.1	0.0	0.1	12.7	0.0	28.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.8	3.8	1.1	1.7	11.7	11.3	20.2	0.0	2.5	4.2	0.0	16.8
Lane Grp Delay (d), s/veh	88.0	40.1	9.3	75.3	85.9	90.9	60.8	0.0	13.9	65.2	0.0	69.6
Lane Grp LOS	F	D	A	E	F	F	E		B	E		E
Approach Vol, veh/h		451			603			739				570
Approach Delay, s/veh		49.3			87.3			49.8				68.7
Approach LOS		D			F			D				E
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	13.0	28.1		7.9	23.0		43.2	66.8		13.8		37.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	9.0	20.0		8.0	19.0		42.0	61.0		15.0		34.0
Max Q Clear Time (g_c+I1), s	9.5	9.8		5.0	20.1		38.3	7.9		9.9		33.2
Green Ext Time (p_c), s	0.0	4.0		0.0	0.0		0.9	3.2		0.1		0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				63.8								
HCM 2010 LOS				E								
<b>Notes</b>												



























HCM 2010 Signalized Intersection Summary Cumulative Plus Project AM With Bypass & Std Oil Dr  
 33: Somersville Rd & Fairview Dr 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	76	0	0	0	428	478	0	2	291	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	200	0	116	70	136	0	510	2996	0	2	1728	158
Arrive On Green	0.07	0.00	0.07	0.00	0.00	0.00	0.29	0.81	0.00	0.00	0.52	0.52
Sat Flow, veh/h	1757	0	1568	1297	1845	0	1757	3689	0	1757	3332	304
Grp Volume(v), veh/h	50	0	83	0	0	0	465	520	0	2	174	171
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1297	1845	0	1757	1845	0	1757	1845	1791
Q Serve(g_s), s	2.8	0.0	5.3	0.0	0.0	0.0	26.1	3.2	0.0	0.1	5.1	5.2
Cycle Q Clear(g_c), s	2.8	0.0	5.3	0.0	0.0	0.0	26.1	3.2	0.0	0.1	5.1	5.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.17
Lane Grp Cap(c), veh/h	200	0	116	70	136	0	510	2996	0	2	957	929
V/C Ratio(X)	0.25	0.00	0.72	0.00	0.00	0.00	0.91	0.17	0.00	1.16	0.18	0.18
Avail Cap(c_a), veh/h	414	0	307	229	361	0	1066	2996	0	86	957	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.45	0.45	0.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	45.1	0.0	46.3	0.0	0.0	0.0	35.0	2.1	0.0	51.1	13.1	13.1
Incr Delay (d2), s/veh	0.6	0.0	8.1	0.0	0.0	0.0	3.3	0.1	0.0	340.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	2.4	0.0	0.0	0.0	12.0	1.1	0.0	0.2	2.4	2.3
Lane Grp Delay (d), s/veh	45.8	0.0	54.4	0.0	0.0	0.0	38.3	2.2	0.0	391.1	13.4	13.4
Lane Grp LOS	D		D				D	A		F	B	B
Approach Vol, veh/h		133			0			985			347	
Approach Delay, s/veh		51.1			0.0			19.2			15.6	
Approach LOS		D						B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		11.5			11.5		33.7	87.0		3.7		57.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		20.0			20.0		62.0	83.0		5.0		26.0
Max Q Clear Time (g_c+I1), s		7.3			0.0		28.1	5.2		2.1		7.2
Green Ext Time (p_c), s		0.4			0.0		1.5	4.1		0.0		1.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.3								
HCM 2010 LOS				C								
<b>Notes</b>												







HCM 2010 Signalized Intersection Summary Cumulative Plus Project AM With Bypass & Std Oil Dr  
 34: Fairview Dr & Delta Fair Blvd 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	376	58	24	500	8	227	7	32	9	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	24	1114	170	45	1333	22	564	12	418	281	56	26
Arrive On Green	0.01	0.36	0.36	0.03	0.37	0.37	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1757	3127	478	1757	3619	60	1336	43	1568	376	210	98
Grp Volume(v), veh/h	13	240	232	26	277	275	255	0	35	14	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1760	1757	1845	1834	1379	0	1568	684	0	0
Q Serve(g_s), s	0.3	3.3	3.3	0.5	3.8	3.8	0.0	0.0	0.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	3.3	3.3	0.5	3.8	3.8	5.8	0.0	0.6	5.8	0.0	0.0
Prop In Lane	1.00		0.27	1.00		0.03	0.97		1.00	0.71		0.14
Lane Grp Cap(c), veh/h	24	657	627	45	680	676	575	0	418	363	0	0
V/C Ratio(X)	0.54	0.37	0.37	0.58	0.41	0.41	0.44	0.00	0.08	0.04	0.00	0.00
Avail Cap(c_a), veh/h	308	1565	1494	360	1619	1610	1926	0	1927	1738	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.7	8.1	8.2	16.5	8.0	8.0	11.3	0.0	9.4	9.6	0.0	0.0
Incr Delay (d2), s/veh	17.9	0.3	0.4	11.2	0.4	0.4	0.5	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	1.2	1.2	0.3	1.4	1.4	1.7	0.0	0.2	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	34.7	8.5	8.5	27.7	8.4	8.4	11.8	0.0	9.5	9.7	0.0	0.0
Lane Grp LOS	C	A	A	C	A	A	B		A	A		
Approach Vol, veh/h		485			578			290				14
Approach Delay, s/veh		9.2			9.3			11.5				9.7
Approach LOS		A			A			B				A
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.5	16.2		4.9	16.6			13.1				13.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	29.0		7.0	30.0			42.0				42.0
Max Q Clear Time (g_c+I1), s	2.3	5.3		2.5	5.8			7.8				7.8
Green Ext Time (p_c), s	0.0	6.7		0.0	6.8			1.9				1.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					9.7							
HCM 2010 LOS					A							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary Cumulative Plus Project PM With Bypass & Std Oil Dr  
 11: Loveridge Rd & Leland Rd 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	566	1187	232	165	441	186	203	450	129	324	359	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	718	1681	714	244	1167	496	256	705	300	428	631	268
Arrive On Green	0.21	0.46	0.46	0.07	0.32	0.32	0.15	0.19	0.19	0.13	0.17	0.17
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	615	1290	252	179	479	202	221	489	140	352	390	141
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	17.8	30.0	10.7	5.3	10.4	10.4	12.6	12.7	8.1	10.3	10.0	8.4
Cycle Q Clear(g_c), s	17.8	30.0	10.7	5.3	10.4	10.4	12.6	12.7	8.1	10.3	10.0	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	718	1681	714	244	1167	496	256	705	300	428	631	268
V/C Ratio(X)	0.86	0.77	0.35	0.73	0.41	0.41	0.86	0.69	0.47	0.82	0.62	0.53
Avail Cap(c_a), veh/h	998	1909	811	299	1167	496	377	900	383	566	720	306
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	23.3	18.1	46.6	27.5	27.5	42.8	38.6	36.8	43.7	39.4	38.7
Incr Delay (d2), s/veh	5.5	1.7	0.3	7.1	0.2	0.5	12.9	1.6	1.1	7.3	1.3	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.2	13.8	4.1	2.6	4.9	4.1	6.6	6.1	3.3	4.9	4.8	3.4
Lane Grp Delay (d), s/veh	44.4	25.0	18.4	53.7	27.7	28.0	55.6	40.3	37.9	50.9	40.7	40.3
Lane Grp LOS	D	C	B	D	C	C	E	D	D	D	D	D
Approach Vol, veh/h		2157			860			850			883	
Approach Delay, s/veh		29.8			33.2			43.9			44.7	
Approach LOS		C			C			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	25.6	50.7		11.3	36.4		18.9	23.6		16.9		21.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	30.0	53.0		9.0	32.0		22.0	25.0		17.0		20.0
Max Q Clear Time (g_c+I1), s	19.8	32.0		7.3	12.4		14.6	14.7		12.3		12.0
Green Ext Time (p_c), s	1.8	14.7		0.1	14.1		0.4	4.9		0.6		4.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				35.7								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary Cumulative Plus Project PM With Bypass & Std Oil Dr  
 12: Buchanan Rd & Loveridge Rd 3/15/2014







						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↑	↗	↖	↗
Volume (veh/h)	121	846	350	204	342	233
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	265	1284	944	802	416	371
Arrive On Green	0.15	0.70	1.00	1.00	0.24	0.24
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	132	920	380	222	372	253
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	8.2	36.0	0.0	0.0	24.4	17.5
Cycle Q Clear(g_c), s	8.2	36.0	0.0	0.0	24.4	17.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	265	1284	944	802	416	371
V/C Ratio(X)	0.50	0.72	0.40	0.28	0.89	0.68
Avail Cap(c_a), veh/h	265	1284	944	802	575	513
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.91	0.91	1.00	1.00
Uniform Delay (d), s/veh	46.5	11.0	0.0	0.0	44.1	41.4
Incr Delay (d2), s/veh	0.4	1.0	1.2	0.8	12.9	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	14.4	0.3	0.2	12.4	0.2
Lane Grp Delay (d), s/veh	46.9	12.0	1.2	0.8	57.0	43.6
Lane Grp LOS	D	B	A	A	E	D
Approach Vol, veh/h		1052	602		625	
Approach Delay, s/veh		16.4	1.0		51.6	
Approach LOS		B	A		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	22.0	87.0	65.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	18.0	83.0	61.0			
Max Q Clear Time (g_c+I1), s	10.2	38.0	2.0			
Green Ext Time (p_c), s	4.2	9.4	3.3			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			22.0			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary Cumulative Plus Project PM With Bypass & Std Oil Dr  
 15: Buchanan Rd & Standard Oil Drive

3/15/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	1365	28	94	614	186	17	19	55	484	33	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0
Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Cap, veh/h	42	1036	881	74	1070	909	27	30	86	354	155	271
Arrive On Green	0.02	0.56	0.56	0.04	0.57	0.57	0.02	0.07	0.07	0.20	0.25	0.25
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	427	1220	1774	609	1066
Grp Volume(v), veh/h	33	1484	30	102	667	202	18	0	81	526	0	99
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	0	1647	1774	0	1675
Q Serve(g_s), s	2.2	67.0	1.0	5.0	28.6	7.5	1.2	0.0	5.8	24.0	0.0	5.6
Cycle Q Clear(g_c), s	2.2	67.0	1.0	5.0	28.6	7.5	1.2	0.0	5.8	24.0	0.0	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.74	1.00		0.64
Lane Grp Cap(c), veh/h	42	1036	881	74	1070	909	27	0	115	354	0	426
V/C Ratio(X)	0.79	1.43	0.03	1.38	0.62	0.22	0.68	0.00	0.70	1.49	0.00	0.23
Avail Cap(c_a), veh/h	88	1036	881	74	1070	909	74	0	246	354	0	514
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.5	26.7	12.1	57.7	17.0	12.5	59.0	0.0	54.8	48.2	0.0	35.6
Incr Delay (d2), s/veh	27.4	200.0	0.0	237.4	1.1	0.1	25.8	0.0	7.5	234.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	87.8	0.4	7.1	13.3	2.8	0.8	0.0	2.7	34.0	0.0	2.5
Lane Grp Delay (d), s/veh	85.9	226.8	12.1	295.1	18.1	12.6	84.8	0.0	62.3	282.4	0.0	35.9
Lane Grp LOS	F	F	B	F	B	B	F		E	F		D
Approach Vol, veh/h		1547			971			99				625
Approach Delay, s/veh		219.6			46.1			66.4				243.3
Approach LOS		F			D			E				F
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	6.8	71.0		9.0	73.2		5.8	12.4		28.0		34.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	67.0		5.0	66.0		5.0	18.0		24.0		37.0
Max Q Clear Time (g_c+I1), s	4.2	69.0		7.0	30.6		3.2	7.8		26.0		7.6
Green Ext Time (p_c), s	0.0	0.0		0.0	30.0		0.0	0.7		0.0		1.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					167.5							
HCM 2010 LOS					F							
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary Cumulative Plus Project PM With Bypass & Std Oil Dr  
 17: Proposed Apartments & Buchanan Rd 3/15/2014

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Volume (veh/h)	1950	66	80	915	36	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1515	1288	59	1639	78	70
Arrive On Green	1.00	1.00	0.03	0.89	0.04	0.04
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	2120	72	87	995	39	47
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	98.0	0.0	4.0	15.6	2.6	3.5
Cycle Q Clear(g_c), s	98.0	0.0	4.0	15.6	2.6	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1515	1288	59	1639	78	70
V/C Ratio(X)	1.40	0.06	1.48	0.61	0.50	0.67
Avail Cap(c_a), veh/h	1515	1288	59	1639	236	210
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	57.7	1.6	55.7	56.1
Incr Delay (d2), s/veh	180.1	0.0	285.8	1.7	4.8	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	75.8	0.0	6.5	3.5	1.3	1.6
Lane Grp Delay (d), s/veh	180.1	0.0	343.5	3.3	60.5	66.8
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	2192			1082	86	
Approach Delay, s/veh	174.2			30.7	63.9	
Approach LOS	F			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	102.0		8.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	98.0		4.0	106.0		
Max Q Clear Time (g_c+I1), s	100.0		6.0	17.6		
Green Ext Time (p_c), s	0.0		0.0	10.1		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			125.1			
HCM 2010 LOS			F			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary Cumulative Plus Project PM With Bypass & Std Oil Dr  
 22: Somersville Rd & Buchanan Rd 3/15/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	407	504	1096	54	247	129	395	274	36	264	204	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	469	1420	603	76	297	252	456	803	104	321	640	272
Arrive On Green	0.27	0.38	0.00	0.04	0.16	0.00	0.26	0.25	0.25	0.18	0.17	0.17
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3201	415	1757	3689	1568
Grp Volume(v), veh/h	442	548	0	59	268	0	429	170	167	287	222	443
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1771	1757	1845	1568
Q Serve(g_s), s	28.4	12.4	0.0	3.8	16.4	0.0	27.6	8.8	9.0	18.4	6.1	20.0
Cycle Q Clear(g_c), s	28.4	12.4	0.0	3.8	16.4	0.0	27.6	8.8	9.0	18.4	6.1	20.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	469	1420	603	76	297	252	456	463	444	321	640	272
V/C Ratio(X)	0.94	0.39	0.00	0.78	0.90	0.00	0.94	0.37	0.37	0.90	0.35	1.63
Avail Cap(c_a), veh/h	503	1420	603	137	304	258	488	463	444	472	640	272
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	25.6	0.0	54.6	47.5	0.0	41.8	35.7	35.7	46.1	41.9	47.7
Incr Delay (d2), s/veh	25.5	0.2	0.0	15.6	28.1	0.0	25.7	0.5	0.5	14.2	0.3	299.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.7	5.5	0.0	2.1	10.1	0.0	15.6	4.2	4.1	9.6	2.9	30.6
Lane Grp Delay (d), s/veh	66.8	25.8	0.0	70.2	75.6	0.0	67.5	36.2	36.2	60.3	42.2	347.0
Lane Grp LOS	E	C		E	E		E	D	D	E	D	F
Approach Vol, veh/h		990			327			766			952	
Approach Delay, s/veh		44.1			74.6			53.7			189.5	
Approach LOS		D			E			D			F	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	34.8	48.4		9.0	22.5		34.0	32.9		25.0	24.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	33.0	43.0		9.0	19.0		32.0	21.0		31.0	20.0	
Max Q Clear Time (g_c+I1), s	30.4	14.4		5.8	18.4		29.6	11.0		20.4	22.0	
Green Ext Time (p_c), s	0.4	5.4		0.0	0.1		0.4	3.8		0.6	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			95.4									
HCM 2010 LOS			F									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary Cumulative Plus Project PM With Bypass & Std Oil Dr  
 31: Un Rd & Buchanan Rd 3/15/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	1812	14	32	891	38	20	0	31	40	0	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	37	2806	21	46	2713	115	158	0	115	152	0	115
Arrive On Green	0.02	0.77	0.77	0.03	0.77	0.77	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1757	3657	28	1757	3514	149	1364	0	1568	1356	0	1568
Grp Volume(v), veh/h	26	993	993	35	508	501	22	0	34	43	0	27
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1818	1364	0	1568	1356	0	1568
Q Serve(g_s), s	1.3	24.4	24.6	1.8	7.8	7.8	1.4	0.0	1.9	2.8	0.0	1.5
Cycle Q Clear(g_c), s	1.3	24.4	24.6	1.8	7.8	7.8	2.9	0.0	1.9	4.6	0.0	1.5
Prop In Lane	1.00		0.02	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	1415	1412	46	1424	1404	158	0	115	152	0	115
V/C Ratio(X)	0.70	0.70	0.70	0.77	0.36	0.36	0.14	0.00	0.29	0.28	0.00	0.23
Avail Cap(c_a), veh/h	117	1760	1756	117	1760	1735	300	0	278	293	0	278
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.8	5.3	5.3	43.6	3.2	3.2	40.7	0.0	39.5	41.7	0.0	39.3
Incr Delay (d2), s/veh	20.8	0.9	1.0	23.3	0.2	0.2	0.4	0.0	1.4	1.0	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	7.3	7.5	1.1	2.3	2.3	0.5	0.0	0.8	1.0	0.0	0.6
Lane Grp Delay (d), s/veh	64.6	6.2	6.3	66.9	3.4	3.4	41.1	0.0	40.9	42.7	0.0	40.4
Lane Grp LOS	E	A	A	E	A	A	D		D	D		D
Approach Vol, veh/h		2011			1044			56			70	
Approach Delay, s/veh		7.0			5.5			41.0			41.8	
Approach LOS		A			A			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.9	73.2		6.3	73.6			10.6				10.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	86.0		6.0	86.0			16.0				16.0
Max Q Clear Time (g_c+I1), s	3.3	26.6		3.8	9.8			4.9				6.6
Green Ext Time (p_c), s	0.0	42.6		0.0	50.3			0.3				0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					7.9							
HCM 2010 LOS					A							
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary Cumulative Plus Project PM With Bypass & Std Oil Dr  
 32: Standard Oil Drive & Delta Fair Blvd 3/15/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	399	1086	85	58	470	173	186	150	30	194	150	277
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	186.3	186.3	186.3	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Lanes	1	2	1	1	2	0	1	1	0	1	1	0
Cap, veh/h	457	1510	642	81	503	184	229	419	85	241	168	310
Arrive On Green	0.26	0.41	0.41	0.05	0.19	0.19	0.13	0.28	0.28	0.14	0.29	0.29
Sat Flow, veh/h	1774	3725	1583	1774	2604	953	1774	1504	305	1774	587	1084
Grp Volume(v), veh/h	434	1180	92	63	365	334	202	0	196	211	0	464
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1695	1774	0	1809	1774	0	1671
Q Serve(g_s), s	28.6	32.8	2.9	4.2	23.0	23.0	13.3	0.0	10.4	13.9	0.0	32.7
Cycle Q Clear(g_c), s	28.6	32.8	2.9	4.2	23.0	23.0	13.3	0.0	10.4	13.9	0.0	32.7
Prop In Lane	1.00		1.00	1.00		0.56	1.00		0.17	1.00		0.65
Lane Grp Cap(c), veh/h	457	1510	642	81	360	327	229	0	504	241	0	477
V/C Ratio(X)	0.95	0.78	0.14	0.78	1.01	1.02	0.88	0.00	0.39	0.87	0.00	0.97
Avail Cap(c_a), veh/h	462	1510	642	104	360	327	238	0	504	343	0	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.4	30.8	10.0	56.2	48.0	48.0	50.9	0.0	34.7	50.4	0.0	42.1
Incr Delay (d2), s/veh	29.2	2.7	0.1	24.1	51.0	55.3	28.8	0.0	0.5	16.0	0.0	34.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	16.7	15.8	1.7	2.5	16.2	15.1	7.9	0.0	4.9	7.4	0.0	18.6
Lane Grp Delay (d), s/veh	72.6	33.5	10.1	80.3	99.1	103.3	79.7	0.0	35.2	66.5	0.0	76.1
Lane Grp LOS	E	C	B	F	F	F	E		D	E		E
Approach Vol, veh/h		1706			762			398				675
Approach Delay, s/veh		42.2			99.4			57.8				73.1
Approach LOS		D			F			E				E
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	34.7	52.3		9.4	27.0		19.4	37.2		20.2		38.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	31.0	47.0		7.0	23.0		16.0	27.0		23.0		34.0
Max Q Clear Time (g_c+I1), s	30.6	34.8		6.2	25.0		15.3	12.4		15.9		34.7
Green Ext Time (p_c), s	0.1	9.2		0.0	0.0		0.1	1.5		0.3		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				62.2								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary Cumulative Plus Project PM With Bypass & Std Oil Dr  
 33: Somersville Rd & Fairview Dr 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	129	9	448	19	1	2	122	624	14	21	636	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	568	11	557	124	199	397	241	1837	41	32	1324	105
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.14	0.51	0.51	0.02	0.39	0.39
Sat Flow, veh/h	1394	32	1541	888	550	1100	1757	3596	80	1757	3374	268
Grp Volume(v), veh/h	140	0	497	21	0	3	133	348	345	23	378	368
Grp Sat Flow(s),veh/h/ln	1394	0	1573	888	0	1650	1757	1845	1831	1757	1845	1797
Q Serve(g_s), s	7.8	0.0	32.3	2.5	0.0	0.1	7.7	12.5	12.5	1.4	17.1	17.2
Cycle Q Clear(g_c), s	8.0	0.0	32.3	34.8	0.0	0.1	7.7	12.5	12.5	1.4	17.1	17.2
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.04	1.00		0.15
Lane Grp Cap(c), veh/h	568	0	568	124	0	596	241	943	935	32	724	705
V/C Ratio(X)	0.25	0.00	0.87	0.17	0.00	0.01	0.55	0.37	0.37	0.71	0.52	0.52
Avail Cap(c_a), veh/h	649	0	660	176	0	693	305	943	935	96	724	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.69	0.69	0.69	0.84	0.84	0.84
Uniform Delay (d), s/veh	24.9	0.0	32.7	49.0	0.0	22.4	44.2	16.2	16.2	53.5	25.4	25.5
Incr Delay (d2), s/veh	0.2	0.0	11.3	0.6	0.0	0.0	1.4	0.8	0.8	21.4	2.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.8	0.0	14.6	0.6	0.0	0.1	3.6	5.7	5.7	0.8	8.3	8.1
Lane Grp Delay (d), s/veh	25.2	0.0	44.0	49.6	0.0	22.4	45.5	16.9	16.9	74.9	27.7	27.8
Lane Grp LOS	C		D	D		C	D	B	B	E	C	C
Approach Vol, veh/h		637			24			826			769	
Approach Delay, s/veh		39.9			46.2			21.5			29.1	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		43.6			43.6		19.0	60.0		6.0		47.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		46.0			46.0		19.0	56.0		6.0		43.0
Max Q Clear Time (g_c+I1), s		34.3			36.8		9.7	14.5		3.4		19.2
Green Ext Time (p_c), s		3.2			2.8		3.2	5.4		0.0		4.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary Cumulative Plus Project PM With Bypass & Std Oil Dr  
 34: Fairview Dr & Delta Fair Blvd 3/15/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	928	200	128	384	10	67	20	34	15	11	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	34	1641	352	181	2293	60	240	39	161	131	68	28
Arrive On Green	0.02	0.56	0.56	0.10	0.64	0.64	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1757	2946	632	1757	3578	94	1108	376	1568	278	664	269
Grp Volume(v), veh/h	20	631	595	139	215	213	95	0	37	36	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1733	1757	1845	1828	1484	0	1568	1211	0	0
Q Serve(g_s), s	0.6	11.7	11.7	3.9	2.4	2.4	0.0	0.0	1.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	11.7	11.7	3.9	2.4	2.4	3.1	0.0	1.1	3.1	0.0	0.0
Prop In Lane	1.00		0.36	1.00		0.05	0.77		1.00	0.44		0.22
Lane Grp Cap(c), veh/h	34	1027	965	181	1182	1171	278	0	161	227	0	0
V/C Ratio(X)	0.59	0.61	0.62	0.77	0.18	0.18	0.34	0.00	0.23	0.16	0.00	0.00
Avail Cap(c_a), veh/h	173	1640	1540	451	1931	1914	705	0	619	671	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.6	7.6	7.6	22.1	3.7	3.7	21.7	0.0	20.9	20.8	0.0	0.0
Incr Delay (d2), s/veh	15.1	0.6	0.6	6.6	0.1	0.1	0.7	0.0	0.7	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	4.4	4.1	2.0	0.8	0.8	1.1	0.0	0.4	0.4	0.0	0.0
Lane Grp Delay (d), s/veh	39.7	8.2	8.2	28.8	3.8	3.8	22.5	0.0	21.6	21.1	0.0	0.0
Lane Grp LOS	D	A	A	C	A	A	C		C	C		
Approach Vol, veh/h		1246			567			132				36
Approach Delay, s/veh		8.7			9.9			22.2				21.1
Approach LOS		A			A			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.0	32.2		9.2	36.4			9.2				9.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	5.0	45.0		13.0	53.0			20.0				20.0
Max Q Clear Time (g_c+I1), s	2.6	13.7		5.9	4.4			5.1				5.1
Green Ext Time (p_c), s	0.0	14.5		0.2	17.0			0.6				0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.2								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Cumulative Plus Project AM With Bypass





















3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↕↕	↕↕		↕	↕↕	↕
Volume (veh/h)	0	0	0	161	323	194	745	827	155	268	829	324
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				201	417	265	893	1305	244	358	1376	585
Arrive On Green				0.25	0.25	0.25	0.44	0.72	0.72	0.20	0.37	0.00
Sat Flow, veh/h				789	1636	1041	3408	3025	565	1757	3689	1568
Grp Volume(v), veh/h				400	0	337	810	548	519	291	901	0
Grp Sat Flow(s),veh/h/ln				1805	0	1661	1704	1845	1745	1757	1845	1568
Q Serve(g_s), s				23.1	0.0	20.6	24.1	18.0	18.0	17.2	22.1	0.0
Cycle Q Clear(g_c), s				23.1	0.0	20.6	24.1	18.0	18.0	17.2	22.1	0.0
Prop In Lane				0.44		0.63	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h				460	0	423	893	796	753	358	1376	585
V/C Ratio(X)				0.87	0.00	0.80	0.91	0.69	0.69	0.81	0.65	0.00
Avail Cap(c_a), veh/h				530	0	488	1126	796	753	468	1376	585
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.57	0.57	0.57	1.00	1.00	0.00
Uniform Delay (d), s/veh				38.9	0.0	37.9	29.4	11.2	11.2	41.4	28.3	0.0
Incr Delay (d2), s/veh				13.2	0.0	7.8	5.6	2.8	3.0	8.1	2.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				12.4	0.0	9.7	9.9	6.3	6.0	8.5	10.7	0.0
Lane Grp Delay (d), s/veh				52.0	0.0	45.8	34.9	14.0	14.2	49.5	30.8	0.0
Lane Grp LOS				D		D	C	B	B	D	C	
Approach Vol, veh/h					737			1877			1192	
Approach Delay, s/veh					49.2			23.1			35.4	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					31.8		32.6	51.0		26.2	44.6	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					32.0		36.0	47.0		29.0	40.0	
Max Q Clear Time (g_c+I1), s					25.1		26.1	20.0		19.2	24.1	
Green Ext Time (p_c), s					2.6		2.4	8.2		3.0	6.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					32.0							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave
























Cumulative Plus Project AM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	329	0	483	0	0	0	0	1088	276	281	675	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	418	438	745				0	1644	417	473	2548	0
Arrive On Green	0.24	0.00	0.24				0.00	0.39	0.39	0.54	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4262	1081	1757	3689	0
Grp Volume(v), veh/h	358	0	525				0	1024	459	305	734	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1654	1757	1845	0
Q Serve(g_s), s	21.8	0.0	17.1				0.0	26.3	26.3	13.7	0.0	0.0
Cycle Q Clear(g_c), s	21.8	0.0	17.1				0.0	26.3	26.3	13.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	418	438	745				0	1423	638	473	2548	0
V/C Ratio(X)	0.86	0.00	0.70				0.00	0.72	0.72	0.65	0.29	0.00
Avail Cap(c_a), veh/h	551	579	984				0	1423	638	473	2548	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.67	0.67	0.00
Uniform Delay (d), s/veh	40.7	0.0	38.9				0.0	29.1	29.1	22.0	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.0	1.5				0.0	3.2	6.9	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.8	0.0	6.9				0.0	12.7	12.1	5.2	0.1	0.0
Lane Grp Delay (d), s/veh	50.8	0.0	40.4				0.0	32.3	36.0	24.0	0.2	0.0
Lane Grp LOS	D		D					C		D	C	A
Approach Vol, veh/h		883						1483			1039	
Approach Delay, s/veh		44.6						33.4			7.2	
Approach LOS		D						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		30.5						47.0		34.0		81.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0						43.0		30.0		77.0
Max Q Clear Time (g_c+I1), s		23.8						28.3		15.7		2.0
Green Ext Time (p_c), s		2.8						8.8		5.3		7.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.3									
HCM 2010 LOS			C									
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd

Cumulative Plus Project AM With Bypass  
 3/16/2014






























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	478	4	92	584	287	130	806	59	143	354	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	339	1304	10	127	871	370	402	1090	463	189	643	273
Arrive On Green	0.19	0.36	0.36	0.07	0.24	0.24	0.23	0.30	0.30	0.11	0.17	0.17
Sat Flow, veh/h	1757	3656	28	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	299	262	262	100	635	312	141	876	64	155	385	297
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	15.8	10.2	10.2	5.3	15.1	13.6	6.4	20.9	2.2	8.2	9.2	11.0
Cycle Q Clear(g_c), s	15.8	10.2	10.2	5.3	15.1	13.6	6.4	20.9	2.2	8.2	9.2	11.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	658	656	127	871	370	402	1090	463	189	643	273
V/C Ratio(X)	0.88	0.40	0.40	0.79	0.73	0.84	0.35	0.80	0.14	0.82	0.60	1.09
Avail Cap(c_a), veh/h	498	774	772	240	1006	428	402	1394	592	276	1316	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	23.0	23.0	43.5	33.6	19.5	30.8	31.0	14.9	41.6	36.3	17.4
Incr Delay (d2), s/veh	12.1	0.4	0.4	10.1	2.3	12.7	0.5	2.7	0.1	11.8	0.9	54.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.1	4.7	4.7	2.7	7.2	6.4	2.9	10.0	1.1	4.3	4.4	8.3
Lane Grp Delay (d), s/veh	49.5	23.4	23.4	53.6	35.9	32.2	31.4	33.8	15.1	53.4	37.2	71.8
Lane Grp LOS	D	C	C	D	D	C	C	C	B	D	D	F
Approach Vol, veh/h		823			1047			1081			837	
Approach Delay, s/veh		32.9			36.5			32.3			52.4	
Approach LOS		C			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.4	38.0		10.9	26.5		25.8	32.2		14.3	20.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	27.0	40.0		13.0	26.0		17.0	36.0		15.0	34.0	
Max Q Clear Time (g_c+I1), s	17.8	12.2		7.3	17.1		8.4	22.9		10.2	13.0	
Green Ext Time (p_c), s	0.6	10.3		0.1	5.4		0.6	5.3		0.2	3.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.0								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	94	102	30	865	57	113	8	841	336	198	579	73
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	583	612	521	1132	612	521	85	1390	591	257	1753	745
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.38	0.38	0.15	0.48	0.48
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	102	111	33	940	62	123	9	914	365	215	629	79
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.4	3.5	1.2	21.1	1.9	4.7	0.4	17.0	15.7	9.9	8.9	2.3
Cycle Q Clear(g_c), s	3.4	3.5	1.2	21.1	1.9	4.7	0.4	17.0	15.7	9.9	8.9	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	583	612	521	1132	612	521	85	1390	591	257	1753	745
V/C Ratio(X)	0.17	0.18	0.06	0.83	0.10	0.24	0.11	0.66	0.62	0.84	0.36	0.11
Avail Cap(c_a), veh/h	583	612	521	1643	889	756	339	1690	718	424	1868	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	19.7	18.9	25.6	19.2	20.1	37.8	21.4	21.0	34.4	13.8	12.0
Incr Delay (d2), s/veh	0.1	0.1	0.1	2.5	0.1	0.2	0.5	0.7	1.1	7.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	1.6	0.5	8.7	0.8	1.8	0.2	7.6	6.1	4.8	3.9	0.8
Lane Grp Delay (d), s/veh	19.8	19.8	19.0	28.0	19.2	20.3	38.3	22.1	22.1	41.8	13.9	12.1
Lane Grp LOS	B	B	B	C	B	C	D	C	C	D	B	B
Approach Vol, veh/h		246			1125			1288			923	
Approach Delay, s/veh		19.7			26.7			22.2			20.2	
Approach LOS		B			C			C			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		31.5			31.5		8.0	35.3		16.2		43.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			40.0		16.0	38.0		20.0		42.0
Max Q Clear Time (g_c+I1), s		5.5			23.1		2.4	19.0		11.9		10.9
Green Ext Time (p_c), s		4.3			4.4		0.0	12.2		0.4		16.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.9								
HCM 2010 LOS				C								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 		 		 	 		 	
Volume (veh/h)	130	46	44	1275	15	332	14	755	539	53	1250	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	2	1	2	2	1	2	1
Cap, veh/h	801	841	715	1554	841	1430	24	1687	1434	192	1476	627
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.01	0.46	0.46	0.40	0.40	0.40
Sat Flow, veh/h	1757	1845	1568	3408	1845	3136	1757	3689	3136	377	3689	1568
Grp Volume(v), veh/h	141	50	48	1386	16	361	15	821	586	58	1359	48
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	377	1845	1568
Q Serve(g_s), s	4.4	1.4	1.6	34.4	0.4	6.5	0.8	14.3	11.5	11.7	32.3	1.7
Cycle Q Clear(g_c), s	4.4	1.4	1.6	34.4	0.4	6.5	0.8	14.3	11.5	20.7	32.3	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	801	841	715	1554	841	1430	24	1687	1434	192	1476	627
V/C Ratio(X)	0.18	0.06	0.07	0.89	0.02	0.25	0.62	0.49	0.41	0.30	0.92	0.08
Avail Cap(c_a), veh/h	801	841	715	1738	941	1599	76	1801	1531	193	1481	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	14.0	14.1	23.0	13.8	15.4	45.2	17.5	16.7	26.5	26.3	17.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	5.8	0.0	0.1	22.8	0.2	0.2	0.9	9.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.6	0.6	15.5	0.2	2.5	0.5	6.4	4.4	1.1	16.5	0.7
Lane Grp Delay (d), s/veh	14.9	14.1	14.1	28.8	13.8	15.5	68.0	17.7	16.9	27.4	36.0	17.2
Lane Grp LOS	B	B	B	C	B	B	E	B	B	C	D	B
Approach Vol, veh/h		239			1763			1422			1465	
Approach Delay, s/veh		14.6			26.0			17.9			35.0	
Approach LOS		B			C			B			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2			6	
Phs Duration (G+Y+Rc), s		46.0			46.0		5.3	46.2			40.9	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	
Max Green Setting (Gmax), s		16.0			47.0		4.0	45.0			37.0	
Max Q Clear Time (g_c+I1), s		6.4			36.4		2.8	16.3			34.3	
Green Ext Time (p_c), s		5.9			5.7		0.0	23.0			2.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.8								
HCM 2010 LOS				C								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Cumulative Plus Project AM With Bypass  
3/16/2014





























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	156	601	129	115	535	199	218	657	241	249	314	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	206	870	370	156	765	325	281	1118	475	313	849	286
Arrive On Green	0.12	0.24	0.24	0.09	0.21	0.21	0.16	0.30	0.30	0.18	0.32	0.32
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2641	891
Grp Volume(v), veh/h	170	653	140	125	582	216	237	714	262	271	236	222
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1687
Q Serve(g_s), s	7.8	13.6	6.2	5.8	12.2	10.4	10.8	13.8	11.5	12.4	8.2	8.5
Cycle Q Clear(g_c), s	7.8	13.6	6.2	5.8	12.2	10.4	10.8	13.8	11.5	12.4	8.2	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	206	870	370	156	765	325	281	1118	475	313	593	542
V/C Ratio(X)	0.82	0.75	0.38	0.80	0.76	0.66	0.84	0.64	0.55	0.87	0.40	0.41
Avail Cap(c_a), veh/h	256	939	399	192	805	342	447	1118	475	405	593	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	29.3	26.4	36.8	30.8	30.0	33.7	24.8	24.0	32.9	21.8	21.9
Incr Delay (d2), s/veh	16.1	3.2	0.6	17.4	4.1	4.5	8.2	2.8	4.5	14.5	2.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.4	6.6	2.4	3.3	6.1	4.4	5.4	6.7	5.0	6.7	4.0	3.8
Lane Grp Delay (d), s/veh	51.6	32.4	27.1	54.3	34.8	34.5	41.9	27.6	28.6	47.5	23.8	24.1
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		963			923			1213			729	
Approach Delay, s/veh		35.0			37.4			30.6			32.7	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.7	23.5		11.3	21.1		17.2	29.0		18.7	30.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	21.0		9.0	18.0		21.0	25.0		19.0	23.0	
Max Q Clear Time (g_c+I1), s	9.8	15.6		7.8	14.2		12.8	15.8		14.4	10.5	
Green Ext Time (p_c), s	0.1	3.9		0.0	2.8		0.4	5.5		0.3	6.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				33.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	442	5	2	772	98	103	110	3	145	36	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	163	1141	12	24	1009	858	136	231	6	184	43	208
Arrive On Green	0.09	0.63	0.63	0.01	0.55	0.55	0.08	0.13	0.13	0.10	0.16	0.16
Sat Flow, veh/h	1757	1822	19	1757	1845	1568	1757	1792	45	1757	275	1334
Grp Volume(v), veh/h	138	0	485	2	839	107	112	0	123	158	0	228
Grp Sat Flow(s),veh/h/ln	1757	0	1841	1757	1845	1568	1757	0	1837	1757	0	1609
Q Serve(g_s), s	9.8	0.0	16.9	0.1	47.7	2.6	7.9	0.0	7.9	11.2	0.0	17.6
Cycle Q Clear(g_c), s	9.8	0.0	16.9	0.1	47.7	2.6	7.9	0.0	7.9	11.2	0.0	17.6
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.02	1.00		0.83
Lane Grp Cap(c), veh/h	163	0	1153	24	1009	858	136	0	236	184	0	251
V/C Ratio(X)	0.84	0.00	0.42	0.08	0.83	0.12	0.82	0.00	0.52	0.86	0.00	0.91
Avail Cap(c_a), veh/h	195	0	1153	56	1009	858	153	0	236	209	0	255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.00	0.74	0.24	0.24	0.24	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	0.0	12.0	61.4	23.7	5.5	57.3	0.0	51.3	55.6	0.0	52.4
Incr Delay (d2), s/veh	19.0	0.0	0.8	0.3	2.1	0.1	26.6	0.0	2.0	26.3	0.0	33.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	7.3	0.1	21.3	1.6	4.6	0.0	3.9	6.4	0.0	9.7
Lane Grp Delay (d), s/veh	75.3	0.0	12.8	61.8	25.8	5.6	83.9	0.0	53.4	81.9	0.0	85.6
Lane Grp LOS	E		B	E	C	A	F		D	F		F
Approach Vol, veh/h		623			948			235				386
Approach Delay, s/veh		26.6			23.6			67.9				84.1
Approach LOS		C			C			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	15.7	83.0		5.7	73.0		13.8	20.2		17.2		23.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	14.0	79.0		4.0	69.0		11.0	16.0		15.0		20.0
Max Q Clear Time (g_c+I1), s	11.8	18.9		2.1	49.7		9.9	9.9		13.2		19.6
Green Ext Time (p_c), s	0.1	3.4		0.1	6.4		0.0	0.5		0.1		0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.9								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave























Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 					 		 
Volume (veh/h)	36	300	24	729	370	150	23	55	86	85	104	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	62	991	79	1561	2643	1123	189	198	168	189	168	25
Arrive On Green	0.04	0.29	0.29	0.46	0.72	0.72	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1757	3374	268	3408	3689	1568	1757	1845	1568	1757	1567	236
Grp Volume(v), veh/h	39	177	175	792	402	163	25	60	93	92	0	130
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1803
Q Serve(g_s), s	1.9	6.4	6.5	14.0	3.0	2.8	1.1	2.6	4.8	4.2	0.0	5.9
Cycle Q Clear(g_c), s	1.9	6.4	6.5	14.0	3.0	2.8	1.1	2.6	4.8	4.2	0.0	5.9
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	62	542	528	1561	2643	1123	189	198	168	189	0	194
V/C Ratio(X)	0.63	0.33	0.33	0.51	0.15	0.15	0.13	0.30	0.55	0.49	0.00	0.67
Avail Cap(c_a), veh/h	144	542	528	1721	2643	1123	371	390	331	371	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	23.5	23.5	16.3	3.8	3.8	34.4	35.1	36.1	35.8	0.0	36.6
Incr Delay (d2), s/veh	10.0	1.6	1.7	0.1	0.1	0.1	0.3	0.8	2.8	1.9	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	3.1	3.1	5.7	1.1	0.9	0.5	1.2	2.0	2.0	0.0	2.9
Lane Grp Delay (d), s/veh	50.5	25.1	25.2	16.4	3.9	4.0	34.7	35.9	38.9	37.7	0.0	40.5
Lane Grp LOS	D	C	C	B	A	A	C	D	D	D		D
Approach Vol, veh/h		391			1357			178			222	
Approach Delay, s/veh		27.7			11.2			37.3			39.4	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	7.0	29.0		43.0	65.0			13.1			13.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	7.0	25.0		43.0	61.0			18.0			18.0	
Max Q Clear Time (g_c+I1), s	3.9	8.5		16.0	5.0			6.8			7.9	
Green Ext Time (p_c), s	1.1	1.8		3.3	3.6			1.3			1.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd

Cumulative Plus Project AM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	66	291	49	151	3	637	329	96	8	240	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	435	306	260	100	244	4	792	1711	490	65	1567	666
Arrive On Green	0.13	0.17	0.17	0.03	0.07	0.07	0.23	0.62	0.62	0.04	0.42	0.42
Sat Flow, veh/h	3408	1845	1568	3408	3612	66	3408	2759	790	1757	3689	1568
Grp Volume(v), veh/h	124	72	316	53	84	83	692	238	224	9	261	621
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1705	1757	1845	1568
Q Serve(g_s), s	3.6	3.7	18.0	1.7	4.8	4.8	21.2	6.1	6.2	0.5	4.7	40.9
Cycle Q Clear(g_c), s	3.6	3.7	18.0	1.7	4.8	4.8	21.2	6.1	6.2	0.5	4.7	40.9
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	435	306	260	100	125	124	792	1144	1058	65	1567	666
V/C Ratio(X)	0.29	0.24	1.21	0.53	0.67	0.67	0.87	0.21	0.21	0.14	0.17	0.93
Avail Cap(c_a), veh/h	435	306	260	126	272	270	912	1144	1058	259	1803	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	39.2	45.2	51.9	49.4	49.4	40.1	9.0	9.0	50.5	19.3	29.7
Incr Delay (d2), s/veh	0.4	0.4	126.2	4.3	6.1	6.2	8.5	0.1	0.1	1.0	0.0	16.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	1.8	16.3	0.8	2.5	2.5	10.2	2.7	2.5	0.3	2.2	18.9
Lane Grp Delay (d), s/veh	43.2	39.6	171.4	56.2	55.4	55.6	48.6	9.1	9.1	51.5	19.4	46.6
Lane Grp LOS	D	D	F	E	E	E	D	A	A	D	B	D
Approach Vol, veh/h		512			220			1154			891	
Approach Delay, s/veh		121.8			55.7			32.8			38.6	
Approach LOS		F			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	17.8	22.0		7.2	11.3		29.2	71.2		8.0	50.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	18.0		4.0	16.0		29.0	66.0		16.0	53.0	
Max Q Clear Time (g_c+I1), s	5.6	20.0		3.7	6.8		23.2	8.2		2.5	42.9	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.5		2.0	6.5		0.0	3.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				52.9								
HCM 2010 LOS				D								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Cumulative Plus Project AM With Bypass













3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	455	0	407	0	0	0	0	743	201	141	520	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1111	0	511				0	1843	783	217	2214	0
Arrive On Green	0.33	0.00	0.33				0.00	0.50	0.50	0.06	0.60	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	495	0	442				0	808	218	153	565	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	12.4	0.0	28.7				0.0	15.2	8.8	4.8	7.8	0.0
Cycle Q Clear(g_c), s	12.4	0.0	28.7				0.0	15.2	8.8	4.8	7.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1111	0	511				0	1843	783	217	2214	0
V/C Ratio(X)	0.45	0.00	0.86				0.00	0.44	0.28	0.71	0.26	0.00
Avail Cap(c_a), veh/h	1479	0	680				0	1843	783	378	2214	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	28.8	0.0	34.3				0.0	17.4	15.8	49.7	10.2	0.0
Incr Delay (d2), s/veh	0.3	0.0	8.9				0.0	0.8	0.9	3.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	12.4				0.0	7.0	3.5	2.2	3.5	0.0
Lane Grp Delay (d), s/veh	29.1	0.0	43.1				0.0	18.1	16.6	53.5	10.5	0.0
Lane Grp LOS	C		D					B	B	D	B	
Approach Vol, veh/h		937						1026			718	
Approach Delay, s/veh		35.7						17.8			19.7	
Approach LOS		D						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		39.3						58.1		10.9	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						49.0		12.0	65.0	
Max Q Clear Time (g_c+I1), s		30.7						17.2		6.8	9.8	
Green Ext Time (p_c), s		4.7						13.3		0.2	15.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	199	257	180	189	739	197	256	621	139	198	383	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	304	1198	509	290	1184	503	326	1143	486	303	786	334
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.19	0.31	0.31	0.09	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	216	279	196	205	803	214	278	675	151	215	416	185
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.1	4.6	8.1	4.9	15.8	9.0	12.8	12.9	6.1	5.1	8.4	8.8
Cycle Q Clear(g_c), s	5.1	4.6	8.1	4.9	15.8	9.0	12.8	12.9	6.1	5.1	8.4	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1198	509	290	1184	503	326	1143	486	303	786	334
V/C Ratio(X)	0.71	0.23	0.38	0.71	0.68	0.43	0.85	0.59	0.31	0.71	0.53	0.55
Avail Cap(c_a), veh/h	531	1679	713	490	1634	695	631	1811	770	531	1060	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	20.6	21.8	37.2	24.6	22.3	32.9	24.4	22.0	37.0	29.1	29.3
Incr Delay (d2), s/veh	3.1	0.1	0.5	3.1	0.7	0.6	6.4	0.5	0.4	3.1	0.6	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	2.1	3.1	2.2	7.1	3.5	6.2	5.9	2.4	2.3	3.9	3.5
Lane Grp Delay (d), s/veh	40.1	20.7	22.2	40.3	25.3	22.9	39.3	24.8	22.4	40.1	29.7	30.7
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		691			1222			1104			816	
Approach Delay, s/veh		27.2			27.4			28.1			32.7	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.4	31.1		11.1	30.8		19.5	29.9		11.4	21.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	38.0		12.0	37.0		30.0	41.0		13.0	24.0	
Max Q Clear Time (g_c+I1), s	7.1	10.1		6.9	17.8		14.8	14.9		7.1	10.8	
Green Ext Time (p_c), s	0.3	10.7		0.3	9.0		0.7	10.0		0.3	7.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	295	313	868	336	203	208
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	365	1462	1022	868	257	229
Arrive On Green	0.21	0.79	1.00	1.00	0.15	0.15
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	321	340	943	365	221	226
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	23.0	6.1	0.0	0.0	16.0	18.7
Cycle Q Clear(g_c), s	23.0	6.1	0.0	0.0	16.0	18.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	365	1462	1022	868	257	229
V/C Ratio(X)	0.88	0.23	0.92	0.42	0.86	0.99
Avail Cap(c_a), veh/h	365	1462	1022	868	257	229
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.47	0.47	1.00	1.00
Uniform Delay (d), s/veh	49.9	3.4	0.0	0.0	54.2	55.4
Incr Delay (d2), s/veh	18.3	0.3	8.1	0.7	24.4	55.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.1	2.2	2.3	0.2	9.0	18.6
Lane Grp Delay (d), s/veh	68.3	3.8	8.1	0.7	78.6	110.7
Lane Grp LOS	E	A	A	A	E	F
Approach Vol, veh/h		661	1308		447	
Approach Delay, s/veh		35.1	6.1		94.8	
Approach LOS		D	A		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	31.0	107.0	76.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	27.0	103.0	72.0			
Max Q Clear Time (g_c+I1), s	25.0	8.1	2.0			
Green Ext Time (p_c), s	0.7	3.2	12.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			30.4			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd






















Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	444	73	31	1037	12	156	118	59	15	11	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	15	1328	1129	43	1339	15	251	186	93	123	96	169
Arrive On Green	0.02	1.00	1.00	0.02	0.74	0.74	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1757	1845	1568	1757	1820	21	1357	1161	581	1175	603	1055
Grp Volume(v), veh/h	11	483	79	34	0	1140	170	0	192	16	0	33
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1841	1357	0	1742	1175	0	1658
Q Serve(g_s), s	0.8	0.0	0.0	2.4	0.0	53.7	15.4	0.0	13.0	1.6	0.0	2.1
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.4	0.0	53.7	17.5	0.0	13.0	14.6	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.33	1.00		0.64
Lane Grp Cap(c), veh/h	15	1328	1129	43	0	1355	251	0	278	123	0	265
V/C Ratio(X)	0.74	0.36	0.07	0.79	0.00	0.84	0.68	0.00	0.69	0.13	0.00	0.12
Avail Cap(c_a), veh/h	56	1328	1129	84	0	1355	273	0	307	142	0	292
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.44	0.00	0.44	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.3	0.0	0.0	60.7	0.0	11.5	52.5	0.0	49.6	56.5	0.0	45.0
Incr Delay (d2), s/veh	45.7	0.7	0.1	13.2	0.0	3.0	5.9	0.0	5.7	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.2	0.0	1.2	0.0	21.7	5.8	0.0	6.4	0.5	0.0	0.9
Lane Grp Delay (d), s/veh	107.0	0.7	0.1	73.8	0.0	14.4	58.4	0.0	55.3	57.0	0.0	45.2
Lane Grp LOS	F	A	A	E		B	E		E	E		D
Approach Vol, veh/h		573			1174			362				49
Approach Delay, s/veh		2.6			16.1			56.8				49.1
Approach LOS		A			B			E				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.1	94.0		7.1	96.0			24.0				24.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	90.0		6.0	92.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	2.8	2.0		4.4	55.7			19.5				16.6
Green Ext Time (p_c), s	0.2	3.6		0.0	13.3			0.5				0.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.1								
HCM 2010 LOS				C								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

Cumulative Plus Project AM With Bypass  
 3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	532	19	36	1470	42	54	82	94	44	29	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	91	2062	75	52	2001	57	75	115	132	60	58	167
Arrive On Green	0.05	0.58	0.58	0.03	0.56	0.56	0.04	0.15	0.15	0.03	0.14	0.14
Sat Flow, veh/h	1757	3538	128	1757	3569	102	1757	786	900	1757	421	1210
Grp Volume(v), veh/h	71	301	298	39	824	820	59	0	191	48	0	124
Grp Sat Flow(s),veh/h/ln	1757	1845	1822	1757	1845	1827	1757	0	1686	1757	0	1631
Q Serve(g_s), s	3.1	6.3	6.3	1.7	27.4	27.6	2.6	0.0	8.4	2.1	0.0	5.5
Cycle Q Clear(g_c), s	3.1	6.3	6.3	1.7	27.4	27.6	2.6	0.0	8.4	2.1	0.0	5.5
Prop In Lane	1.00		0.07	1.00		0.06	1.00		0.53	1.00		0.74
Lane Grp Cap(c), veh/h	91	1075	1062	52	1034	1024	75	0	247	60	0	225
V/C Ratio(X)	0.78	0.28	0.28	0.76	0.80	0.80	0.79	0.00	0.77	0.80	0.00	0.55
Avail Cap(c_a), veh/h	137	1123	1110	137	1123	1112	114	0	350	114	0	338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.2	8.0	8.0	37.2	13.5	13.5	36.6	0.0	31.7	37.0	0.0	31.0
Incr Delay (d2), s/veh	15.3	0.1	0.1	19.8	3.8	4.0	18.5	0.0	6.8	21.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.7	2.6	2.6	1.0	12.1	12.1	1.5	0.0	4.0	1.3	0.0	2.3
Lane Grp Delay (d), s/veh	51.5	8.2	8.2	57.0	17.3	17.5	55.2	0.0	38.5	58.1	0.0	33.1
Lane Grp LOS	D	A	A	E	B	B	E		D	E		C
Approach Vol, veh/h		670			1683			250				172
Approach Delay, s/veh		12.8			18.3			42.4				40.1
Approach LOS		B			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	8.0	49.0		6.3	47.3		7.3	15.3		6.6		14.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	47.0		6.0	47.0		5.0	16.0		5.0		16.0
Max Q Clear Time (g_c+I1), s	5.1	8.3		3.7	29.6		4.6	10.4		4.1		7.5
Green Ext Time (p_c), s	0.0	24.6		0.0	13.7		0.0	0.9		0.0		1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.5								
HCM 2010 LOS				C								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	549	12	36	911	34	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	958	814	50	1069	625	558
Arrive On Green	0.52	0.52	0.03	0.58	0.36	0.36
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	597	13	39	990	37	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	28.5	0.5	2.7	60.2	1.7	6.4
Cycle Q Clear(g_c), s	28.5	0.5	2.7	60.2	1.7	6.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	958	814	50	1069	625	558
V/C Ratio(X)	0.62	0.02	0.79	0.93	0.06	0.21
Avail Cap(c_a), veh/h	999	849	99	1163	625	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	14.4	59.7	23.6	26.2	27.7
Incr Delay (d2), s/veh	1.1	0.0	23.1	11.9	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.7	0.2	1.6	28.8	0.8	2.6
Lane Grp Delay (d), s/veh	22.3	14.4	82.9	35.5	26.4	28.6
Lane Grp LOS	C	B	F	D	C	C
Approach Vol, veh/h	610			1029	153	
Approach Delay, s/veh	22.1			37.2	28.1	
Approach LOS	C			D	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	68.2		7.5	75.7		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	67.0		7.0	78.0		
Max Q Clear Time (g_c+I1), s	30.5		4.7	62.2		
Green Ext Time (p_c), s	14.9		0.0	9.5		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			31.3			
HCM 2010 LOS			C			
<b>Notes</b>						























HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr













Cumulative Plus Project AM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	555	15	13	1355	4	30	23	40	11	15	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	59	2117	56	24	2102	6	48	90	155	21	22	189
Arrive On Green	0.03	0.59	0.59	0.01	0.57	0.57	0.03	0.15	0.15	0.01	0.13	0.13
Sat Flow, veh/h	1757	3578	95	1757	3678	10	1757	610	1049	1757	164	1428
Grp Volume(v), veh/h	45	311	308	14	739	738	33	0	68	12	0	155
Grp Sat Flow(s),veh/h/ln	1757	1845	1828	1757	1845	1843	1757	0	1659	1757	0	1593
Q Serve(g_s), s	1.7	5.6	5.6	0.5	19.5	19.5	1.3	0.0	2.5	0.5	0.0	6.4
Cycle Q Clear(g_c), s	1.7	5.6	5.6	0.5	19.5	19.5	1.3	0.0	2.5	0.5	0.0	6.4
Prop In Lane	1.00		0.05	1.00		0.01	1.00		0.63	1.00		0.90
Lane Grp Cap(c), veh/h	59	1091	1081	24	1054	1053	48	0	245	21	0	210
V/C Ratio(X)	0.76	0.28	0.29	0.58	0.70	0.70	0.69	0.00	0.28	0.57	0.00	0.74
Avail Cap(c_a), veh/h	129	1329	1317	103	1302	1301	129	0	415	103	0	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	6.8	6.8	33.3	10.4	10.4	32.8	0.0	25.8	33.4	0.0	28.4
Incr Delay (d2), s/veh	17.9	0.1	0.1	20.4	1.3	1.3	16.1	0.0	0.6	22.3	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	2.2	2.2	0.4	8.2	8.2	0.8	0.0	1.0	0.3	0.0	2.8
Lane Grp Delay (d), s/veh	50.5	7.0	7.0	53.8	11.7	11.7	48.9	0.0	26.4	55.7	0.0	33.3
Lane Grp LOS	D	A	A	D	B	B	D		C	E		C
Approach Vol, veh/h		664			1491			101				167
Approach Delay, s/veh		9.9			12.1			33.7				34.9
Approach LOS		A			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	6.3	44.2		4.9	42.9		5.9	14.0		4.8		13.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	5.0	49.0		4.0	48.0		5.0	17.0		4.0		16.0
Max Q Clear Time (g_c+I1), s	3.7	7.6		2.5	21.5		3.3	4.5		2.5		8.4
Green Ext Time (p_c), s	0.0	22.7		0.0	17.4		0.0	1.0		0.0		0.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				14.0								
HCM 2010 LOS				B								
<b>Notes</b>												





















	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	640	16	22	885	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	783	666	193	1066	589	526
Arrive On Green	0.42	0.42	0.11	0.58	0.34	0.34
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	696	17	24	962	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	32.2	0.6	1.1	42.5	2.4	4.0
Cycle Q Clear(g_c), s	32.2	0.6	1.1	42.5	2.4	4.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	783	666	193	1066	589	526
V/C Ratio(X)	0.89	0.03	0.12	0.90	0.11	0.18
Avail Cap(c_a), veh/h	1517	1290	209	1817	589	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	15.5	37.1	17.2	21.2	21.7
Incr Delay (d2), s/veh	3.7	0.0	0.3	3.8	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	14.7	0.2	0.5	17.7	1.1	1.6
Lane Grp Delay (d), s/veh	28.2	15.5	37.4	21.0	21.6	22.5
Lane Grp LOS	C	B	D	C	C	C
Approach Vol, veh/h	713			986	164	
Approach Delay, s/veh	27.9			21.4	22.1	
Approach LOS	C			C	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	43.2		14.2	57.4		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	76.0		11.0	91.0		
Max Q Clear Time (g_c+I1), s	34.2		3.1	44.5		
Green Ext Time (p_c), s	5.0		4.0	8.9		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			24.0			
HCM 2010 LOS			C			
<b>Notes</b>						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	34	46	225	83	32	228	522	162	26	568	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	410	222	189	410	152	59	594	2879	871	41	2045	869
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.06	0.23	0.23	0.02	0.55	0.55
Sat Flow, veh/h	3408	1845	1568	3408	1266	492	3408	4082	1234	1757	3689	1568
Grp Volume(v), veh/h	124	37	50	245	0	125	248	511	232	28	617	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1627	1757	1845	1568
Q Serve(g_s), s	2.6	1.4	2.3	5.4	0.0	5.3	5.6	8.8	9.1	1.3	7.1	8.8
Cycle Q Clear(g_c), s	2.6	1.4	2.3	5.4	0.0	5.3	5.6	8.8	9.1	1.3	7.1	8.8
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	410	222	189	410	0	211	594	2602	1147	41	2045	869
V/C Ratio(X)	0.30	0.17	0.27	0.60	0.00	0.59	0.42	0.20	0.20	0.69	0.30	0.36
Avail Cap(c_a), veh/h	773	418	355	944	0	487	859	2602	1147	177	2045	869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	31.3	31.7	33.1	0.0	33.1	33.5	12.4	12.5	38.5	9.5	9.8
Incr Delay (d2), s/veh	0.4	0.4	0.7	1.4	0.0	2.6	0.5	0.2	0.4	18.5	0.4	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.7	0.9	2.4	0.0	2.5	2.6	4.5	4.2	0.8	3.0	3.4
Lane Grp Delay (d), s/veh	32.3	31.7	32.5	34.5	0.0	35.7	34.0	12.5	12.9	57.0	9.9	11.0
Lane Grp LOS	C	C	C	C		D	C	B	B	E	A	B
Approach Vol, veh/h		211			370			991			957	
Approach Delay, s/veh		32.2			34.9			18.0			11.6	
Approach LOS		C			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.5			13.5		17.8	60.0		5.8		48.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			22.0		20.0	56.0		8.0		44.0
Max Q Clear Time (g_c+I1), s		4.6			7.4		7.6	11.1		3.3		10.8
Green Ext Time (p_c), s		2.1			2.1		4.7	7.1		0.0		7.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.2								
HCM 2010 LOS				B								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	236	293	553	602	464	316
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	775	357	716	3882	2522	715
Arrive On Green	0.23	0.23	0.07	0.23	0.46	0.46
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	257	318	601	654	504	343
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	7.1	22.1	19.6	10.6	6.1	17.2
Cycle Q Clear(g_c), s	7.1	22.1	19.6	10.6	6.1	17.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	775	357	716	3882	2522	715
V/C Ratio(X)	0.33	0.89	0.84	0.17	0.20	0.48
Avail Cap(c_a), veh/h	999	459	1120	3882	2522	715
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.91	0.91
Uniform Delay (d), s/veh	36.3	42.2	50.5	17.0	18.3	21.3
Incr Delay (d2), s/veh	0.2	16.1	3.2	0.1	0.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.1	1.6	9.4	5.4	2.8	7.1
Lane Grp Delay (d), s/veh	36.6	58.3	53.8	17.1	18.5	23.4
Lane Grp LOS	D	E	D	B	B	C
Approach Vol, veh/h	575			1255	847	
Approach Delay, s/veh	48.6			34.7	20.5	
Approach LOS	D			C	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			27.7	83.0	55.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			37.0	79.0	38.0	
Max Q Clear Time (g_c+I1), s			21.6	12.6	19.2	
Green Ext Time (p_c), s			2.1	13.5	9.2	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			33.2			
HCM 2010 LOS			C			
<b>Notes</b>						
























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	228	0	290	0	0	0	0	863	495	148	646	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	439	238	404				0	3868	1096	223	4427	0
Arrive On Green	0.13	0.00	0.13				0.00	1.00	1.00	0.13	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	248	0	315				0	938	538	161	702	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.7	0.0	10.9				0.0	0.0	0.0	5.1	0.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	10.9				0.0	0.0	0.0	5.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	439	238	404				0	3868	1096	223	4427	0
V/C Ratio(X)	0.56	0.00	0.78				0.00	0.24	0.49	0.72	0.16	0.00
Avail Cap(c_a), veh/h	666	361	613				0	3868	1096	485	4427	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.79	0.79	0.94	0.94	0.00
Uniform Delay (d), s/veh	46.0	0.0	47.4				0.0	0.0	0.0	47.9	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	3.6				0.0	0.1	1.2	4.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	0.0	4.6				0.0	0.0	0.4	2.3	0.0	0.0
Lane Grp Delay (d), s/veh	47.2	0.0	51.1				0.0	0.1	1.2	52.0	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		563						1476			863	
Approach Delay, s/veh		49.3						0.5			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		18.5						82.6		11.4	94.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		22.0						70.0		16.0	90.0	
Max Q Clear Time (g_c+I1), s		12.9						2.0		7.1	2.0	
Green Ext Time (p_c), s		1.6						25.8		0.3	27.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.7									
HCM 2010 LOS			B									
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
21: Somersville Rd & Delta Fair Blvd













Cumulative Plus Project AM With Bypass  
3/16/2014



























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	288	126	7	47	345	452	97	568	19	150	405	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1533	776	45	790	830	705	292	1892	64	236	954	405
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.05	0.12	0.12	0.02	0.09	0.09
Sat Flow, veh/h	3408	1726	101	1757	1845	1568	1757	5322	180	3408	3689	1568
Grp Volume(v), veh/h	313	0	145	51	375	491	105	427	211	163	440	335
Grp Sat Flow(s),veh/h/ln	1704	0	1827	1757	1845	1568	1757	1845	1813	1704	1845	1568
Q Serve(g_s), s	5.3	0.0	4.5	1.6	13.4	24.0	5.5	10.2	10.2	4.5	10.9	20.1
Cycle Q Clear(g_c), s	5.3	0.0	4.5	1.6	13.4	24.0	5.5	10.2	10.2	4.5	10.9	20.1
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	1533	0	822	790	830	705	292	1312	645	236	954	405
V/C Ratio(X)	0.20	0.00	0.18	0.06	0.45	0.70	0.36	0.33	0.33	0.69	0.46	0.83
Avail Cap(c_a), veh/h	1533	0	822	790	830	705	292	1312	645	356	1157	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.75	0.75	0.99	0.99	0.99	0.98	0.98	0.98
Uniform Delay (d), s/veh	15.9	0.0	15.7	14.9	18.2	21.1	40.3	31.7	31.7	45.7	37.4	41.6
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	1.3	4.3	0.7	0.7	1.3	3.5	0.3	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	0.0	2.0	0.7	6.2	9.8	2.6	5.2	5.3	2.2	5.5	9.6
Lane Grp Delay (d), s/veh	16.0	0.0	15.8	15.0	19.5	25.3	41.0	32.3	33.0	49.2	37.7	50.9
Lane Grp LOS	B		B	B	B	C	D	C	C	D	D	D
Approach Vol, veh/h		458			917			743			938	
Approach Delay, s/veh		16.0			22.4			33.8			44.4	
Approach LOS		B			C			C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		47.0			47.0		19.9	38.0		10.6		28.7
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			43.0		14.0	34.0		10.0		30.0
Max Q Clear Time (g_c+I1), s		7.3			26.0		7.5	12.2		6.5		22.1
Green Ext Time (p_c), s		4.6			6.2		0.5	4.2		0.2		2.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.0								
HCM 2010 LOS				C								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	425	244	37	27	384	433	416	699	58	43	197	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	464	1714	729	37	409	347	449	1156	96	60	452	192
Arrive On Green	0.26	0.46	0.00	0.02	0.22	0.00	0.26	0.34	0.34	0.03	0.12	0.12
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3362	279	1757	3689	1568
Grp Volume(v), veh/h	462	265	0	29	417	0	452	417	406	47	214	161
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1796	1757	1845	1568
Q Serve(g_s), s	30.8	4.9	0.0	1.9	26.0	0.0	30.0	22.5	22.5	3.1	6.3	11.8
Cycle Q Clear(g_c), s	30.8	4.9	0.0	1.9	26.0	0.0	30.0	22.5	22.5	3.1	6.3	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	464	1714	729	37	409	347	449	634	617	60	452	192
V/C Ratio(X)	1.00	0.15	0.00	0.79	1.02	0.00	1.01	0.66	0.66	0.78	0.47	0.84
Avail Cap(c_a), veh/h	464	1714	729	90	409	347	449	634	617	120	534	227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	18.1	0.0	57.2	45.7	0.0	43.7	32.6	32.7	56.2	48.0	50.4
Incr Delay (d2), s/veh	40.6	0.0	0.0	30.5	49.9	0.0	44.2	2.5	2.6	19.2	0.8	20.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	18.7	2.1	0.0	1.2	18.0	0.0	19.0	11.0	10.7	1.7	3.1	5.8
Lane Grp Delay (d), s/veh	83.8	18.2	0.0	87.7	95.6	0.0	87.9	35.1	35.2	75.5	48.7	70.8
Lane Grp LOS	F	B		F	F		F	D	D	E	D	E
Approach Vol, veh/h		727			446			1275			422	
Approach Delay, s/veh		59.9			95.1			53.8			60.1	
Approach LOS		E			F			D			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	35.0	58.6		6.4	30.0		34.0	44.4		8.0	18.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	31.0	51.0		6.0	26.0		30.0	39.0		8.0	17.0	
Max Q Clear Time (g_c+I1), s	32.8	6.9		3.9	28.0		32.0	24.5		5.1	13.8	
Green Ext Time (p_c), s	0.0	4.8		0.0	0.0		0.0	6.3		0.0	0.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				62.7								
HCM 2010 LOS				E								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	175	11	4	1660	314	59
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	239	213	804	2786	2786	1184
Arrive On Green	0.14	0.14	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1757	1568	967	3689	3689	1568
Grp Volume(v), veh/h	190	12	4	1804	341	64
Grp Sat Flow(s),veh/h/ln	1757	1568	967	1845	1845	1568
Q Serve(g_s), s	7.7	0.5	0.1	17.2	1.8	0.8
Cycle Q Clear(g_c), s	7.7	0.5	1.9	17.2	1.8	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	239	213	804	2786	2786	1184
V/C Ratio(X)	0.79	0.06	0.00	0.65	0.12	0.05
Avail Cap(c_a), veh/h	574	512	1232	4418	4418	1878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	27.6	2.7	4.3	2.4	2.3
Incr Delay (d2), s/veh	5.9	0.1	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	0.2	0.0	5.9	0.6	0.2
Lane Grp Delay (d), s/veh	36.7	27.7	2.7	4.6	2.4	2.3
Lane Grp LOS	D	C	A	A	A	A
Approach Vol, veh/h	202			1808	405	
Approach Delay, s/veh	36.1			4.6	2.4	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				59.5	59.5	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				88.0	88.0	
Max Q Clear Time (g_c+I1), s				19.2	3.8	
Green Ext Time (p_c), s				36.3	39.6	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			6.8			
HCM 2010 LOS			A			
<b>Notes</b>						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 					 		 
Volume (veh/h)	186	370	0	4	1284	660	0	1	2	289	9	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	243	2383	0	7	1888	802	2	23	46	404	383	651
Arrive On Green	0.14	0.65	0.00	0.00	0.51	0.00	0.00	0.04	0.04	0.12	0.21	0.21
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	202	402	0	4	1396	0	0	0	3	314	10	77
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	9.4	3.7	0.0	0.2	25.1	0.0	0.0	0.0	0.1	7.5	0.4	1.7
Cycle Q Clear(g_c), s	9.4	3.7	0.0	0.2	25.1	0.0	0.0	0.0	0.1	7.5	0.4	1.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	243	2383	0	7	1888	802	2	0	69	404	383	651
V/C Ratio(X)	0.83	0.17	0.00	0.54	0.74	0.00	0.00	0.00	0.04	0.78	0.03	0.12
Avail Cap(c_a), veh/h	396	3018	0	83	2362	1004	83	0	333	566	591	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	5.9	0.0	41.9	16.2	0.0	0.0	0.0	38.8	36.1	26.6	27.1
Incr Delay (d2), s/veh	7.7	0.0	0.0	48.9	1.0	0.0	0.0	0.0	0.3	4.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.7	1.4	0.0	0.2	11.1	0.0	0.0	0.0	0.1	3.5	0.2	0.6
Lane Grp Delay (d), s/veh	43.1	6.0	0.0	90.9	17.1	0.0	0.0	0.0	39.1	40.6	26.6	27.2
Lane Grp LOS	D	A		F	B				D	D	C	C
Approach Vol, veh/h		604			1400			3			401	
Approach Delay, s/veh		18.4			17.3			39.1			37.7	
Approach LOS		B			B			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	15.7	58.5		4.4	47.2		0.0	7.5		14.0	21.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	19.0	69.0		4.0	54.0		4.0	17.0		14.0	27.0	
Max Q Clear Time (g_c+I1), s	11.4	5.7		2.2	27.1		0.0	2.1		9.5	3.7	
Green Ext Time (p_c), s	0.3	23.9		0.0	16.1		0.0	0.2		0.5	0.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd





















Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	230	59	55	429	223	137	461	57	69	114	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	301	1118	280	478	901	465	653	748	93	315	857	728
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	730	2849	714	1051	2296	1184	1230	1610	199	836	1845	1568
Grp Volume(v), veh/h	53	160	154	60	374	334	149	0	563	75	124	17
Grp Sat Flow(s),veh/h/ln	730	1845	1719	1051	1845	1636	1230	0	1809	836	1845	1568
Q Serve(g_s), s	3.3	3.2	3.3	2.3	8.6	8.7	4.4	0.0	13.5	4.3	2.2	0.3
Cycle Q Clear(g_c), s	12.1	3.2	3.3	5.6	8.6	8.7	6.6	0.0	13.5	17.8	2.2	0.3
Prop In Lane	1.00		0.42	1.00		0.72	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	301	724	674	478	724	642	653	0	841	315	857	728
V/C Ratio(X)	0.18	0.22	0.23	0.13	0.52	0.52	0.23	0.00	0.67	0.24	0.14	0.02
Avail Cap(c_a), veh/h	577	1420	1323	875	1420	1259	1601	0	2235	959	2278	1936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	11.3	11.3	13.2	12.9	13.0	10.5	0.0	11.6	18.5	8.6	8.1
Incr Delay (d2), s/veh	0.3	0.2	0.2	0.1	0.6	0.7	0.2	0.0	0.9	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	1.3	1.3	0.5	3.5	3.2	1.2	0.0	5.4	0.9	0.8	0.1
Lane Grp Delay (d), s/veh	17.8	11.4	11.5	13.3	13.5	13.6	10.7	0.0	12.6	18.9	8.7	8.1
Lane Grp LOS	B	B	B	B	B	B	B		B	B	A	A
Approach Vol, veh/h		367			768			712				216
Approach Delay, s/veh		12.4			13.5			12.2				12.2
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs		4			8			2				6
Phs Duration (G+Y+Rc), s		25.9			25.9			30.0				30.0
Change Period (Y+Rc), s		4.0			4.0			4.0				4.0
Max Green Setting (Gmax), s		43.0			43.0			69.0				69.0
Max Q Clear Time (g_c+I1), s		14.1			10.7			15.5				19.8
Green Ext Time (p_c), s		7.9			8.1			6.2				6.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.7								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Cumulative Plus Project AM With Bypass

3/16/2014
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	492	2	10	1563	235	7	10	13	226	14	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	236	2442	9	19	1795	172	86	111	108	211	27	275
Arrive On Green	0.13	0.66	0.66	0.01	0.54	0.54	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3673	14	1757	3316	317	187	586	570	1367	144	1446
Grp Volume(v), veh/h	217	269	268	11	934	930	33	0	0	246	0	166
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1789	1343	0	0	1367	0	1590
Q Serve(g_s), s	10.9	5.1	5.1	0.6	42.1	44.4	0.1	0.0	0.0	8.5	0.0	8.4
Cycle Q Clear(g_c), s	10.9	5.1	5.1	0.6	42.1	44.4	8.5	0.0	0.0	17.0	0.0	8.4
Prop In Lane	1.00		0.01	1.00		0.18	0.24		0.42	1.00		0.91
Lane Grp Cap(c), veh/h	236	1226	1225	19	998	968	305	0	0	211	0	302
V/C Ratio(X)	0.92	0.22	0.22	0.59	0.94	0.96	0.11	0.00	0.00	1.17	0.00	0.55
Avail Cap(c_a), veh/h	236	1226	1225	79	1011	981	305	0	0	211	0	302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	5.9	5.9	44.0	19.1	19.6	29.9	0.0	0.0	42.1	0.0	32.7
Incr Delay (d2), s/veh	37.6	0.1	0.1	25.7	15.2	19.7	0.2	0.0	0.0	115.0	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.3	2.0	2.0	0.4	21.9	23.4	0.6	0.0	0.0	11.5	0.0	3.5
Lane Grp Delay (d), s/veh	75.8	6.0	6.0	69.7	34.2	39.2	30.1	0.0	0.0	157.0	0.0	34.8
Lane Grp LOS	E	A	A	E	C	D	C			F		C
Approach Vol, veh/h		754			1875			33				412
Approach Delay, s/veh		26.1			36.9			30.1				107.8
Approach LOS		C			D			C				F
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	16.0	63.4		5.0	52.4			21.0				21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	12.0	57.0		4.0	49.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	12.9	7.1		2.6	46.4			10.5				19.0
Green Ext Time (p_c), s	0.0	32.9		0.0	2.0			1.1				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				43.7								
HCM 2010 LOS				D								
<b>Notes</b>												



























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	218	55	545	12	124	85	1006	1270	10	54	950	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	300	315	1674	28	286	267	1238	2407	1023	76	1527	264
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.36	0.65	0.65	0.04	0.33	0.33
Sat Flow, veh/h	1757	1845	3136	161	1675	1568	3408	3689	1568	1757	4598	795
Grp Volume(v), veh/h	237	60	592	148	0	92	1093	1380	11	59	828	384
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1837	0	1568	1704	1845	1568	1757	1845	1704
Q Serve(g_s), s	11.6	2.5	9.7	6.5	0.0	4.6	26.9	18.6	0.2	3.0	17.3	17.4
Cycle Q Clear(g_c), s	11.6	2.5	9.7	6.5	0.0	4.6	26.9	18.6	0.2	3.0	17.3	17.4
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	300	315	1674	313	0	267	1238	2407	1023	76	1225	566
V/C Ratio(X)	0.79	0.19	0.35	0.47	0.00	0.34	0.88	0.57	0.01	0.78	0.68	0.68
Avail Cap(c_a), veh/h	333	350	1734	328	0	280	1522	2595	1103	157	1277	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	31.9	12.0	33.5	0.0	32.7	26.7	8.6	5.4	42.5	25.8	25.8
Incr Delay (d2), s/veh	11.1	0.3	0.1	1.1	0.0	0.8	5.5	0.3	0.0	15.9	1.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.1	1.2	3.5	3.1	0.0	1.9	12.3	7.6	0.1	1.7	8.1	7.7
Lane Grp Delay (d), s/veh	46.7	32.1	12.1	34.6	0.0	33.5	32.3	8.9	5.5	58.3	27.1	28.7
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		889			240			2484			1271	
Approach Delay, s/veh		22.7			34.2			19.2			29.1	
Approach LOS		C			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		19.3			19.3		36.5	62.5		7.9		33.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			16.0		40.0	63.0		8.0		31.0
Max Q Clear Time (g_c+I1), s		13.6			8.5		28.9	20.6		5.0		19.4
Green Ext Time (p_c), s		1.7			3.0		3.6	30.7		0.0		10.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr

Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	26	0	107	0	0	0	61	559	3	0	1786	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	176	0	157	495	184	157	84	2897	1231	3	3687	65
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.05	0.79	0.79	0.00	0.68	0.68
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5422	95
Grp Volume(v), veh/h	28	0	116	0	0	0	66	608	3	0	1320	655
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	3.0	0.0	0.0	12.4	12.5
Cycle Q Clear(g_c), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	3.0	0.0	0.0	12.4	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	176	0	157	495	184	157	84	2897	1231	3	2509	1243
V/C Ratio(X)	0.16	0.00	0.74	0.00	0.00	0.00	0.78	0.21	0.00	0.00	0.53	0.53
Avail Cap(c_a), veh/h	403	0	360	1136	423	360	252	3596	1528	101	3279	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	30.5	0.0	0.0	0.0	32.8	1.9	1.6	0.0	5.6	5.6
Incr Delay (d2), s/veh	0.4	0.0	6.7	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.0	2.2	0.0	0.0	0.0	1.5	0.8	0.0	0.0	4.5	4.5
Lane Grp Delay (d), s/veh	29.1	0.0	37.2	0.0	0.0	0.0	47.3	2.0	1.6	0.0	5.7	5.9
Lane Grp LOS	C		D				D	A	A		A	A
Approach Vol, veh/h		144			0			677			1975	
Approach Delay, s/veh		35.6			0.0			6.4			5.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		11.0			11.0		7.3	58.8		0.0		51.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		10.0	68.0		4.0		62.0
Max Q Clear Time (g_c+I1), s		7.0			0.0		4.6	5.0		0.0		14.5
Green Ext Time (p_c), s		0.4			0.0		0.0	39.6		0.0		33.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			7.5									
HCM 2010 LOS			A									
<b>Notes</b>												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	72	75	136	412	421	98	73	456	86	55	1678	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	361	208	177	450	602	256	90	2052	376	77	1919	454
Arrive On Green	0.21	0.11	0.11	0.26	0.16	0.16	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4553	834	1757	4329	1024
Grp Volume(v), veh/h	78	82	148	448	458	107	79	400	189	60	1547	720
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1697	1757	1845	1664
Q Serve(g_s), s	4.3	4.8	10.8	29.8	13.9	6.2	5.2	7.8	8.1	4.0	47.1	49.7
Cycle Q Clear(g_c), s	4.3	4.8	10.8	29.8	13.9	6.2	5.2	7.8	8.1	4.0	47.1	49.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		0.62
Lane Grp Cap(c), veh/h	361	208	177	450	602	256	90	1663	765	77	1636	738
V/C Ratio(X)	0.22	0.39	0.84	1.00	0.76	0.42	0.88	0.24	0.25	0.78	0.95	0.98
Avail Cap(c_a), veh/h	361	252	214	450	1071	455	90	1663	765	135	1638	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	48.3	50.9	43.5	46.8	33.0	55.2	19.8	19.9	55.4	31.3	32.0
Incr Delay (d2), s/veh	0.3	1.2	21.0	41.2	2.0	1.1	57.0	0.1	0.2	15.4	11.8	27.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	2.4	5.4	18.6	6.8	2.5	3.8	3.6	3.5	2.1	24.4	26.1
Lane Grp Delay (d), s/veh	39.0	49.5	72.0	84.7	48.8	34.1	112.2	19.9	20.1	70.9	43.1	58.9
Lane Grp LOS	D	D	E	F	D	C	F	B	C	E	D	E
Approach Vol, veh/h		308			1013			668			2327	
Approach Delay, s/veh		57.6			63.2			30.9			48.7	
Approach LOS		E			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	28.1	17.2		34.0	23.1		10.0	56.8		9.1	55.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	16.0		30.0	34.0		6.0	49.0		9.0	52.0	
Max Q Clear Time (g_c+I1), s	6.3	12.8		31.8	15.9		7.2	10.1		6.0	51.7	
Green Ext Time (p_c), s	0.9	0.4		0.0	3.2		0.0	31.7		0.0	0.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				50.0								
HCM 2010 LOS				D								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
30: Ygnacio Valley Rd & Clayton Blvd












Cumulative Plus Project AM With Bypass  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	231	384	37	485	1277	150	165	346	183	300	1182	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	307	1262	0	605	1747	0	234	1887	535	393	2146	608
Arrive On Green	0.09	0.23	0.00	0.18	0.32	0.00	0.07	0.34	0.34	0.12	0.39	0.39
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	251	417	0	527	1388	0	179	376	199	326	1285	621
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Cycle Q Clear(g_c), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1262	0	605	1747	0	234	1887	535	393	2146	608
V/C Ratio(X)	0.82	0.33	0.00	0.87	0.79	0.00	0.77	0.20	0.37	0.83	0.60	1.02
Avail Cap(c_a), veh/h	323	1262	0	764	1907	0	235	1887	535	529	2146	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	37.4	0.0	46.4	36.3	0.0	53.1	27.0	28.9	50.2	28.3	35.5
Incr Delay (d2), s/veh	14.6	0.2	0.0	8.9	2.2	0.0	13.9	0.1	0.4	8.0	0.5	42.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.5	0.0	8.4	12.8	0.0	3.1	2.6	4.5	5.2	10.1	24.7
Lane Grp Delay (d), s/veh	66.4	37.5	0.0	55.3	38.5	0.0	67.0	27.1	29.3	58.2	28.8	77.6
Lane Grp LOS	E	D		E	D		E	C	C	E	C	F
Approach Vol, veh/h		668			1915			754			2232	
Approach Delay, s/veh		48.4			43.1			37.2			46.7	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	14.4	30.5		24.6	40.6		12.0	43.6		17.4	49.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	25.0		26.0	40.0		8.0	35.0		18.0	45.0	
Max Q Clear Time (g_c+I1), s	10.4	9.3		19.5	28.6		8.0	13.1		12.9	47.0	
Green Ext Time (p_c), s	0.1	10.9		1.2	8.1		0.0	16.0		0.5	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				44.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd






















Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	692	5	10	999	12	7	0	31	8	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	18	2346	16	20	2335	28	241	0	72	215	0	72
Arrive On Green	0.01	0.64	0.64	0.01	0.64	0.64	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1757	3661	24	1757	3638	44	1393	0	1568	1356	0	1568
Grp Volume(v), veh/h	10	379	378	11	551	548	8	0	34	9	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1837	1393	0	1568	1356	0	1568
Q Serve(g_s), s	0.2	3.7	3.7	0.2	6.1	6.1	0.2	0.0	0.8	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.2	3.7	3.7	0.2	6.1	6.1	0.3	0.0	0.8	1.1	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1182	1179	20	1184	1179	241	0	72	215	0	72
V/C Ratio(X)	0.54	0.32	0.32	0.54	0.47	0.47	0.03	0.00	0.47	0.04	0.00	0.06
Avail Cap(c_a), veh/h	354	3758	3749	354	3758	3742	843	0	749	800	0	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	3.2	3.2	19.5	3.6	3.6	18.3	0.0	18.5	19.0	0.0	18.1
Incr Delay (d2), s/veh	22.4	0.2	0.2	20.8	0.3	0.3	0.1	0.0	4.8	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.8	0.8	0.2	1.3	1.3	0.1	0.0	0.4	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	42.0	3.4	3.4	40.4	3.9	3.9	18.4	0.0	23.3	19.1	0.0	18.5
Lane Grp LOS	D	A	A	D	A	A	B		C	B		B
Approach Vol, veh/h		767			1110			42				13
Approach Delay, s/veh		3.9			4.3			22.3				18.9
Approach LOS		A			A			C				B
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	29.5		4.5	29.5			5.8				5.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	81.0		8.0	81.0			19.0				19.0
Max Q Clear Time (g_c+I1), s	2.2	5.7		2.2	8.1			2.8				3.1
Green Ext Time (p_c), s	0.0	17.5		0.0	17.5			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.6								
HCM 2010 LOS				A								
<b>Notes</b>												

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	110	325	782	116	118	326
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	157	2170	1345	199	475	424
Arrive On Green	0.09	0.59	0.43	0.43	0.27	0.27
Sat Flow, veh/h	1757	3689	3141	466	1757	1568
Grp Volume(v), veh/h	120	353	499	477	128	354
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1762	1757	1568
Q Serve(g_s), s	3.8	2.5	12.0	12.0	3.2	12.0
Cycle Q Clear(g_c), s	3.8	2.5	12.0	12.0	3.2	12.0
Prop In Lane	1.00			0.26	1.00	1.00
Lane Grp Cap(c), veh/h	157	2170	790	755	475	424
V/C Ratio(X)	0.77	0.16	0.63	0.63	0.27	0.84
Avail Cap(c_a), veh/h	435	3789	1306	1248	747	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	5.3	12.7	12.7	16.2	19.4
Incr Delay (d2), s/veh	7.6	0.0	0.8	0.9	0.3	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.9	5.0	4.8	1.4	0.6
Lane Grp Delay (d), s/veh	32.8	5.3	13.5	13.5	16.5	24.8
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		473	976		482	
Approach Delay, s/veh		12.3	13.5		22.6	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	9.0	37.2	28.2			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	58.0	40.0			
Max Q Clear Time (g_c+I1), s	5.8	4.5	14.0			
Green Ext Time (p_c), s	0.2	12.4	10.2			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			15.5			
HCM 2010 LOS			B			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	114	0	0	0	882	478	0	2	291	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	237	0	154	65	181	0	1001	2932	0	2	746	68
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.57	0.79	0.00	0.00	0.22	0.22
Sat Flow, veh/h	1757	0	1568	1250	1845	0	1757	3689	0	1757	3332	304
Grp Volume(v), veh/h	50	0	124	0	0	0	959	520	0	2	174	171
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1250	1845	0	1757	1845	0	1757	1845	1791
Q Serve(g_s), s	2.9	0.0	8.6	0.0	0.0	0.0	57.3	3.7	0.0	0.1	9.0	9.1
Cycle Q Clear(g_c), s	2.9	0.0	8.6	0.0	0.0	0.0	57.3	3.7	0.0	0.1	9.0	9.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.17
Lane Grp Cap(c), veh/h	237	0	154	65	181	0	1001	2932	0	2	413	401
V/C Ratio(X)	0.21	0.00	0.81	0.00	0.00	0.00	0.96	0.18	0.00	1.26	0.42	0.43
Avail Cap(c_a), veh/h	319	0	227	123	267	0	1190	2932	0	63	413	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.40	0.40	0.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	46.4	0.0	48.9	0.0	0.0	0.0	22.6	2.7	0.0	55.4	36.8	36.9
Incr Delay (d2), s/veh	0.4	0.0	12.3	0.0	0.0	0.0	8.1	0.1	0.0	390.0	2.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	4.0	0.0	0.0	0.0	26.2	1.3	0.0	0.2	4.5	4.4
Lane Grp Delay (d), s/veh	46.8	0.0	61.2	0.0	0.0	0.0	30.7	2.8	0.0	445.3	39.2	39.4
Lane Grp LOS	D		E				C	A		F	D	D
Approach Vol, veh/h		174			0			1479			347	
Approach Delay, s/veh		57.1			0.0			20.9			41.6	
Approach LOS		E						C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		14.9			14.9		67.1	92.0		3.9		28.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		75.0	88.0		4.0		17.0
Max Q Clear Time (g_c+I1), s		10.6			0.0		59.3	5.7		2.1		11.1
Green Ext Time (p_c), s		0.3			0.0		3.8	4.1		0.0		1.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					27.6							
HCM 2010 LOS					C							
<b>Notes</b>												



















HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	376	174	24	500	8	681	7	32	9	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	22	493	225	39	779	13	903	9	959	190	38	24
Arrive On Green	0.01	0.21	0.21	0.02	0.22	0.22	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1757	2400	1096	1757	3619	60	1320	14	1568	176	62	40
Grp Volume(v), veh/h	13	313	285	26	277	275	748	0	35	14	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1651	1757	1845	1834	1334	0	1568	278	0	0
Q Serve(g_s), s	0.6	12.2	12.4	1.1	10.4	10.4	0.0	0.0	0.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.6	12.2	12.4	1.1	10.4	10.4	37.9	0.0	0.7	38.2	0.0	0.0
Prop In Lane	1.00		0.66	1.00		0.03	0.99		1.00	0.71		0.14
Lane Grp Cap(c), veh/h	22	379	339	39	397	395	912	0	959	253	0	0
V/C Ratio(X)	0.58	0.83	0.84	0.66	0.70	0.70	0.82	0.00	0.04	0.06	0.00	0.00
Avail Cap(c_a), veh/h	94	395	353	94	397	395	1140	0	1216	486	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.7	28.4	28.5	36.3	27.1	27.1	13.0	0.0	5.8	15.0	0.0	0.0
Incr Delay (d2), s/veh	22.0	13.1	15.8	17.5	5.3	5.3	4.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	6.9	6.6	0.7	5.3	5.3	11.8	0.0	0.2	0.2	0.0	0.0
Lane Grp Delay (d), s/veh	58.8	41.5	44.4	53.8	32.4	32.4	16.9	0.0	5.8	15.0	0.0	0.0
Lane Grp LOS	E	D	D	D	C	C	B		A	B		
Approach Vol, veh/h		611			578			783				14
Approach Delay, s/veh		43.2			33.4			16.4				15.0
Approach LOS		D			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.9	19.4		5.7	20.1			49.8				49.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0			58.0				58.0
Max Q Clear Time (g_c+I1), s	2.6	14.4		3.1	12.4			39.9				40.2
Green Ext Time (p_c), s	0.0	1.0		0.0	2.2			5.6				5.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Cumulative Plus Project PM With Bypass





















3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	127	262	58	532	775	392	258	820	321
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				164	358	82	673	1170	587	379	1928	819
Arrive On Green				0.17	0.17	0.17	0.33	0.84	0.84	0.22	0.52	0.00
Sat Flow, veh/h				967	2106	483	3408	2320	1164	1757	3689	1568
Grp Volume(v), veh/h				256	0	230	578	668	600	280	891	0
Grp Sat Flow(s),veh/h/ln				1796	0	1759	1704	1845	1639	1757	1845	1568
Q Serve(g_s), s				15.1	0.0	13.6	17.3	15.8	16.2	16.2	16.6	0.0
Cycle Q Clear(g_c), s				15.1	0.0	13.6	17.3	15.8	16.2	16.2	16.6	0.0
Prop In Lane				0.54		0.27	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h				305	0	299	673	930	827	379	1928	819
V/C Ratio(X)				0.84	0.00	0.77	0.86	0.72	0.73	0.74	0.46	0.00
Avail Cap(c_a), veh/h				379	0	371	875	930	827	483	1928	819
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.65	0.65	0.65	1.00	1.00	0.00
Uniform Delay (d), s/veh				43.8	0.0	43.2	35.1	5.5	5.6	39.9	16.4	0.0
Incr Delay (d2), s/veh				12.9	0.0	7.5	4.6	3.1	3.6	4.4	0.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				8.0	0.0	6.7	7.3	4.0	3.7	7.7	7.6	0.0
Lane Grp Delay (d), s/veh				56.7	0.0	50.7	39.8	8.6	9.2	44.3	17.2	0.0
Lane Grp LOS				E		D	D	A	A	D	B	
Approach Vol, veh/h					486			1846			1171	
Approach Delay, s/veh					53.8			18.6			23.7	
Approach LOS					D			B			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1		6
Phs Duration (G+Y+Rc), s					22.5		25.5	59.0		27.5		61.0
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s					23.0		28.0	55.0		30.0		57.0
Max Q Clear Time (g_c+I1), s					17.1		19.3	18.2		18.2		18.6
Green Ext Time (p_c), s					1.5		2.2	12.0		2.6		7.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					25.2							
HCM 2010 LOS					C							
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Cumulative Plus Project PM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	575	0	863	0	0	0	0	978	114	83	601	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	725	761	1294				0	1734	202	203	1882	0
Arrive On Green	0.41	0.00	0.41				0.00	0.36	0.36	0.23	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4867	567	1757	3689	0
Grp Volume(v), veh/h	625	0	938				0	805	382	90	653	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1745	1757	1845	0
Q Serve(g_s), s	33.7	0.0	26.0				0.0	18.7	18.7	4.6	0.0	0.0
Cycle Q Clear(g_c), s	33.7	0.0	26.0				0.0	18.7	18.7	4.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.32	1.00		0.00
Lane Grp Cap(c), veh/h	725	761	1294				0	1314	621	203	1882	0
V/C Ratio(X)	0.86	0.00	0.72				0.00	0.61	0.61	0.44	0.35	0.00
Avail Cap(c_a), veh/h	998	1048	1781				0	1314	621	203	1882	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	27.8	0.0	25.6				0.0	27.5	27.6	37.1	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.9				0.0	2.1	4.5	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.6	0.0	10.2				0.0	8.9	8.8	2.0	0.1	0.0
Lane Grp Delay (d), s/veh	33.7	0.0	26.5				0.0	29.7	32.0	38.4	0.4	0.0
Lane Grp LOS	C		C					C	C	D	A	
Approach Vol, veh/h		1563						1187			743	
Approach Delay, s/veh		29.4						30.4			5.0	
Approach LOS		C						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		46.9						41.0		16.0	57.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		59.0						37.0		12.0	53.0	
Max Q Clear Time (g_c+I1), s		35.7						20.7		6.6	2.0	
Green Ext Time (p_c), s		7.2						7.5		2.2	5.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	226	869	177	97	336	224	76	612	144	501	932	281
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	273	921	187	103	785	334	291	727	309	529	1228	522
Arrive On Green	0.16	0.31	0.31	0.06	0.21	0.21	0.17	0.20	0.20	0.30	0.33	0.33
Sat Flow, veh/h	1757	2978	604	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	246	585	552	105	365	243	83	665	157	545	1013	305
Grp Sat Flow(s),veh/h/ln	1757	1845	1738	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.4	37.0	37.0	7.0	10.3	9.2	4.9	21.1	9.0	36.0	30.2	12.9
Cycle Q Clear(g_c), s	16.4	37.0	37.0	7.0	10.3	9.2	4.9	21.1	9.0	36.0	30.2	12.9
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	571	538	103	785	334	291	727	309	529	1228	522
V/C Ratio(X)	0.90	1.02	1.03	1.02	0.47	0.73	0.29	0.91	0.51	1.03	0.82	0.58
Avail Cap(c_a), veh/h	294	571	538	103	785	334	291	740	315	529	1481	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	41.3	41.3	56.3	41.1	12.4	43.7	47.0	30.5	41.8	36.7	14.7
Incr Delay (d2), s/veh	27.8	44.1	45.7	94.5	0.4	7.8	0.5	15.7	1.3	47.2	3.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.6	24.4	23.3	5.9	5.0	4.1	2.3	11.6	3.7	23.1	14.6	5.0
Lane Grp Delay (d), s/veh	77.4	85.4	87.0	150.8	41.6	20.3	44.2	62.7	31.8	89.0	40.0	15.7
Lane Grp LOS	E	F	F	F	D	C	D	E	C	F	D	B
Approach Vol, veh/h		1383			713			905			1863	
Approach Delay, s/veh		84.6			50.4			55.7			50.4	
Approach LOS		F			D			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.6	41.0		11.0	29.4		23.8	27.6		40.0	43.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	20.0	37.0		7.0	24.0		12.0	24.0		36.0	48.0	
Max Q Clear Time (g_c+I1), s	18.4	39.0		9.0	12.3		6.9	23.1		38.0	32.2	
Green Ext Time (p_c), s	0.1	0.0		0.0	7.8		1.1	0.5		0.0	7.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				61.1								
HCM 2010 LOS				E								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd






























Cumulative Plus Project PM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	55	3	299	117	127	38	764	897	124	618	127
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	224	235	200	435	235	200	77	2411	1025	166	2599	1104
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.65	0.65	0.09	0.70	0.70
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	67	60	3	325	127	138	41	830	975	135	672	138
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.3	2.8	0.2	8.9	6.2	8.1	2.2	9.7	55.1	7.3	6.4	2.8
Cycle Q Clear(g_c), s	3.3	2.8	0.2	8.9	6.2	8.1	2.2	9.7	55.1	7.3	6.4	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	235	200	435	235	200	77	2411	1025	166	2599	1104
V/C Ratio(X)	0.30	0.26	0.02	0.75	0.54	0.69	0.53	0.34	0.95	0.81	0.26	0.12
Avail Cap(c_a), veh/h	327	343	292	564	305	259	291	2518	1070	254	2599	1104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	38.0	36.9	40.7	39.5	40.4	45.2	7.5	15.3	42.9	5.2	4.6
Incr Delay (d2), s/veh	0.7	0.6	0.0	4.0	1.9	5.1	5.5	0.1	16.7	10.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	1.3	0.1	4.0	3.0	3.5	1.1	3.9	24.0	3.8	2.4	0.9
Lane Grp Delay (d), s/veh	39.0	38.6	36.9	44.7	41.4	45.5	50.8	7.6	32.1	53.8	5.2	4.7
Lane Grp LOS	D	D	D	D	D	D	D	A	C	D	A	A
Approach Vol, veh/h		130			590			1846			945	
Approach Delay, s/veh		38.8			44.2			21.5			12.1	
Approach LOS		D			D			C			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		16.3			16.3		8.3	67.2		13.2		72.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		16.0	66.0		14.0		64.0
Max Q Clear Time (g_c+I1), s		5.3			10.9		4.2	57.1		9.3		8.4
Green Ext Time (p_c), s		2.4			1.4		0.0	6.1		0.1		30.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.4								
HCM 2010 LOS				C								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 		 		 	 		 	
Volume (veh/h)	80	30	27	843	48	37	47	1473	1444	67	703	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	2	1	2	2	1	2	1
Cap, veh/h	537	564	479	1041	564	958	65	2249	1912	97	1957	832
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.04	0.61	0.61	0.53	0.53	0.53
Sat Flow, veh/h	1757	1845	1568	3408	1845	3136	1757	3689	3136	66	3689	1568
Grp Volume(v), veh/h	87	33	29	916	52	40	51	1601	1570	73	764	151
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	66	1845	1568
Q Serve(g_s), s	3.4	1.2	1.2	24.1	1.9	0.8	2.7	28.2	36.9	29.3	11.6	4.7
Cycle Q Clear(g_c), s	3.4	1.2	1.2	24.1	1.9	0.8	2.7	28.2	36.9	50.0	11.6	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Lane Grp Cap(c), veh/h	537	564	479	1041	564	958	65	2249	1912	97	1957	832
V/C Ratio(X)	0.16	0.06	0.06	0.88	0.09	0.04	0.79	0.71	0.82	0.75	0.39	0.18
Avail Cap(c_a), veh/h	537	564	479	1229	665	1131	75	2270	1929	97	1957	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	23.2	23.2	31.1	23.4	23.0	45.0	12.7	14.4	43.0	13.1	11.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	6.8	0.1	0.0	37.4	1.1	3.0	28.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	0.6	0.5	11.2	0.9	0.3	1.9	11.9	13.9	2.5	5.0	1.8
Lane Grp Delay (d), s/veh	24.1	23.2	23.2	37.8	23.5	23.0	82.4	13.7	17.3	71.1	13.2	11.6
Lane Grp LOS	C	C	C	D	C	C	F	B	B	E	B	B
Approach Vol, veh/h		149			1008			3222			988	
Approach Delay, s/veh		23.7			36.5			16.6			17.3	
Approach LOS		C			D			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2			6	
Phs Duration (G+Y+Rc), s		32.8			32.8		7.5	61.5			54.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	
Max Green Setting (Gmax), s		16.0			34.0		4.0	58.0			50.0	
Max Q Clear Time (g_c+I1), s		5.4			26.1		4.7	38.9			52.0	
Green Ext Time (p_c), s		3.7			2.7		0.0	18.4			0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.6								
HCM 2010 LOS				C								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	102	905	186	191	297	121	87	277	298	263	458	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	141	1089	463	239	1296	551	121	754	320	321	875	253
Arrive On Green	0.08	0.30	0.30	0.14	0.35	0.35	0.07	0.20	0.20	0.18	0.32	0.32
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2752	797
Grp Volume(v), veh/h	111	984	202	208	323	132	95	301	324	286	333	310
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1704
Q Serve(g_s), s	5.5	22.6	9.2	10.2	5.5	5.3	4.7	6.2	18.0	14.0	13.2	13.4
Cycle Q Clear(g_c), s	5.5	22.6	9.2	10.2	5.5	5.3	4.7	6.2	18.0	14.0	13.2	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	141	1089	463	239	1296	551	121	754	320	321	586	542
V/C Ratio(X)	0.79	0.90	0.44	0.87	0.25	0.24	0.78	0.40	1.01	0.89	0.57	0.57
Avail Cap(c_a), veh/h	239	1131	481	239	1296	551	199	754	320	339	586	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	29.8	25.1	37.3	20.3	20.2	40.3	30.4	35.0	35.1	25.0	25.0
Incr Delay (d2), s/veh	9.4	10.0	0.6	27.1	0.1	0.2	10.5	0.3	53.1	23.5	1.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.8	11.9	3.6	6.4	2.5	2.0	2.4	2.9	11.8	8.2	6.2	5.9
Lane Grp Delay (d), s/veh	49.2	39.9	25.8	64.4	20.4	20.5	50.8	30.7	88.1	58.6	26.3	26.5
Lane Grp LOS	D	D	C	E	C	C	D	C	F	E	C	C
Approach Vol, veh/h		1297			663			720			929	
Approach Delay, s/veh		38.5			34.2			59.2			36.3	
Approach LOS		D			C			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.1	30.0		16.0	34.9		10.1	22.0		20.1		32.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	27.0		12.0	27.0		10.0	18.0		17.0		25.0
Max Q Clear Time (g_c+I1), s	7.5	24.6		12.2	7.5		6.7	20.0		16.0		15.4
Green Ext Time (p_c), s	0.1	1.4		0.0	10.5		0.1	0.0		0.1		4.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				41.3								
HCM 2010 LOS				D								
<b>Notes</b>												



























HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	908	31	24	467	96	18	43	9	144	83	95
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	109	1218	42	33	1187	1009	35	74	16	185	107	122
Arrive On Green	0.06	0.69	0.69	0.02	0.64	0.64	0.02	0.05	0.05	0.11	0.14	0.14
Sat Flow, veh/h	1757	1773	61	1757	1845	1568	1757	1475	314	1757	786	900
Grp Volume(v), veh/h	86	0	1021	26	508	104	20	0	57	157	0	193
Grp Sat Flow(s),veh/h/ln	1757	0	1834	1757	1845	1568	1757	0	1789	1757	0	1686
Q Serve(g_s), s	5.6	0.0	45.2	1.7	15.6	2.9	1.3	0.0	3.6	10.1	0.0	12.9
Cycle Q Clear(g_c), s	5.6	0.0	45.2	1.7	15.6	2.9	1.3	0.0	3.6	10.1	0.0	12.9
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	109	0	1260	33	1187	1009	35	0	90	185	0	229
V/C Ratio(X)	0.79	0.00	0.81	0.80	0.43	0.10	0.58	0.00	0.64	0.85	0.00	0.84
Avail Cap(c_a), veh/h	199	0	1260	61	1187	1009	76	0	249	229	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.00	0.47	0.60	0.60	0.60	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.2	0.0	12.7	56.2	10.1	7.8	55.9	0.0	53.6	50.5	0.0	48.5
Incr Delay (d2), s/veh	5.9	0.0	2.8	22.5	0.7	0.1	14.4	0.0	7.3	21.0	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	0.0	18.8	1.0	6.6	1.0	0.7	0.0	1.9	5.7	0.0	6.2
Lane Grp Delay (d), s/veh	59.1	0.0	15.5	78.8	10.8	8.0	70.3	0.0	60.9	71.5	0.0	57.0
Lane Grp LOS	E		B	E	B	A	E		E	E		E
Approach Vol, veh/h		1107			638			77				350
Approach Delay, s/veh		18.9			13.1			63.3				63.5
Approach LOS		B			B			E				E
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	11.1	83.0		6.1	78.0		6.3	9.8		16.1		19.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	13.0	79.0		4.0	70.0		5.0	16.0		15.0		26.0
Max Q Clear Time (g_c+I1), s	7.6	47.2		3.7	17.6		3.3	5.6		12.1		14.9
Green Ext Time (p_c), s	0.1	10.2		0.0	4.0		0.0	0.2		0.1		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 							
Volume (veh/h)	32	721	25	650	284	90	44	26	252	78	65	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	51	1325	46	1054	2412	1025	338	355	302	338	301	47
Arrive On Green	0.03	0.37	0.37	0.31	0.65	0.65	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3546	122	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	35	408	403	707	309	98	48	28	274	85	0	82
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.9	17.1	17.1	17.4	3.1	2.2	2.2	1.2	16.5	4.0	0.0	3.7
Cycle Q Clear(g_c), s	1.9	17.1	17.1	17.4	3.1	2.2	2.2	1.2	16.5	4.0	0.0	3.7
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	51	689	681	1054	2412	1025	338	355	302	338	0	347
V/C Ratio(X)	0.68	0.59	0.59	0.67	0.13	0.10	0.14	0.08	0.91	0.25	0.00	0.24
Avail Cap(c_a), veh/h	109	689	681	1167	2412	1025	346	364	309	338	0	347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.3	24.3	24.3	29.0	6.3	6.2	32.3	31.9	38.1	33.0	0.0	32.9
Incr Delay (d2), s/veh	14.9	3.7	3.8	1.1	0.1	0.1	0.2	0.1	28.5	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	8.5	8.4	7.5	1.3	0.8	1.0	0.6	8.8	1.8	0.0	1.7
Lane Grp Delay (d), s/veh	61.3	28.0	28.0	30.1	6.4	6.3	32.5	32.0	66.5	33.4	0.0	33.3
Lane Grp LOS	E	C	C	C	A	A	C	C	E	C		C
Approach Vol, veh/h		846			1114			350				167
Approach Delay, s/veh		29.4			21.4			59.1				33.3
Approach LOS		C			C			E				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.8	40.0		33.8	67.0			22.6				22.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	36.0		33.0	63.0			19.0				16.0
Max Q Clear Time (g_c+I1), s	3.9	19.1		19.4	5.1			18.5				6.0
Green Ext Time (p_c), s	0.7	4.8		2.5	2.6			0.1				1.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.3								
HCM 2010 LOS				C								
<b>Notes</b>												



















HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd

Cumulative Plus Project PM With Bypass













3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	333	315	371	95	164	19	492	617	213	19	196	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	884	548	465	166	280	33	821	1133	392	78	869	369
Arrive On Green	0.26	0.30	0.30	0.05	0.09	0.09	0.24	0.43	0.43	0.04	0.24	0.24
Sat Flow, veh/h	3408	1845	1568	3408	3245	378	3408	2623	907	1757	3689	1568
Grp Volume(v), veh/h	362	342	403	103	100	99	535	472	431	21	213	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1778	1704	1845	1685	1757	1845	1568
Q Serve(g_s), s	7.9	14.4	21.9	2.7	4.7	4.8	12.7	17.6	17.6	1.0	4.2	17.1
Cycle Q Clear(g_c), s	7.9	14.4	21.9	2.7	4.7	4.8	12.7	17.6	17.6	1.0	4.2	17.1
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	884	548	465	166	159	153	821	797	728	78	869	369
V/C Ratio(X)	0.41	0.62	0.87	0.62	0.63	0.64	0.65	0.59	0.59	0.27	0.25	0.84
Avail Cap(c_a), veh/h	884	718	610	265	472	455	1099	944	862	313	1354	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	27.3	29.9	42.0	39.7	39.8	30.7	19.5	19.5	41.5	27.9	32.8
Incr Delay (d2), s/veh	0.3	1.2	10.0	3.8	4.1	4.5	0.9	0.7	0.8	1.8	0.1	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	6.7	9.7	1.2	2.4	2.4	5.5	8.0	7.3	0.5	1.9	7.3
Lane Grp Delay (d), s/veh	27.9	28.5	39.9	45.7	43.8	44.2	31.6	20.2	20.3	43.4	28.0	39.6
Lane Grp LOS	C	C	D	D	D	D	C	C	C	D	C	D
Approach Vol, veh/h		1107			302			1438			546	
Approach Delay, s/veh		32.5			44.6			24.5			35.2	
Approach LOS		C			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	27.3	30.7		8.4	11.7		25.7	42.9		8.0		25.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	19.0	35.0		7.0	23.0		29.0	46.0		16.0		33.0
Max Q Clear Time (g_c+I1), s	9.9	23.9		4.7	6.8		14.7	19.6		3.0		19.1
Green Ext Time (p_c), s	1.2	2.8		0.1	0.9		7.0	9.3		0.0		2.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.6								
HCM 2010 LOS				C								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	839	0	518	0	0	0	0	719	398	139	525	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1390	0	640				0	1467	623	301	1923	0
Arrive On Green	0.41	0.00	0.41				0.00	0.40	0.40	0.09	0.52	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	912	0	563				0	782	433	151	571	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	24.5	0.0	37.5				0.0	18.3	26.0	4.8	9.9	0.0
Cycle Q Clear(g_c), s	24.5	0.0	37.5				0.0	18.3	26.0	4.8	9.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1390	0	640				0	1467	623	301	1923	0
V/C Ratio(X)	0.66	0.00	0.88				0.00	0.53	0.69	0.50	0.30	0.00
Avail Cap(c_a), veh/h	1596	0	734				0	1467	623	301	1923	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	27.1	0.0	30.9				0.0	26.1	28.4	49.2	15.3	0.0
Incr Delay (d2), s/veh	0.8	0.0	10.9				0.0	1.4	6.3	1.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.4	0.0	16.5				0.0	8.8	11.3	2.2	4.5	0.0
Lane Grp Delay (d), s/veh	27.9	0.0	41.8				0.0	27.4	34.6	50.4	15.7	0.0
Lane Grp LOS	C		D					C	C	D	B	
Approach Vol, veh/h		1475						1215			722	
Approach Delay, s/veh		33.2						30.0			22.9	
Approach LOS		C						C			C	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		50.2						49.0		14.0	63.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		53.0						45.0		10.0	59.0	
Max Q Clear Time (g_c+I1), s		39.5						28.0		6.8	11.9	
Green Ext Time (p_c), s		6.6						6.7		1.4	5.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			29.9									
HCM 2010 LOS			C									
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↗	↔	↕	↗	↔	↕	↗	↔	↕	↗
Volume (veh/h)	566	1166	253	223	428	148	216	488	159	260	423	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	714	1579	671	306	1137	483	268	841	357	349	656	279
Arrive On Green	0.21	0.43	0.43	0.09	0.31	0.31	0.15	0.23	0.23	0.10	0.18	0.18
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	615	1267	275	242	465	161	235	530	173	283	460	141
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	18.3	31.5	12.8	7.3	10.5	8.3	13.8	13.6	10.1	8.6	12.3	8.6
Cycle Q Clear(g_c), s	18.3	31.5	12.8	7.3	10.5	8.3	13.8	13.6	10.1	8.6	12.3	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	714	1579	671	306	1137	483	268	841	357	349	656	279
V/C Ratio(X)	0.86	0.80	0.41	0.79	0.41	0.33	0.88	0.63	0.48	0.81	0.70	0.51
Avail Cap(c_a), veh/h	970	1750	744	356	1137	483	350	1050	446	420	770	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	26.3	20.9	47.0	28.9	28.1	43.7	36.7	35.3	46.3	40.7	39.1
Incr Delay (d2), s/veh	6.1	2.6	0.4	10.0	0.2	0.4	17.6	0.8	1.0	9.6	2.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.5	15.0	5.0	3.6	4.9	3.3	7.5	6.5	4.1	4.2	6.0	3.5
Lane Grp Delay (d), s/veh	46.2	28.8	21.3	57.0	29.1	28.5	61.2	37.5	36.3	55.9	43.0	40.5
Lane Grp LOS	D	C	C	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		2157			868			938			884	
Approach Delay, s/veh		32.8			36.8			43.2			46.7	
Approach LOS		C			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	26.1	49.1		13.5	36.5		20.1	28.0		14.8	22.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	30.0	50.0		11.0	31.0		21.0	30.0		13.0	22.0	
Max Q Clear Time (g_c+I1), s	20.3	33.5		9.3	12.5		15.8	15.6		10.6	14.3	
Green Ext Time (p_c), s	1.7	11.6		0.1	13.2		0.3	6.7		0.2	4.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.1								
HCM 2010 LOS				D								
<b>Notes</b>												
























						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	151	846	350	255	427	291
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	305	1189	808	686	509	454
Arrive On Green	0.17	0.64	0.88	0.88	0.29	0.29
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	164	920	380	277	464	316
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	10.3	42.8	5.3	4.1	30.9	21.7
Cycle Q Clear(g_c), s	10.3	42.8	5.3	4.1	30.9	21.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	305	1189	808	686	509	454
V/C Ratio(X)	0.54	0.77	0.47	0.40	0.91	0.70
Avail Cap(c_a), veh/h	305	1189	808	686	639	570
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.89	0.89	1.00	1.00
Uniform Delay (d), s/veh	45.6	15.3	4.6	4.5	41.5	38.3
Incr Delay (d2), s/veh	0.5	1.5	1.7	1.6	15.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.6	18.1	1.8	1.4	15.9	0.3
Lane Grp Delay (d), s/veh	46.2	16.8	6.3	6.1	56.7	40.9
Lane Grp LOS	D	B	A	A	E	D
Approach Vol, veh/h		1084	657		780	
Approach Delay, s/veh		21.2	6.2		50.3	
Approach LOS		C	A		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.0	82.0	57.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	21.0	78.0	53.0			
Max Q Clear Time (g_c+I1), s	12.3	44.8	7.3			
Green Ext Time (p_c), s	4.6	9.0	3.5			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			26.3			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	1153	147	55	524	12	105	23	68	199	104	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	54	1263	1073	68	1244	28	203	76	225	224	282	50
Arrive On Green	0.04	0.91	0.91	0.04	0.69	0.69	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1757	1845	1568	1757	1796	41	1239	412	1218	1278	1527	270
Grp Volume(v), veh/h	8	1253	160	60	0	583	114	0	99	216	0	133
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1837	1239	0	1630	1278	0	1797
Q Serve(g_s), s	0.6	81.8	1.4	4.4	0.0	18.6	11.6	0.0	6.9	17.1	0.0	8.5
Cycle Q Clear(g_c), s	0.6	81.8	1.4	4.4	0.0	18.6	20.1	0.0	6.9	24.0	0.0	8.5
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.75	1.00		0.15
Lane Grp Cap(c), veh/h	54	1263	1073	68	0	1272	203	0	301	224	0	332
V/C Ratio(X)	0.15	0.99	0.15	0.89	0.00	0.46	0.56	0.00	0.33	0.96	0.00	0.40
Avail Cap(c_a), veh/h	54	1263	1073	68	0	1272	203	0	301	224	0	332
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.47	0.91	0.00	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.7	5.5	1.9	62.2	0.0	9.0	55.5	0.0	46.0	58.3	0.0	46.7
Incr Delay (d2), s/veh	0.6	15.7	0.1	67.7	0.0	1.1	3.4	0.0	0.6	49.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	9.3	0.4	3.3	0.0	7.7	3.9	0.0	2.9	10.4	0.0	4.0
Lane Grp Delay (d), s/veh	61.3	21.2	2.0	130.0	0.0	10.1	59.0	0.0	46.6	108.3	0.0	47.5
Lane Grp LOS	E	C	A	F		B	E		D	F		D
Approach Vol, veh/h		1421			643			213				349
Approach Delay, s/veh		19.2			21.3			53.2				85.1
Approach LOS		B			C			D				F
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	8.0	93.0		9.0	94.0			28.0				28.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	89.0		5.0	90.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	2.6	83.8		6.4	20.6			22.1				26.0
Green Ext Time (p_c), s	1.2	4.1		0.0	4.3			0.5				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.2								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	1486	54	88	898	49	31	44	54	37	73	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	47	2086	76	123	2194	119	47	74	91	53	119	57
Arrive On Green	0.03	0.59	0.59	0.07	0.63	0.63	0.03	0.10	0.10	0.03	0.10	0.10
Sat Flow, veh/h	1757	3538	129	1757	3468	188	1757	754	927	1757	1178	567
Grp Volume(v), veh/h	33	840	834	96	519	510	34	0	107	40	0	117
Grp Sat Flow(s),veh/h/ln	1757	1845	1822	1757	1845	1811	1757	0	1681	1757	0	1745
Q Serve(g_s), s	1.4	25.8	26.1	4.1	10.8	10.8	1.4	0.0	4.6	1.7	0.0	4.9
Cycle Q Clear(g_c), s	1.4	25.8	26.1	4.1	10.8	10.8	1.4	0.0	4.6	1.7	0.0	4.9
Prop In Lane	1.00		0.07	1.00		0.10	1.00		0.55	1.00		0.32
Lane Grp Cap(c), veh/h	47	1088	1074	123	1167	1146	47	0	165	53	0	177
V/C Ratio(X)	0.71	0.77	0.78	0.78	0.44	0.44	0.72	0.00	0.65	0.76	0.00	0.66
Avail Cap(c_a), veh/h	140	1151	1137	163	1175	1154	93	0	357	93	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	11.6	11.7	34.5	7.1	7.1	36.4	0.0	32.7	36.3	0.0	32.6
Incr Delay (d2), s/veh	17.9	3.1	3.3	16.1	0.3	0.3	18.1	0.0	4.2	19.4	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	11.2	11.2	2.3	4.3	4.2	0.9	0.0	2.1	1.0	0.0	2.3
Lane Grp Delay (d), s/veh	54.3	14.8	15.0	50.6	7.3	7.3	54.4	0.0	36.9	55.6	0.0	36.8
Lane Grp LOS	D	B	B	D	A	A	D		D	E		D
Approach Vol, veh/h		1707			1125			141			157	
Approach Delay, s/veh		15.7			11.0			41.2			41.6	
Approach LOS		B			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7	4	
Phs Duration (G+Y+Rc), s	6.0	48.4		9.3	51.7		6.0	11.4		6.3	11.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	47.0		7.0	48.0		4.0	16.0		4.0	16.0	
Max Q Clear Time (g_c+I1), s	3.4	28.1		6.1	12.8		3.4	6.6		3.7	6.9	
Green Ext Time (p_c), s	0.0	16.3		0.0	27.4		0.0	0.8		0.0	0.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.4								
HCM 2010 LOS				B								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1450	28	94	665	17	55
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1489	1266	73	1627	90	80
Arrive On Green	0.81	0.81	0.08	1.00	0.05	0.05
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1576	30	102	723	18	60
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	97.0	0.5	5.0	0.0	1.2	4.5
Cycle Q Clear(g_c), s	97.0	0.5	5.0	0.0	1.2	4.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1489	1266	73	1627	90	80
V/C Ratio(X)	1.06	0.02	1.40	0.44	0.20	0.75
Avail Cap(c_a), veh/h	1489	1266	73	1627	234	209
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.85	0.85	1.00	1.00
Uniform Delay (d), s/veh	11.6	2.3	55.1	0.0	54.6	56.2
Incr Delay (d2), s/veh	28.1	0.0	234.1	0.8	1.1	12.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	43.5	0.1	6.9	0.3	0.6	2.1
Lane Grp Delay (d), s/veh	39.6	2.3	289.2	0.8	55.7	69.1
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1606			825	78	
Approach Delay, s/veh	38.9			36.4	66.0	
Approach LOS	D			D	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	101.0		9.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	97.0		5.0	106.0		
Max Q Clear Time (g_c+I1), s	99.0		7.0	2.0		
Green Ext Time (p_c), s	0.0		0.0	5.7		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			39.0			
HCM 2010 LOS			D			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr













Cumulative Plus Project PM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	131	1384	28	33	881	12	13	27	22	8	18	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	182	2239	45	51	1984	27	24	93	77	16	30	124
Arrive On Green	0.10	0.62	0.62	0.03	0.55	0.55	0.01	0.10	0.10	0.01	0.10	0.10
Sat Flow, veh/h	1757	3605	72	1757	3631	49	1757	935	774	1757	314	1301
Grp Volume(v), veh/h	142	769	765	36	487	484	14	0	53	9	0	103
Grp Sat Flow(s),veh/h/ln	1757	1845	1832	1757	1845	1836	1757	0	1708	1757	0	1615
Q Serve(g_s), s	5.2	18.0	18.1	1.4	10.8	10.8	0.5	0.0	1.9	0.3	0.0	4.1
Cycle Q Clear(g_c), s	5.2	18.0	18.1	1.4	10.8	10.8	0.5	0.0	1.9	0.3	0.0	4.1
Prop In Lane	1.00		0.04	1.00		0.03	1.00		0.45	1.00		0.81
Lane Grp Cap(c), veh/h	182	1146	1138	51	1008	1003	24	0	171	16	0	154
V/C Ratio(X)	0.78	0.67	0.67	0.70	0.48	0.48	0.58	0.00	0.31	0.56	0.00	0.67
Avail Cap(c_a), veh/h	396	1331	1322	132	1054	1049	106	0	437	106	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	8.2	8.2	32.0	9.3	9.3	32.6	0.0	27.8	32.8	0.0	29.1
Incr Delay (d2), s/veh	7.0	1.1	1.1	15.9	0.4	0.4	20.3	0.0	1.0	26.6	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.6	7.2	7.1	0.8	4.4	4.4	0.4	0.0	0.8	0.3	0.0	1.8
Lane Grp Delay (d), s/veh	36.1	9.3	9.3	47.9	9.7	9.7	52.9	0.0	28.8	59.4	0.0	34.0
Lane Grp LOS	D	A	A	D	A	A	D		C	E		C
Approach Vol, veh/h		1676			1007			67				112
Approach Delay, s/veh		11.6			11.0			33.8				36.0
Approach LOS		B			B			C				D
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	10.9	45.3		5.9	40.3		4.9	10.7		4.6		10.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	15.0	48.0		5.0	38.0		4.0	17.0		4.0		17.0
Max Q Clear Time (g_c+I1), s	7.2	20.1		3.4	12.8		2.5	3.9		2.3		6.1
Green Ext Time (p_c), s	0.2	21.2		0.0	19.6		0.0	0.6		0.0		0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.8								
HCM 2010 LOS				B								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1501	66	80	780	36	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1515	1288	59	1639	78	70
Arrive On Green	1.00	1.00	0.03	0.89	0.04	0.04
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1632	72	87	848	39	47
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	98.0	0.0	4.0	11.3	2.6	3.5
Cycle Q Clear(g_c), s	98.0	0.0	4.0	11.3	2.6	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1515	1288	59	1639	78	70
V/C Ratio(X)	1.08	0.06	1.48	0.52	0.50	0.67
Avail Cap(c_a), veh/h	1515	1288	59	1639	236	210
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	57.7	1.4	55.7	56.1
Incr Delay (d2), s/veh	36.2	0.0	285.8	1.2	4.8	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.2	0.0	6.5	2.7	1.3	1.6
Lane Grp Delay (d), s/veh	36.2	0.0	343.5	2.5	60.5	66.8
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1704			935	86	
Approach Delay, s/veh	34.7			34.3	63.9	
Approach LOS	C			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	102.0		8.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	98.0		4.0	106.0		
Max Q Clear Time (g_c+I1), s	100.0		6.0	13.3		
Green Ext Time (p_c), s	0.0		0.0	7.4		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			35.4			
HCM 2010 LOS			D			
<b>Notes</b>						

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	381	140	268	223	71	25	451	573	135	27	856	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	726	393	334	726	278	98	584	2770	642	40	2153	466
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.29	1.00	1.00	0.02	0.49	0.49
Sat Flow, veh/h	3408	1845	1568	3408	1306	458	3408	4349	1007	1757	4411	954
Grp Volume(v), veh/h	414	152	291	242	0	104	490	527	243	29	777	355
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1764	1704	1845	1667	1757	1845	1676
Q Serve(g_s), s	10.2	6.7	16.9	5.7	0.0	4.6	12.7	0.0	0.0	1.5	12.9	12.9
Cycle Q Clear(g_c), s	10.2	6.7	16.9	5.7	0.0	4.6	12.7	0.0	0.0	1.5	12.9	12.9
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.60	1.00		0.57
Lane Grp Cap(c), veh/h	726	393	334	726	0	376	584	2350	1062	40	1801	818
V/C Ratio(X)	0.57	0.39	0.87	0.33	0.00	0.28	0.84	0.22	0.23	0.73	0.43	0.43
Avail Cap(c_a), veh/h	796	431	366	726	0	376	941	2350	1062	112	1801	818
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	31.8	35.8	31.4	0.0	31.0	32.4	0.0	0.0	45.7	15.6	15.7
Incr Delay (d2), s/veh	0.8	0.6	18.7	0.3	0.0	0.4	3.6	0.2	0.5	22.5	0.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	3.2	8.4	2.5	0.0	2.1	5.3	0.1	0.1	0.9	5.9	5.6
Lane Grp Delay (d), s/veh	34.0	32.4	54.5	31.7	0.0	31.4	36.0	0.2	0.5	68.2	16.4	17.3
Lane Grp LOS	C	C	D	C		C	D	A	A	E	B	B
Approach Vol, veh/h		857			346			1260			1161	
Approach Delay, s/veh		40.7			31.6			14.2			18.0	
Approach LOS		D			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		24.1			24.1		20.2	64.0		6.1		50.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		22.0			16.0		26.0	60.0		6.0		40.0
Max Q Clear Time (g_c+I1), s		18.9			7.7		14.7	2.0		3.5		14.9
Green Ext Time (p_c), s		1.2			3.4		1.4	22.4		0.0		15.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.3								
HCM 2010 LOS				C								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	382	517	337	675	1030	312
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	1299	597	615	3045	1856	526
Arrive On Green	0.38	0.38	0.36	1.00	0.34	0.34
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	415	562	366	734	1120	339
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	10.0	40.2	10.2	0.0	19.6	21.3
Cycle Q Clear(g_c), s	10.0	40.2	10.2	0.0	19.6	21.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1299	597	615	3045	1856	526
V/C Ratio(X)	0.32	0.94	0.59	0.24	0.60	0.64
Avail Cap(c_a), veh/h	1406	647	615	3045	1856	526
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.93	0.79	0.79
Uniform Delay (d), s/veh	25.4	34.7	33.7	0.0	32.2	32.8
Incr Delay (d2), s/veh	0.1	21.2	1.4	0.2	1.2	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.5	4.0	0.0	9.4	9.2
Lane Grp Delay (d), s/veh	25.5	55.9	35.1	0.2	33.4	37.6
Lane Grp LOS	C	E	D	A	C	D
Approach Vol, veh/h	977			1100	1459	
Approach Delay, s/veh	43.0			11.8	34.3	
Approach LOS	D			B	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			25.0	68.0	43.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			21.0	64.0	39.0	
Max Q Clear Time (g_c+I1), s			12.2	2.0	23.3	
Green Ext Time (p_c), s			4.2	8.1	8.3	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			29.7			
HCM 2010 LOS			C			
<b>Notes</b>						


























HCM 2010 Signalized Intersection Summary  
20: Somersville Rd & EB SR-4 Ramps

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 		 					 		 	 	
Volume (veh/h)	275	232	457	0	0	0	0	867	732	480	1160	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	568	307	523				0	3130	887	572	4243	0
Arrive On Green	0.17	0.17	0.17				0.00	1.00	1.00	0.34	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	299	252	497				0	942	796	522	1261	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	9.6	15.8	18.8				0.0	0.0	0.0	17.6	0.0	0.0
Cycle Q Clear(g_c), s	9.6	15.8	18.8				0.0	0.0	0.0	17.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	568	307	523				0	3130	887	572	4243	0
V/C Ratio(X)	0.53	0.82	0.95				0.00	0.30	0.90	0.91	0.30	0.00
Avail Cap(c_a), veh/h	568	307	523				0	3130	887	625	4243	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.72	0.72	0.79	0.79	0.00
Uniform Delay (d), s/veh	45.7	48.3	49.5				0.0	0.0	0.0	39.0	0.0	0.0
Incr Delay (d2), s/veh	0.9	16.0	27.5				0.0	0.2	10.5	14.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	8.9	9.6				0.0	0.1	2.6	7.9	0.1	0.0
Lane Grp Delay (d), s/veh	46.6	64.2	77.0				0.0	0.2	10.5	53.1	0.1	0.0
Lane Grp LOS	D	E	E					A	B	D	A	
Approach Vol, veh/h		1048						1738			1783	
Approach Delay, s/veh		65.2						4.9			15.7	
Approach LOS		E						A			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		24.0						71.9		24.1	96.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		20.0						66.0		22.0	92.0	
Max Q Clear Time (g_c+I1), s		20.8						2.0		19.6	2.0	
Green Ext Time (p_c), s		0.0						42.5		0.5	52.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			22.9									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
21: Somersville Rd & Delta Fair Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	438	371	41	55	143	410	59	762	29	429	707	245
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1081	517	58	557	585	497	82	1737	67	693	1788	760
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.02	0.11	0.11	0.41	0.97	0.97
Sat Flow, veh/h	3408	1630	182	1757	1845	1568	1757	5294	204	3408	3689	1568
Grp Volume(v), veh/h	476	0	448	60	155	446	64	576	284	466	768	266
Grp Sat Flow(s),veh/h/ln	1704	0	1813	1757	1845	1568	1757	1845	1809	1704	1845	1568
Q Serve(g_s), s	8.8	0.0	17.8	1.9	5.0	21.5	2.9	11.6	11.7	8.9	0.9	0.6
Cycle Q Clear(g_c), s	8.8	0.0	17.8	1.9	5.0	21.5	2.9	11.6	11.7	8.9	0.9	0.6
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	1081	0	575	557	585	497	82	1211	593	693	1788	760
V/C Ratio(X)	0.44	0.00	0.78	0.11	0.26	0.90	0.78	0.48	0.48	0.67	0.43	0.35
Avail Cap(c_a), veh/h	1505	0	801	557	585	497	155	1211	593	860	1816	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.89	0.89	0.89
Uniform Delay (d), s/veh	21.5	0.0	24.5	19.1	20.2	25.8	38.6	28.9	28.9	21.4	0.6	0.6
Incr Delay (d2), s/veh	0.3	0.0	3.3	0.1	0.2	18.0	14.1	1.3	2.6	1.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	0.0	8.4	0.8	2.3	10.6	1.6	6.1	6.2	3.2	0.3	0.2
Lane Grp Delay (d), s/veh	21.8	0.0	27.8	19.2	20.4	43.8	52.7	30.2	31.6	22.7	0.8	0.9
Lane Grp LOS	C		C	B	C	D	D	C	C	C	A	A
Approach Vol, veh/h		924			661			924			1500	
Approach Delay, s/veh		24.7			36.1			32.2			7.6	
Approach LOS		C			D			C			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		29.1			29.1		7.7	30.0		20.1		42.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0			23.0		7.0	26.0		20.0		39.0
Max Q Clear Time (g_c+I1), s		19.8			23.5		4.9	13.7		10.9		2.9
Green Ext Time (p_c), s		5.4			0.0		0.0	4.5		5.3		10.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.9								
HCM 2010 LOS				C								
<b>Notes</b>												



























HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Cumulative Plus Project PM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	407	504	697	54	247	129	260	409	36	264	603	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	472	1449	616	76	309	262	311	813	71	317	908	386
Arrive On Green	0.27	0.39	0.00	0.04	0.17	0.00	0.18	0.24	0.24	0.18	0.25	0.25
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3346	292	1757	3689	1568
Grp Volume(v), veh/h	442	548	0	59	268	0	283	245	239	287	655	443
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1793	1757	1845	1568
Q Serve(g_s), s	28.0	12.0	0.0	3.8	16.1	0.0	18.0	13.2	13.3	18.2	18.5	28.0
Cycle Q Clear(g_c), s	28.0	12.0	0.0	3.8	16.1	0.0	18.0	13.2	13.3	18.2	18.5	28.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	472	1449	616	76	309	262	311	448	436	317	908	386
V/C Ratio(X)	0.94	0.38	0.00	0.78	0.87	0.00	0.91	0.55	0.55	0.91	0.72	1.15
Avail Cap(c_a), veh/h	525	1460	620	139	324	276	340	448	436	371	908	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	24.6	0.0	53.9	46.1	0.0	45.9	37.6	37.6	45.7	39.3	42.9
Incr Delay (d2), s/veh	23.4	0.2	0.0	15.6	20.7	0.0	26.1	1.4	1.5	22.9	2.8	92.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.3	5.4	0.0	2.0	9.4	0.0	10.4	6.4	6.3	10.2	9.1	21.0
Lane Grp Delay (d), s/veh	64.0	24.8	0.0	69.5	66.8	0.0	72.0	38.9	39.1	68.5	42.1	135.3
Lane Grp LOS	E	C		E	E		E	D	D	E	D	F
Approach Vol, veh/h		990			327			767			1385	
Approach Delay, s/veh		42.3			67.3			51.2			77.4	
Approach LOS		D			E			D			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	34.5	48.7		8.9	23.0		24.2	31.6		24.5	32.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	34.0	45.0		9.0	20.0		22.0	26.0		24.0	28.0	
Max Q Clear Time (g_c+I1), s	30.0	14.0		5.8	18.1		20.0	15.3		20.2	30.0	
Green Ext Time (p_c), s	0.6	5.5		0.0	0.9		0.2	6.4		0.3	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				60.6								
HCM 2010 LOS				E								
<b>Notes</b>												


























						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	94	8	12	614	1416	161
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	138	124	294	2942	2942	1250
Arrive On Green	0.08	0.08	0.80	0.80	0.80	0.80
Sat Flow, veh/h	1757	1568	281	3689	3689	1568
Grp Volume(v), veh/h	102	9	13	667	1539	175
Grp Sat Flow(s),veh/h/ln	1757	1568	281	1845	1845	1568
Q Serve(g_s), s	3.7	0.3	1.1	2.9	9.4	1.6
Cycle Q Clear(g_c), s	3.7	0.3	10.5	2.9	9.4	1.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	138	124	294	2942	2942	1250
V/C Ratio(X)	0.74	0.07	0.04	0.23	0.52	0.14
Avail Cap(c_a), veh/h	598	533	461	5135	5135	2182
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	27.6	4.1	1.6	2.3	1.5
Incr Delay (d2), s/veh	7.4	0.2	0.1	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.1	0.1	0.8	2.6	0.4
Lane Grp Delay (d), s/veh	36.5	27.8	4.2	1.7	2.4	1.5
Lane Grp LOS	D	C	A	A	A	A
Approach Vol, veh/h	111			680	1714	
Approach Delay, s/veh	35.8			1.7	2.3	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				55.6	55.6	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				90.0	90.0	
Max Q Clear Time (g_c+I1), s				12.5	11.4	
Green Ext Time (p_c), s				39.1	39.3	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			3.6			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 					 		 
Volume (veh/h)	100	1239	0	2	700	392	0	7	4	814	5	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	139	1786	0	4	1503	639	2	50	25	1011	707	1202
Arrive On Green	0.08	0.48	0.00	0.00	0.41	0.00	0.00	0.04	0.04	0.30	0.38	0.38
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	1161	581	3408	1845	3136
Grp Volume(v), veh/h	109	1347	0	2	761	0	0	0	12	885	5	174
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1742	1704	1845	1568
Q Serve(g_s), s	5.6	27.3	0.0	0.1	14.2	0.0	0.0	0.0	0.6	22.7	0.2	3.3
Cycle Q Clear(g_c), s	5.6	27.3	0.0	0.1	14.2	0.0	0.0	0.0	0.6	22.7	0.2	3.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	139	1786	0	4	1503	639	2	0	75	1011	707	1202
V/C Ratio(X)	0.79	0.75	0.00	0.53	0.51	0.00	0.00	0.00	0.16	0.88	0.01	0.14
Avail Cap(c_a), veh/h	286	2004	0	76	1563	664	76	0	303	1259	922	1567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	19.3	0.0	45.9	20.4	0.0	0.0	0.0	42.4	30.8	17.6	18.5
Incr Delay (d2), s/veh	9.4	1.5	0.0	81.8	0.3	0.0	0.0	0.0	1.0	6.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	12.3	0.0	0.1	6.4	0.0	0.0	0.0	0.3	10.4	0.1	1.2
Lane Grp Delay (d), s/veh	51.0	20.8	0.0	127.7	20.6	0.0	0.0	0.0	43.4	36.8	17.6	18.6
Lane Grp LOS	D	C		F	C				D	D	B	B
Approach Vol, veh/h		1456			763			12				1064
Approach Delay, s/veh		23.0			20.9			43.4				33.7
Approach LOS		C			C			D				C
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.3	48.6		4.2	41.5		0.0	8.0		31.3		39.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	15.0	50.0		4.0	39.0		4.0	16.0		34.0		46.0
Max Q Clear Time (g_c+I1), s	7.6	29.3		2.1	16.2		0.0	2.6		24.7		5.3
Green Ext Time (p_c), s	0.1	15.3		0.0	16.4		0.0	0.6		2.6		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				26.1								
HCM 2010 LOS				C								
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

Cumulative Plus Project PM With Bypass  
3/16/2014
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	74	445	163	100	251	80	90	275	27	277	453	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	425	1023	372	292	1068	333	361	823	80	497	916	779
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1008	2585	939	763	2699	841	843	1656	161	1037	1845	1568
Grp Volume(v), veh/h	80	345	316	109	185	175	98	0	328	301	492	62
Grp Sat Flow(s),veh/h/ln	1008	1845	1679	763	1845	1696	843	0	1816	1037	1845	1568
Q Serve(g_s), s	4.3	10.3	10.4	9.2	5.0	5.2	6.7	0.0	8.3	18.7	13.6	1.5
Cycle Q Clear(g_c), s	9.5	10.3	10.4	19.7	5.0	5.2	20.3	0.0	8.3	26.9	13.6	1.5
Prop In Lane	1.00		0.56	1.00		0.50	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	425	730	664	292	730	671	361	0	902	497	916	779
V/C Ratio(X)	0.19	0.47	0.48	0.37	0.25	0.26	0.27	0.00	0.36	0.61	0.54	0.08
Avail Cap(c_a), veh/h	663	1165	1060	472	1165	1071	678	0	1586	888	1611	1369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	16.7	16.7	24.1	15.1	15.2	19.8	0.0	11.5	19.8	12.8	9.8
Incr Delay (d2), s/veh	0.2	0.5	0.5	0.8	0.2	0.2	0.4	0.0	0.2	1.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	4.5	4.1	1.8	2.2	2.1	1.4	0.0	3.4	4.7	5.9	0.6
Lane Grp Delay (d), s/veh	18.6	17.2	17.3	24.9	15.3	15.4	20.2	0.0	11.7	21.0	13.3	9.9
Lane Grp LOS	B	B	B	C	B	B	C		B	C	B	A
Approach Vol, veh/h		741			469			426			855	
Approach Delay, s/veh		17.4			17.5			13.7			15.8	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		33.4			33.4			41.0			41.0	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		47.0			47.0			65.0			65.0	
Max Q Clear Time (g_c+I1), s		12.4			21.7			22.3			28.9	
Green Ext Time (p_c), s		8.4			7.8			8.2			8.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.2								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Cumulative Plus Project PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	117	1635	8	27	658	124	4	19	8	246	21	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	161	2152	11	42	1567	296	71	283	110	397	52	334
Arrive On Green	0.09	0.59	0.59	0.02	0.52	0.52	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1757	3667	19	1757	3019	570	90	1172	454	1361	217	1384
Grp Volume(v), veh/h	127	893	893	29	437	413	34	0	0	267	0	170
Grp Sat Flow(s),veh/h/ln	1757	1845	1841	1757	1845	1744	1716	0	0	1361	0	1600
Q Serve(g_s), s	5.7	31.4	31.5	1.3	12.1	12.1	0.0	0.0	0.0	15.3	0.0	7.3
Cycle Q Clear(g_c), s	5.7	31.4	31.5	1.3	12.1	12.1	1.2	0.0	0.0	16.5	0.0	7.3
Prop In Lane	1.00		0.01	1.00		0.33	0.12		0.26	1.00		0.86
Lane Grp Cap(c), veh/h	161	1082	1080	42	957	905	464	0	0	397	0	386
V/C Ratio(X)	0.79	0.83	0.83	0.70	0.46	0.46	0.07	0.00	0.00	0.67	0.00	0.44
Avail Cap(c_a), veh/h	282	1140	1138	87	957	905	556	0	0	472	0	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	13.4	13.4	39.2	12.3	12.3	23.7	0.0	0.0	30.1	0.0	26.1
Incr Delay (d2), s/veh	8.4	4.9	4.9	18.9	0.3	0.4	0.1	0.0	0.0	2.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	14.4	14.4	0.8	5.1	4.8	0.5	0.0	0.0	5.4	0.0	3.0
Lane Grp Delay (d), s/veh	44.4	18.3	18.4	58.1	12.6	12.6	23.8	0.0	0.0	33.0	0.0	26.8
Lane Grp LOS	D	B	B	E	B	B	C			C		C
Approach Vol, veh/h		1913			879			34			437	
Approach Delay, s/veh		20.1			14.1			23.8			30.6	
Approach LOS		C			B			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8			2			6	
Phs Duration (G+Y+Rc), s	11.4	51.5		5.9	46.0			23.5			23.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	13.0	50.0		4.0	41.0			24.0			24.0	
Max Q Clear Time (g_c+I1), s	7.7	33.5		3.3	14.1			3.2			18.5	
Green Ext Time (p_c), s	0.1	14.0		0.0	22.0			2.0			1.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.9								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	165	135	1162	13	66	77	802	842	10	80	1274	267
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	298	313	1433	51	260	266	978	2358	1002	112	1846	386
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.29	0.64	0.64	0.06	0.42	0.42
Sat Flow, veh/h	1757	1845	3136	298	1532	1568	3408	3689	1568	1757	4442	929
Grp Volume(v), veh/h	179	147	1263	86	0	84	872	915	11	87	1150	525
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1830	0	1568	1704	1845	1568	1757	1845	1681
Q Serve(g_s), s	8.9	6.8	16.0	3.9	0.0	4.4	23.1	11.2	0.2	4.6	24.9	25.0
Cycle Q Clear(g_c), s	8.9	6.8	16.0	3.9	0.0	4.4	23.1	11.2	0.2	4.6	24.9	25.0
Prop In Lane	1.00		1.00	0.16		1.00	1.00		1.00	1.00		0.55
Lane Grp Cap(c), veh/h	298	313	1433	311	0	266	978	2358	1002	112	1534	699
V/C Ratio(X)	0.60	0.47	0.88	0.28	0.00	0.32	0.89	0.39	0.01	0.78	0.75	0.75
Avail Cap(c_a), veh/h	298	313	1433	311	0	266	1122	2358	1002	224	1606	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	35.3	23.3	34.0	0.0	34.3	32.2	8.2	6.2	43.4	23.4	23.4
Incr Delay (d2), s/veh	3.3	1.1	6.8	0.5	0.0	0.7	8.4	0.1	0.0	11.1	1.9	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.3	14.2	1.8	0.0	1.8	11.0	4.5	0.1	2.4	11.7	11.2
Lane Grp Delay (d), s/veh	39.4	36.3	30.0	34.5	0.0	35.0	40.6	8.3	6.2	54.5	25.3	27.6
Lane Grp LOS	D	D	C	C		C	D	A	A	D	C	C
Approach Vol, veh/h		1589			170			1798			1762	
Approach Delay, s/veh		31.7			34.7			23.9			27.4	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		20.0			20.0		31.0	64.2		10.0		43.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		31.0	60.0		12.0		41.0
Max Q Clear Time (g_c+I1), s		18.0			6.4		25.1	13.2		6.6		27.0
Green Ext Time (p_c), s		0.0			5.7		1.9	32.6		0.1		12.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.7								
HCM 2010 LOS				C								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr























Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	0	47	2	0	1	55	2166	3	0	751	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	102	0	91	289	107	91	76	3085	1311	2	4032	54
Arrive On Green	0.06	0.00	0.06	0.06	0.00	0.06	0.04	0.84	0.84	0.00	0.74	0.74
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5448	73
Grp Volume(v), veh/h	61	0	51	2	0	1	60	2354	3	0	552	275
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1832
Q Serve(g_s), s	2.6	0.0	2.4	0.0	0.0	0.0	2.6	21.9	0.0	0.0	3.5	3.5
Cycle Q Clear(g_c), s	2.6	0.0	2.4	0.0	0.0	0.0	2.6	21.9	0.0	0.0	3.5	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	102	0	91	289	107	91	76	3085	1311	2	2730	1356
V/C Ratio(X)	0.60	0.00	0.56	0.01	0.00	0.01	0.78	0.76	0.00	0.00	0.20	0.20
Avail Cap(c_a), veh/h	371	0	331	1045	389	331	208	3307	1405	93	3064	1521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	0.0	34.8	33.7	0.0	33.7	35.9	2.8	1.0	0.0	3.0	3.0
Incr Delay (d2), s/veh	5.4	0.0	5.2	0.0	0.0	0.0	15.9	1.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	1.1	0.0	0.0	0.0	1.5	5.7	0.0	0.0	1.2	1.2
Lane Grp Delay (d), s/veh	40.3	0.0	40.0	33.7	0.0	33.7	51.9	3.8	1.0	0.0	3.1	3.1
Lane Grp LOS	D		D	C		C	D	A	A		A	A
Approach Vol, veh/h		112			3			2417			827	
Approach Delay, s/veh		40.2			33.7			5.0			3.1	
Approach LOS		D			C			A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		8.4			8.4		7.3	67.4		0.0		60.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		9.0	68.0		4.0		63.0
Max Q Clear Time (g_c+I1), s		4.6			2.0		4.6	23.9		0.0		5.5
Green Ext Time (p_c), s		0.3			0.3		0.0	39.6		0.0		50.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				5.7								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd























Cumulative Plus Project PM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	319	327	177	222	143	46	160	1496	397	63	539	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	487	425	226	274	243	103	206	1946	509	87	1895	233
Arrive On Green	0.28	0.19	0.19	0.16	0.07	0.07	0.12	0.46	0.46	0.05	0.39	0.39
Sat Flow, veh/h	1757	2271	1206	1757	3689	1568	1757	4232	1107	1757	4835	594
Grp Volume(v), veh/h	347	287	260	241	155	50	174	1414	644	68	445	214
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1649	1757	1845	1740
Q Serve(g_s), s	19.3	16.2	16.7	14.5	4.4	2.9	10.5	36.4	37.4	4.1	9.0	9.2
Cycle Q Clear(g_c), s	19.3	16.2	16.7	14.5	4.4	2.9	10.5	36.4	37.4	4.1	9.0	9.2
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.67	1.00		0.34
Lane Grp Cap(c), veh/h	487	345	305	274	243	103	206	1697	758	87	1446	682
V/C Ratio(X)	0.71	0.83	0.85	0.88	0.64	0.49	0.84	0.83	0.85	0.78	0.31	0.31
Avail Cap(c_a), veh/h	487	409	362	341	545	232	325	1772	792	114	1446	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	42.4	42.6	44.7	49.3	36.8	46.8	25.6	25.9	50.9	22.8	22.8
Incr Delay (d2), s/veh	4.9	11.9	15.3	19.2	2.8	3.5	11.1	3.5	8.4	22.4	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.2	8.9	8.3	8.0	2.2	1.4	5.4	17.3	17.0	2.4	4.2	4.0
Lane Grp Delay (d), s/veh	40.1	54.3	57.9	64.0	52.1	40.3	58.0	29.1	34.3	73.3	22.9	23.1
Lane Grp LOS	D	D	E	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		894			446			2232			727	
Approach Delay, s/veh		49.8			57.2			32.8			27.7	
Approach LOS		D			E			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	34.0	24.2		20.9	11.1		16.7	53.8		9.4	46.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	29.0	24.0		21.0	16.0		20.0	52.0		7.0	39.0	
Max Q Clear Time (g_c+I1), s	21.3	18.7		16.5	6.4		12.5	39.4		6.1	11.2	
Green Ext Time (p_c), s	1.3	1.6		0.4	0.7		0.3	10.3		0.0	22.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.0								
HCM 2010 LOS				D								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd















Cumulative Plus Project PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	662	946	30	251	443	161	145	1670	594	279	469	235
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	779	1469	0	328	737	0	215	2214	627	348	2429	688
Arrive On Green	0.23	0.27	0.00	0.10	0.13	0.00	0.06	0.40	0.40	0.10	0.44	0.44
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	720	1028	0	273	482	0	158	1815	646	303	510	255
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	24.3	19.7	0.0	9.2	9.7	0.0	5.4	34.4	47.0	10.3	6.7	12.8
Cycle Q Clear(g_c), s	24.3	19.7	0.0	9.2	9.7	0.0	5.4	34.4	47.0	10.3	6.7	12.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	779	1469	0	328	737	0	215	2214	627	348	2429	688
V/C Ratio(X)	0.92	0.70	0.00	0.83	0.65	0.00	0.73	0.82	1.03	0.87	0.21	0.37
Avail Cap(c_a), veh/h	812	1554	0	348	801	0	290	2214	627	348	2429	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	38.9	0.0	52.2	48.4	0.0	54.1	31.5	35.3	52.0	20.4	22.1
Incr Delay (d2), s/veh	15.8	1.3	0.0	14.9	1.7	0.0	6.3	2.6	43.9	20.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.3	9.5	0.0	4.8	4.8	0.0	2.6	16.5	26.0	5.5	3.0	5.0
Lane Grp Delay (d), s/veh	60.1	40.3	0.0	67.1	50.1	0.0	60.3	34.1	79.1	72.5	20.4	22.4
Lane Grp LOS	E	D		E	D		E	C	F	E	C	C
Approach Vol, veh/h		1748			755			2619			1068	
Approach Delay, s/veh		48.5			56.2			46.7			35.7	
Approach LOS		D			E			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	30.9	35.2		15.3	19.6		11.4	51.0		16.0	55.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	33.0		12.0	17.0		10.0	47.0		12.0	49.0	
Max Q Clear Time (g_c+I1), s	26.3	21.7		11.2	11.7		7.4	49.0		12.3	14.8	
Green Ext Time (p_c), s	0.6	7.3		0.1	3.9		0.1	0.0		0.0	28.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				46.5								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Cumulative Plus Project PM With Bypass  
3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	1413	14	32	756	38	20	0	31	40	0	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	41	2583	25	51	2488	124	196	0	123	189	0	123
Arrive On Green	0.02	0.71	0.71	0.03	0.71	0.71	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1757	3647	36	1757	3485	174	1364	0	1568	1356	0	1568
Grp Volume(v), veh/h	26	776	775	35	435	428	22	0	34	43	0	27
Grp Sat Flow(s),veh/h/ln	1757	1845	1838	1757	1845	1814	1364	0	1568	1356	0	1568
Q Serve(g_s), s	1.0	13.8	13.8	1.3	5.7	5.7	1.0	0.0	1.3	2.0	0.0	1.0
Cycle Q Clear(g_c), s	1.0	13.8	13.8	1.3	5.7	5.7	2.0	0.0	1.3	3.3	0.0	1.0
Prop In Lane	1.00		0.02	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	1306	1302	51	1317	1295	196	0	123	189	0	123
V/C Ratio(X)	0.64	0.59	0.60	0.69	0.33	0.33	0.11	0.00	0.28	0.23	0.00	0.22
Avail Cap(c_a), veh/h	216	2328	2320	216	2328	2289	467	0	434	459	0	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.5	4.8	4.8	31.3	3.5	3.5	29.0	0.0	28.2	29.8	0.0	28.1
Incr Delay (d2), s/veh	15.7	0.4	0.4	15.5	0.1	0.1	0.3	0.0	1.2	0.6	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	3.8	3.8	0.8	1.6	1.6	0.3	0.0	0.6	0.7	0.0	0.4
Lane Grp Delay (d), s/veh	47.2	5.2	5.2	46.7	3.6	3.6	29.3	0.0	29.4	30.4	0.0	29.0
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		1577			898			56			70	
Approach Delay, s/veh		5.9			5.3			29.4			29.8	
Approach LOS		A			A			C			C	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.5	50.0		5.9	50.4			9.1				9.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	82.0		8.0	82.0			18.0				18.0
Max Q Clear Time (g_c+I1), s	3.0	15.8		3.3	7.7			4.0				5.3
Green Ext Time (p_c), s	0.0	30.2		0.0	31.5			0.4				0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				6.9								
HCM 2010 LOS				A								
<b>Notes</b>												

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			 
Volume (veh/h)	417	1312	482	181	203	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	511	2444	813	304	402	359
Arrive On Green	0.29	0.66	0.32	0.32	0.23	0.23
Sat Flow, veh/h	1757	3689	2561	959	1757	1568
Grp Volume(v), veh/h	453	1426	377	344	221	315
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1675	1757	1568
Q Serve(g_s), s	18.1	15.7	12.9	13.0	8.2	14.3
Cycle Q Clear(g_c), s	18.1	15.7	12.9	13.0	8.2	14.3
Prop In Lane	1.00			0.57	1.00	1.00
Lane Grp Cap(c), veh/h	511	2444	585	532	402	359
V/C Ratio(X)	0.89	0.58	0.64	0.65	0.55	0.88
Avail Cap(c_a), veh/h	811	3158	627	569	453	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	6.8	21.6	21.6	25.0	27.4
Incr Delay (d2), s/veh	7.4	0.2	2.1	2.3	1.2	17.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.7	5.8	6.1	5.6	3.6	1.8
Lane Grp Delay (d), s/veh	32.3	7.1	23.6	23.9	26.2	45.2
Lane Grp LOS	C	A	C	C	C	D
Approach Vol, veh/h		1879	721		536	
Approach Delay, s/veh		13.2	23.8		37.4	
Approach LOS		B	C		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.4	52.8	27.4			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	34.0	63.0	25.0			
Max Q Clear Time (g_c+I1), s	20.1	17.7	15.0			
Green Ext Time (p_c), s	1.3	25.9	8.4			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			19.7			
HCM 2010 LOS			B			
<b>Notes</b>						




















HCM 2010 Signalized Intersection Summary  
33: Somersville Rd & Fairview Dr

Cumulative Plus Project PM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	129	9	580	19	1	2	257	624	14	21	636	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	667	11	666	99	237	473	361	1569	35	33	841	67
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.21	0.44	0.44	0.02	0.25	0.25
Sat Flow, veh/h	1394	25	1547	778	550	1100	1757	3596	80	1757	3374	268
Grp Volume(v), veh/h	140	0	640	21	0	3	279	348	345	23	378	368
Grp Sat Flow(s),veh/h/ln	1394	0	1572	778	0	1650	1757	1845	1831	1757	1845	1797
Q Serve(g_s), s	6.7	0.0	40.9	2.8	0.0	0.1	15.7	13.7	13.7	1.4	20.2	20.2
Cycle Q Clear(g_c), s	6.8	0.0	40.9	43.7	0.0	0.1	15.7	13.7	13.7	1.4	20.2	20.2
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.04	1.00		0.15
Lane Grp Cap(c), veh/h	667	0	676	99	0	710	361	805	799	33	460	448
V/C Ratio(X)	0.21	0.00	0.95	0.21	0.00	0.00	0.77	0.43	0.43	0.70	0.82	0.82
Avail Cap(c_a), veh/h	667	0	676	99	0	710	470	988	980	118	617	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.64	0.64	0.64	0.84	0.84	0.84
Uniform Delay (d), s/veh	18.9	0.0	28.6	49.6	0.0	17.0	39.2	20.5	20.5	51.0	37.0	37.1
Incr Delay (d2), s/veh	0.2	0.0	22.3	1.1	0.0	0.0	3.8	1.1	1.1	20.3	12.9	13.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	0.0	20.0	0.6	0.0	0.0	7.4	6.4	6.4	0.8	11.1	10.9
Lane Grp Delay (d), s/veh	19.1	0.0	51.0	50.7	0.0	17.0	43.0	21.6	21.6	71.4	49.9	50.3
Lane Grp LOS	B		D	D		B	D	C	C	E	D	D
Approach Vol, veh/h		780			24			972			769	
Approach Delay, s/veh		45.2			46.5			27.7			50.8	
Approach LOS		D			D			C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		49.0			49.0		25.5	49.6		5.9		30.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		45.0			45.0		28.0	56.0		7.0		35.0
Max Q Clear Time (g_c+I1), s		42.9			45.7		17.7	15.7		3.4		22.2
Green Ext Time (p_c), s		1.1			0.0		3.8	5.9		0.0		3.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				40.2								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	928	599	128	384	10	202	20	34	15	11	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	31	1109	677	171	2134	56	274	20	392	59	39	11
Arrive On Green	0.02	0.52	0.52	0.10	0.60	0.60	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1757	2147	1311	1757	3578	94	786	79	1568	0	157	45
Grp Volume(v), veh/h	20	859	801	139	215	213	242	0	37	36	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1613	1757	1845	1828	865	0	1568	201	0	0
Q Serve(g_s), s	1.0	37.1	42.0	6.8	4.7	4.7	0.0	0.0	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	37.1	42.0	6.8	4.7	4.7	22.0	0.0	1.6	22.0	0.0	0.0
Prop In Lane	1.00		0.81	1.00		0.05	0.91		1.00	0.44		0.22
Lane Grp Cap(c), veh/h	31	953	834	171	1100	1090	294	0	392	109	0	0
V/C Ratio(X)	0.65	0.90	0.96	0.81	0.20	0.20	0.82	0.00	0.09	0.33	0.00	0.00
Avail Cap(c_a), veh/h	100	963	843	199	1100	1090	294	0	392	109	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.0	19.3	20.4	39.0	8.1	8.1	34.2	0.0	25.4	27.5	0.0	0.0
Incr Delay (d2), s/veh	20.5	11.4	21.9	19.5	0.1	0.1	17.0	0.0	0.1	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	19.0	20.9	4.0	1.9	1.9	6.8	0.0	0.6	0.7	0.0	0.0
Lane Grp Delay (d), s/veh	63.5	30.6	42.3	58.5	8.2	8.2	51.2	0.0	25.5	29.2	0.0	0.0
Lane Grp LOS	E	C	D	E	A	A	D		C	C		
Approach Vol, veh/h	1680		567				279			36		
Approach Delay, s/veh	36.6		20.5				47.8			29.2		
Approach LOS	D		C				D			C		
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.5	49.5		12.6	56.5			26.0				26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	5.0	46.0		10.0	51.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	3.0	44.0		8.8	6.7			24.0				24.0
Green Ext Time (p_c), s	0.0	1.5		0.0	25.6			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			34.2									
HCM 2010 LOS			C									
<b>Notes</b>												

## MEMORANDUM

Date: May 2, 2014

To: Paul Reinders  
City Traffic Engineer  
City of Pittsburg  
65 Civic Avenue  
Pittsburg CA 94565

From: Steve Abrams

**Subject: Analysis of Level-of-Service and Queuing with and without AM Peak Hour Control Point Metering on Buchanan Road**

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The purpose of this memorandum is to review the differences in queuing and level of service (LOS) with and without the current control point metering on Buchanan Road at Meadows Avenue. Some of the existing queuing and delay that occurs on Buchanan Road is affected by control point metering at the Meadows Avenue traffic signal which limits the amount of traffic that can pass through the intersection during peak periods. The control point metering strategy was based on recommendations in the East Central Traffic Management Study. The report's recommendations were ultimately adopted by Contra Costa County and the surrounding Cities. As a result, downstream traffic congestion during the AM peak hour often results in westbound queues that limit the volume of traffic that can travel through intersections further to the west. In other words, the resulting LOS calculations do not always provide a complete portrayal of the traffic operations because the volumes are restricted by the queuing problems that occur on Buchanan Road.

Although not required for the environmental review, it was requested that we also provide a comparison of the project's traffic operations both with and without the current AM peak period control point metering to assist in the City's review of the project application. **Table A-4** summarizes the results of the queuing analysis for westbound Buchanan Road during the AM peak commute period. The queues presented are the maximum queues on an average weekday based on the Synchro 2010 HCM LOS calculations and calibrated with field observations. It is important to note that these queues can sometimes fluctuate significantly based on numerous factors including traffic congestion on parallel transportation facilities such as the State Route 4 freeway.

Please note that the queues measured from the Meadows Avenue intersection for the existing and baseline scenarios (the scenarios without the project). If the project were approved the project's main signalized entrance at Tuscany Meadows Drive would ultimately be located about 2,000



feet closer to Somersville Road than the Meadows Avenue intersection. Therefore, in the scenarios with the project included the queues are measured from the Tuscany Meadows Drive intersection because this would be the worst case scenario with respect to queuing. To allow comparison of the queuing impacts that would occur at each intersection, Table 8 also presents the approximate distance from the end of the queue to the Somersville Road intersection.

As seen in **Table A-4**, the queues are not forecast to regularly extend back into the Somersville Road intersection on a regular basis under any of the project study scenarios. It is also important to note that Section 7.1.6 of the City of Antioch General Plan specifies the widening of Buchanan Road to four lanes (from Somersville Road to the Antioch City Limit) as a planned improvement. This is essentially the segment from Somersville Road to Tuscany Meadows Drive. Our analysis indicates that the planned widening the eastbound direction of Buchanan Road to two lanes in would be expected to help alleviate any significant operational or queuing issues that might result from control point metering in the area.

**Table A-5** provides a summary of the Baseline Plus Project AM peak hour intersection LOS conditions both with and without control point metering. Please note that the detailed Synchro calculations for each of the scenarios presented in Tables A-4 and A-5 are attached to this memorandum.

### Summary and Findings

As shown in **Table A-5**, removal of the existing control point metering on Buchanan Road would be forecast to cause four intersections to deteriorate to LOS E or F during the AM peak commute period. The intersections of Buchanan Road with Harbor Street, Loveridge Road, Ventura Drive, and Somersville Road would also be forecast to have unacceptable operations if control point metering were discontinued. It should be noted that there do not appear to be any feasible mitigations to address the poor operations that would result without widening Buchanan Road in the vicinity of these intersections.

**TABLE A-4**  
**ANALYSIS OF QUEUING ON WESTBOUND BUCHANAN ROAD WITH AND WITHOUT AM PEAK HOUR CONTROL POINT METERING**

<i>Scenario</i>	<i>Control Point Metering Location</i>	<i>Queuing Details</i>		<i>Total Distance from the Metering Point to Somersville Road (feet)*</i>
		<i>Single Lane Queue Length (feet)</i>	<i>Average Distance from end of the queue to Somersville Rd (feet)</i>	
Existing AM	Meadows Avenue	1,840	3,720	5,560
Existing + Project AM	Tuscany Meadows Dr.	1,930	1,670	3,600
Baseline AM	Meadows Avenue	1,980	3,580	5,560
Baseline + Project AM	Tuscany Meadows Dr.	2,060	1,540	3,600
Cumulative + Project +Bypass AM	Tuscany Meadows Dr.	1,720	1,880	3,600
Cumulative + Project without Bypass	Tuscany Meadows Dr.	2,250	1,350	3,600

**NOTE:** \* 5,560 feet = length of storage for metering (from Meadows Avenue).  
3,600 feet = length of storage for metering (from Tuscany Meadows Drive).

**TABLE A-5**  
**BASELINE PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS WITH AND WITHOUT AM PEAK HOUR CONTROL POINT METERING ON BUCHANAN ROAD**

	INTERSECTION	CONTROL	WITH METERING		WITHOUT METERING	
			Delay	LOS	Delay	LOS
1	RAILROAD AVE & SR-4 WB RAMPS	Traffic Signal	37.5	D	37.5	D
2	RAILROAD AVE & SR-4 EB RAMPS	Traffic Signal	30.6	C	30.6	C
3	RAILROAD AVE & E. LELAND RD	Traffic Signal	<b>47.4</b>	<b>D</b>	<b>47.4</b>	<b>D</b>
4	RAILROAD AVE & BUCHANAN RD	Traffic Signal	21.2	C	24.9	C
5	KIRKER PASS RD & MONTREUX ENTRANCE	Traffic Signal	8.5	A	8.5	A
6	HARBOR ST & E LELAND RD	Traffic Signal	27.1	C	27.1	C
7	HARBOR ST & BUCHANAN RD	Traffic Signal	<b>52.6</b>	<b>D</b>	<b>&gt; 80.0</b>	<b>F</b>
8	CALIFORNIA AVE & SR-4 WB RAMPS (LOVERIDGE)	Traffic Signal	18.3	B	18.3	B
9	LOVERIDGE RD & CALIFORNIA AVE	Traffic Signal	41.1	D	41.1	D
10	LOVERIDGE RD & SR-4 EB RAMPS	Traffic Signal	22.9	C	22.9	C
11	LOVERIDGE RD & E. LELAND RD	Traffic Signal	26.6	C	26.6	C
12	LOVERIDGE RD & BUCHANAN RD	Traffic Signal	<b>52.3</b>	<b>D</b>	<b>&gt; 80.0</b>	<b>F</b>
13	BUCHANAN RD & VENTURA DR	Traffic Signal	28.9	C	<b>71.3</b>	<b>E</b>
14	VENTURA DR & JAMES DONLON BLVD	Traffic Signal	N/A	N/A	N/A	N/A
15	BUCHANAN RD & TUSCANY MEADOWS DR	Traffic Signal	<b>52.5</b>	<b>D</b>	9.8	A
16	TUSCANY MEADOWS DR & JAMES DONLON BLVD	Traffic Signal	10.7	B	10.7	B
17	BUCHANAN RD & TUSCANY MEADOWS APARTMENTS	Traffic Signal	26.2	C	20.4	C
18	AUTO CENTER DR & CENTURY BLVD	Traffic Signal	17.6	B	17.6	B
19	SOMERSVILLE RD & SR-4 WB RAMPS	Traffic Signal	25.9	C	25.9	C
20	SOMERSVILLE RD & SR-4 EB RAMPS	Traffic Signal	12.2	B	12.2	B

**SOURCE:** Abrams Associates, 2014

**NOTES:** Intersection LOS is presented in terms of the V/C Ratio for signalized intersections and unsignalized intersection delay is presented in terms of seconds per vehicle.

**TABLE A-5**  
**BASELINE PLUS PROJECT INTERSECTION LEVEL OF SERVICE CONDITIONS WITH AND**  
**WITHOUT AM PEAK HOUR CONTROL POINT METERING ON BUCHANAN ROAD**

INTERSECTION		CONTROL	WITH METERING		WITHOUT METERING	
			Delay	LOS	Delay	LOS
21	SOMERSVILLE RD & DELTA FAIR BLVD	Traffic Signal	20.9	C	20.9	C
22	SOMERSVILLE RD & BUCHANAN RD	Traffic Signal	<b>78.4</b>	<b>E</b>	<b>&gt; 80.0</b>	<b>F</b>
23	SOMERSVILLE RD & TUSCANY MEADOWS	Traffic Signal	8.8	A	8.8	A
24	SOMERSVILLE RD & JAMES DONLON BLVD	Traffic Signal	11.0	B	11.0	B
25	BUCHANAN RD & DELTA FAIR BLVD	Traffic Signal	10.9	B	10.9	B
26	JAMES DONLON BLVD & CONTRA LOMA BLVD	Traffic Signal	21.7	C	21.7	C
27	JAMES DONLON BLVD & LONE TREE WAY	Traffic Signal	20.3	C	20.3	C
28	KIRKER PASS & MYRTLE DR	Traffic Signal	6.9	A	6.9	A
29	YGNACIO VALLEY RD & CONCORD BLVD	Traffic Signal	39.3	D	39.3	D
30	YGNACIO VALLEY RD & CLAYTON BLVD	Traffic Signal	38.6	D	38.6	D
31	BUCHANAN RD & CHATEAU MOBILE PARK	Traffic Signal	4.3	A	4.2	A
32	DELTA FAIR BLVD & CENTURY BLVD	Traffic Signal	13.6	B	13.6	B
33	SOMERSVILLE RD & FAIRVIEW DR	Traffic Signal	20.3	C	20.1	C
34	DELTA FAIR BLVD & FAIRVIEW DR	Traffic Signal	22.2	C	22.2	C



















**SOURCE:** Abrams Associates, 2014

**NOTES:** Intersection LOS is presented in terms of the V/C Ratio for signalized intersections and unsignalized intersection delay is presented in terms of seconds per vehicle.

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Baseline +Project AM





















3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	197	387	269	717	755	160	199	874	388
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				234	474	351	823	1330	282	247	1289	548
Arrive On Green				0.31	0.31	0.31	0.40	0.75	0.75	0.14	0.35	0.00
Sat Flow, veh/h				762	1545	1143	3408	2953	626	1757	3689	1568
Grp Volume(v), veh/h				507	0	420	779	513	482	216	950	0
Grp Sat Flow(s),veh/h/ln				1807	0	1643	1704	1845	1734	1757	1845	1568
Q Serve(g_s), s				31.7	0.0	27.9	25.9	15.1	15.1	14.1	26.5	0.0
Cycle Q Clear(g_c), s				31.7	0.0	27.9	25.9	15.1	15.1	14.1	26.5	0.0
Prop In Lane				0.42		0.70	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h				555	0	504	823	831	781	247	1289	548
V/C Ratio(X)				0.91	0.00	0.83	0.95	0.62	0.62	0.87	0.74	0.00
Avail Cap(c_a), veh/h				585	0	532	842	831	781	359	1289	548
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.44	0.44	0.44	1.00	1.00	0.00
Uniform Delay (d), s/veh				39.2	0.0	37.8	34.3	9.9	9.9	49.4	33.4	0.0
Incr Delay (d2), s/veh				18.5	0.0	10.4	10.5	1.5	1.6	15.1	3.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				17.5	0.0	13.1	11.4	5.0	4.7	7.5	13.1	0.0
Lane Grp Delay (d), s/veh				57.7	0.0	48.3	44.8	11.4	11.5	64.5	37.2	0.0
Lane Grp LOS				E		D	D	B	B	E	D	
Approach Vol, veh/h					927			1774			1166	
Approach Delay, s/veh					53.4			26.1			42.3	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					40.0		32.3	56.8		20.5	45.0	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					33.7		27.9	17.1		16.1	28.5	
Green Ext Time (p_c), s					2.3		0.4	17.1		0.4	9.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					37.5							
HCM 2010 LOS					D							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave




























Baseline +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	392	0	471	0	0	0	0	1139	311	303	802	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	475	499	849				0	1564	427	442	2435	0
Arrive On Green	0.27	0.00	0.27				0.00	0.37	0.37	0.50	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4189	1143	1757	3689	0
Grp Volume(v), veh/h	426	0	512				0	1090	486	329	872	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1643	1757	1845	0
Q Serve(g_s), s	26.9	0.0	16.4				0.0	30.3	30.3	17.1	0.0	0.0
Cycle Q Clear(g_c), s	26.9	0.0	16.4				0.0	30.3	30.3	17.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.70	1.00		0.00
Lane Grp Cap(c), veh/h	475	499	849				0	1378	613	442	2435	0
V/C Ratio(X)	0.90	0.00	0.60				0.00	0.79	0.79	0.74	0.36	0.00
Avail Cap(c_a), veh/h	549	577	980				0	1378	613	442	2435	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.55	0.55	0.00
Uniform Delay (d), s/veh	40.4	0.0	36.6				0.0	32.1	32.1	25.6	0.0	0.0
Incr Delay (d2), s/veh	15.8	0.0	0.8				0.0	4.7	10.1	3.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	14.0	0.0	6.6				0.0	15.0	14.3	6.8	0.1	0.0
Lane Grp Delay (d), s/veh	56.3	0.0	37.4				0.0	36.8	42.2	29.4	0.2	0.0
Lane Grp LOS	E		D					D	D	C	A	
Approach Vol, veh/h		938						1576			1201	
Approach Delay, s/veh		46.0						38.5			8.2	
Approach LOS		D						D			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		35.2						47.0		33.0	80.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		36.0						43.0		29.0	76.0	
Max Q Clear Time (g_c+I1), s		28.9						32.3		19.1	2.0	
Green Ext Time (p_c), s		2.3						7.4		5.0	9.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			30.6									
HCM 2010 LOS			C									
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	297	435	95	158	529	320	144	874	106	185	504	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	357	812	176	205	701	298	189	1144	486	255	1283	545
Arrive On Green	0.20	0.28	0.28	0.12	0.19	0.19	0.11	0.31	0.31	0.15	0.35	0.35
Sat Flow, veh/h	1757	2941	636	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	323	296	280	172	575	348	157	950	115	201	548	272
Grp Sat Flow(s),veh/h/ln	1757	1845	1732	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	18.9	14.6	14.7	10.1	15.8	14.6	9.2	25.2	4.2	11.6	12.0	14.4
Cycle Q Clear(g_c), s	18.9	14.6	14.7	10.1	15.8	14.6	9.2	25.2	4.2	11.6	12.0	14.4
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	510	479	205	701	298	189	1144	486	255	1283	545
V/C Ratio(X)	0.91	0.58	0.59	0.84	0.82	1.17	0.83	0.83	0.24	0.79	0.43	0.50
Avail Cap(c_a), veh/h	433	510	479	333	770	327	317	1364	580	283	1294	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	32.9	33.0	45.6	41.0	22.6	46.1	33.8	14.1	43.5	26.3	27.1
Incr Delay (d2), s/veh	19.9	1.7	1.8	9.8	6.6	105.9	9.0	3.8	0.2	12.6	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.5	7.0	6.7	5.1	8.1	14.3	4.7	12.2	1.6	6.1	5.5	5.7
Lane Grp Delay (d), s/veh	60.9	34.5	34.8	55.4	47.5	128.5	55.1	37.6	14.3	56.1	26.6	27.8
Lane Grp LOS	E	C	C	E	D	F	E	D	B	E	C	C
Approach Vol, veh/h		899			1095			1222			1021	
Approach Delay, s/veh		44.1			74.5			37.7			32.7	
Approach LOS		D			E			D			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	25.4	33.1		16.3	24.0		15.4	36.7		19.3	40.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	26.0	28.0		20.0	22.0		19.0	39.0		17.0	37.0	
Max Q Clear Time (g_c+I1), s	20.9	16.7		12.1	17.8		11.2	27.2		13.6	16.4	
Green Ext Time (p_c), s	0.5	6.4		0.3	2.3		0.2	5.5		1.7	5.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				47.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd













Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	86	93	27	1046	52	122	7	444	440	89	518	67
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	715	751	638	1388	751	638	92	1341	570	125	1410	599
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.05	0.36	0.36	0.07	0.38	0.38
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	93	101	29	1137	57	133	8	483	478	97	563	73
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.5	2.6	0.8	22.6	1.4	4.2	0.3	7.3	21.2	4.1	8.5	2.3
Cycle Q Clear(g_c), s	2.5	2.6	0.8	22.6	1.4	4.2	0.3	7.3	21.2	4.1	8.5	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	715	751	638	1388	751	638	92	1341	570	125	1410	599
V/C Ratio(X)	0.13	0.13	0.05	0.82	0.08	0.21	0.09	0.36	0.84	0.77	0.40	0.12
Avail Cap(c_a), veh/h	715	751	638	2422	1311	1114	370	1505	640	301	1410	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	14.1	13.6	20.0	13.8	14.6	34.3	17.7	22.1	34.7	17.1	15.2
Incr Delay (d2), s/veh	0.1	0.1	0.0	1.3	0.0	0.2	0.4	0.2	8.8	9.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	1.1	0.3	8.9	0.6	1.5	0.2	3.3	9.4	2.1	3.7	0.8
Lane Grp Delay (d), s/veh	14.2	14.2	13.6	21.3	13.8	14.8	34.7	17.9	31.0	44.3	17.3	15.3
Lane Grp LOS	B	B	B	C	B	B	C	B	C	D	B	B
Approach Vol, veh/h		223			1327			969			733	
Approach Delay, s/veh		14.1			20.3			24.5			20.7	
Approach LOS		B			C			C			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		34.9			34.9		8.0	31.6		9.4		33.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			54.0		16.0	31.0		13.0		28.0
Max Q Clear Time (g_c+I1), s		4.6			24.6		2.3	23.2		6.1		10.5
Green Ext Time (p_c), s		5.1			6.4		0.0	4.4		0.1		8.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.2								
HCM 2010 LOS				C								
<b>Notes</b>												































HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

Baseline +Project AM  
3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	162	40	13	729	1536	54
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	226	201	24	2800	2441	86
Arrive On Green	0.13	0.13	0.01	0.76	0.69	0.69
Sat Flow, veh/h	1757	1568	1757	3689	3543	125
Grp Volume(v), veh/h	176	43	14	792	867	862
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1823
Q Serve(g_s), s	6.9	1.7	0.6	4.7	19.6	19.8
Cycle Q Clear(g_c), s	6.9	1.7	0.6	4.7	19.6	19.8
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	226	201	24	2800	1271	1256
V/C Ratio(X)	0.78	0.21	0.59	0.28	0.68	0.69
Avail Cap(c_a), veh/h	396	353	99	3426	1506	1488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	27.8	34.9	2.6	6.5	6.5
Incr Delay (d2), s/veh	5.8	0.5	20.8	0.1	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	0.0	0.4	1.6	7.6	7.6
Lane Grp Delay (d), s/veh	35.8	28.3	55.6	2.7	7.5	7.6
Lane Grp LOS	D	C	E	A	A	A
Approach Vol, veh/h	219			806	1729	
Approach Delay, s/veh	34.3			3.6	7.5	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			5.0	57.9	53.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			4.0	66.0	58.0	
Max Q Clear Time (g_c+I1), s			2.6	6.7	21.8	
Green Ext Time (p_c), s			0.0	38.3	27.1	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			8.5			
HCM 2010 LOS			A			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	145	559	118	105	507	182	206	601	220	228	287	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	198	957	407	146	847	360	273	979	416	296	733	251
Arrive On Green	0.11	0.26	0.26	0.08	0.23	0.23	0.16	0.27	0.27	0.17	0.28	0.28
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2630	901
Grp Volume(v), veh/h	158	608	128	114	551	198	224	653	239	248	217	204
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1686
Q Serve(g_s), s	6.3	10.5	4.7	4.6	9.7	8.0	8.8	11.3	9.5	9.8	6.9	7.1
Cycle Q Clear(g_c), s	6.3	10.5	4.7	4.6	9.7	8.0	8.8	11.3	9.5	9.8	6.9	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	198	957	407	146	847	360	273	979	416	296	514	470
V/C Ratio(X)	0.80	0.64	0.31	0.78	0.65	0.55	0.82	0.67	0.57	0.84	0.42	0.43
Avail Cap(c_a), veh/h	319	1134	482	246	980	416	491	1237	526	442	567	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	23.5	21.4	32.2	25.0	24.3	29.3	23.5	22.8	28.8	21.1	21.2
Incr Delay (d2), s/veh	7.2	0.9	0.4	8.8	1.2	1.3	6.0	0.9	1.3	8.7	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.1	4.8	1.8	2.3	4.5	3.1	4.3	5.1	3.7	4.9	3.2	3.0
Lane Grp Delay (d), s/veh	38.1	24.4	21.8	40.9	26.2	25.6	35.3	24.4	24.0	37.5	21.7	21.8
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		894			863			1116			669	
Approach Delay, s/veh		26.4			28.0			26.5			27.6	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	12.1	22.6		9.9	20.4		15.1	23.0		16.1		23.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	13.0	22.0		10.0	19.0		20.0	24.0		18.0		22.0
Max Q Clear Time (g_c+I1), s	8.3	12.5		6.6	11.7		10.8	13.3		11.8		9.1
Green Ext Time (p_c), s	0.2	5.8		0.1	4.8		0.4	5.7		0.4		6.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					27.1							
HCM 2010 LOS					C							
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	116	494	5	2	1029	103	94	101	3	135	33	159
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	123	1181	11	55	1122	954	126	198	5	151	35	166
Arrive On Green	0.07	0.65	0.65	0.03	0.61	0.61	0.07	0.11	0.11	0.09	0.12	0.12
Sat Flow, veh/h	1757	1825	17	1757	1845	1568	1757	1787	49	1757	277	1332
Grp Volume(v), veh/h	126	0	542	2	1118	112	102	0	113	147	0	209
Grp Sat Flow(s),veh/h/ln	1757	0	1842	1757	1845	1568	1757	0	1836	1757	0	1610
Q Serve(g_s), s	9.0	0.0	18.9	0.1	77.3	2.4	7.3	0.0	7.5	10.7	0.0	16.0
Cycle Q Clear(g_c), s	9.0	0.0	18.9	0.1	77.3	2.4	7.3	0.0	7.5	10.7	0.0	16.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.03	1.00		0.83
Lane Grp Cap(c), veh/h	123	0	1192	55	1122	954	126	0	204	151	0	201
V/C Ratio(X)	1.02	0.00	0.45	0.04	1.00	0.12	0.81	0.00	0.55	0.98	0.00	1.04
Avail Cap(c_a), veh/h	123	0	1192	55	1122	954	151	0	229	151	0	201
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.00	0.75	0.38	0.38	0.38	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.6	0.0	11.3	60.2	25.0	4.1	58.6	0.0	54.0	58.5	0.0	56.1
Incr Delay (d2), s/veh	76.2	0.0	0.9	0.1	15.6	0.1	23.2	0.0	2.4	65.7	0.0	74.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.7	0.0	8.1	0.1	37.8	1.4	4.2	0.0	3.7	7.6	0.0	10.9
Lane Grp Delay (d), s/veh	135.8	0.0	12.2	60.3	40.6	4.2	81.8	0.0	56.4	124.1	0.0	130.7
Lane Grp LOS	F		B	E	D	A	F		E	F		F
Approach Vol, veh/h		668			1232			215				356
Approach Delay, s/veh		35.6			37.3			68.4				128.0
Approach LOS		D			D			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	13.0	87.0		8.0	82.0		13.2	18.2		15.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	9.0	83.0		4.0	78.0		11.0	16.0		11.0		16.0
Max Q Clear Time (g_c+I1), s	11.0	20.9		2.1	79.3		9.3	9.5		12.7		18.0
Green Ext Time (p_c), s	0.0	3.9		0.1	0.0		0.1	0.4		0.0		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				52.6								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave























Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 						 	
Volume (veh/h)	33	274	22	685	338	137	21	50	82	78	95	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	60	955	76	1586	2635	1120	182	191	163	182	162	25
Arrive On Green	0.03	0.28	0.28	0.47	0.71	0.71	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1757	3372	270	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	36	162	160	745	367	149	23	54	89	85	0	119
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.6	5.6	5.7	12.1	2.6	2.4	1.0	2.2	4.4	3.7	0.0	5.1
Cycle Q Clear(g_c), s	1.6	5.6	5.7	12.1	2.6	2.4	1.0	2.2	4.4	3.7	0.0	5.1
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	60	523	509	1586	2635	1120	182	191	163	182	0	187
V/C Ratio(X)	0.60	0.31	0.31	0.47	0.14	0.13	0.13	0.28	0.55	0.47	0.00	0.64
Avail Cap(c_a), veh/h	173	523	509	1805	2635	1120	389	409	348	433	0	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	22.9	22.9	14.9	3.7	3.7	33.1	33.6	34.6	34.3	0.0	34.9
Incr Delay (d2), s/veh	9.2	1.5	1.6	0.1	0.1	0.2	0.3	0.8	2.9	1.9	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	2.8	2.8	4.9	0.9	0.8	0.4	1.0	1.8	1.7	0.0	2.5
Lane Grp Delay (d), s/veh	47.8	24.4	24.5	15.0	3.8	3.8	33.4	34.4	37.4	36.1	0.0	38.5
Lane Grp LOS	D	C	C	B	A	A	C	C	D	D		D
Approach Vol, veh/h		358			1261			166			204	
Approach Delay, s/veh		26.8			10.4			35.9			37.5	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.8	27.0		41.8	62.0			12.4			12.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	8.0	23.0		43.0	58.0			18.0			20.0	
Max Q Clear Time (g_c+I1), s	3.6	7.7		14.1	4.6			6.4			7.1	
Green Ext Time (p_c), s	1.4	1.6		3.1	3.2			1.2			1.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 9: Loveridge Rd & California Ave/N Park Blvd

Baseline +Project AM



















3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	60	269	45	154	3	587	301	94	7	219	522
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	180	385	327	110	680	12	845	1527	468	14	1193	507
Arrive On Green	0.05	0.21	0.21	0.03	0.19	0.19	0.25	0.56	0.56	0.01	0.32	0.32
Sat Flow, veh/h	3408	1845	1568	3408	3613	65	3408	2711	831	1757	3689	1568
Grp Volume(v), veh/h	113	65	292	49	85	85	638	221	208	8	238	567
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1698	1757	1845	1568
Q Serve(g_s), s	2.8	2.5	15.4	1.2	3.3	3.4	14.8	5.1	5.2	0.4	4.0	21.6
Cycle Q Clear(g_c), s	2.8	2.5	15.4	1.2	3.3	3.4	14.8	5.1	5.2	0.4	4.0	21.6
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	180	385	327	110	347	345	845	1039	956	14	1193	507
V/C Ratio(X)	0.63	0.17	0.89	0.45	0.24	0.25	0.76	0.21	0.22	0.56	0.20	1.12
Avail Cap(c_a), veh/h	280	433	368	160	368	366	1199	1644	1514	82	2164	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	27.7	32.8	40.5	29.4	29.4	29.7	9.2	9.3	42.1	20.9	17.7
Incr Delay (d2), s/veh	3.6	0.2	21.3	2.8	0.4	0.4	1.7	0.1	0.1	30.4	0.1	64.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	1.2	7.9	0.6	1.6	1.6	6.5	2.2	2.1	0.3	1.8	17.0
Lane Grp Delay (d), s/veh	43.1	27.9	54.1	43.3	29.8	29.8	31.4	9.3	9.4	72.6	20.9	81.9
Lane Grp LOS	D	C	D	D	C	C	C	A	A	E	C	F
Approach Vol, veh/h		470			219			1067			813	
Approach Delay, s/veh		47.8			32.8			22.5			63.9	
Approach LOS		D			C			C			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	8.5	21.8		6.7	20.1		25.1	52.0		4.7		31.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	7.0	20.0		4.0	17.0		30.0	76.0		4.0		50.0
Max Q Clear Time (g_c+I1), s	4.8	17.4		3.2	5.4		16.8	7.2		2.4		23.6
Green Ext Time (p_c), s	0.1	0.4		0.1	0.8		4.4	5.9		0.0		4.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				41.1								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

























Baseline +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	422	0	373	0	0	0	0	684	193	129	478	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1037	0	477				0	1922	817	205	2285	0
Arrive On Green	0.30	0.00	0.30				0.00	0.52	0.52	0.06	0.62	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	459	0	405				0	743	210	140	520	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	11.4	0.0	25.4				0.0	12.7	7.8	4.2	6.6	0.0
Cycle Q Clear(g_c), s	11.4	0.0	25.4				0.0	12.7	7.8	4.2	6.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1037	0	477				0	1922	817	205	2285	0
V/C Ratio(X)	0.44	0.00	0.85				0.00	0.39	0.26	0.68	0.23	0.00
Avail Cap(c_a), veh/h	1527	0	702				0	1922	817	422	2285	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.92	0.92	0.00
Uniform Delay (d), s/veh	29.3	0.0	34.2				0.0	15.1	13.9	48.3	8.8	0.0
Incr Delay (d2), s/veh	0.3	0.0	6.5				0.0	0.6	0.8	3.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.9	0.0	10.8				0.0	5.8	3.1	2.0	2.8	0.0
Lane Grp Delay (d), s/veh	29.6	0.0	40.7				0.0	15.7	14.7	52.0	9.1	0.0
Lane Grp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		864						953			660	
Approach Delay, s/veh		34.8						15.4			18.2	
Approach LOS		C						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		35.9						58.7		10.3	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						48.0		13.0	65.0	
Max Q Clear Time (g_c+I1), s		27.4						14.7		6.2	8.6	
Green Ext Time (p_c), s		4.5						12.1		0.2	13.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			22.9									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	184	237	169	175	676	180	252	579	133	181	354	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	292	1150	489	279	1137	483	326	1161	493	288	789	335
Arrive On Green	0.09	0.31	0.31	0.08	0.31	0.31	0.19	0.31	0.31	0.08	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	200	258	184	190	735	196	274	629	145	197	385	168
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	4.4	4.0	7.1	4.2	13.3	7.6	11.6	10.9	5.4	4.3	7.1	7.3
Cycle Q Clear(g_c), s	4.4	4.0	7.1	4.2	13.3	7.6	11.6	10.9	5.4	4.3	7.1	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	1150	489	279	1137	483	326	1161	493	288	789	335
V/C Ratio(X)	0.69	0.22	0.38	0.68	0.65	0.41	0.84	0.54	0.29	0.68	0.49	0.50
Avail Cap(c_a), veh/h	529	1767	751	485	1719	731	705	2101	893	529	1194	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	19.7	20.7	34.5	23.1	21.1	30.4	21.9	20.0	34.4	26.7	26.7
Incr Delay (d2), s/veh	2.9	0.1	0.5	2.9	0.6	0.5	5.8	0.4	0.3	2.9	0.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	1.8	2.7	1.9	6.0	2.9	5.6	4.9	2.0	1.9	3.3	2.9
Lane Grp Delay (d), s/veh	37.2	19.8	21.2	37.4	23.7	21.7	36.2	22.3	20.3	37.2	27.1	27.9
Lane Grp LOS	D	B	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		642			1121			1048			750	
Approach Delay, s/veh		25.6			25.7			25.7			29.9	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.6	28.1		10.3	27.8		18.3	28.3		10.5	20.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	37.0		11.0	36.0		31.0	44.0		12.0	25.0	
Max Q Clear Time (g_c+I1), s	6.4	9.1		6.2	15.3		13.6	12.9		6.3	9.3	
Green Ext Time (p_c), s	0.3	9.6		0.2	8.5		0.7	9.7		0.3	7.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				26.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
12: Buchanan Rd & Loveridge Rd























Baseline +Project AM  
3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	270	429	1080	343	198	190
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	284	1504	1149	977	216	193
Arrive On Green	0.16	0.82	0.62	0.62	0.12	0.12
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	293	466	1174	373	215	207
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	21.0	8.1	81.0	15.3	15.9	16.0
Cycle Q Clear(g_c), s	21.0	8.1	81.0	15.3	15.9	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	284	1504	1149	977	216	193
V/C Ratio(X)	1.03	0.31	1.02	0.38	0.99	1.07
Avail Cap(c_a), veh/h	284	1504	1149	977	216	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.19	0.19	1.00	1.00
Uniform Delay (d), s/veh	54.5	3.0	24.5	12.1	57.0	57.0
Incr Delay (d2), s/veh	57.6	0.5	17.4	0.2	59.5	85.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	13.9	2.8	39.4	5.4	10.8	17.6
Lane Grp Delay (d), s/veh	112.1	3.4	41.9	12.3	116.5	142.4
Lane Grp LOS	F	A	F	B	F	F
Approach Vol, veh/h		759	1547		422	
Approach Delay, s/veh		45.4	34.7		129.2	
Approach LOS		D	C		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.0	110.0	85.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	21.0	106.0	81.0			
Max Q Clear Time (g_c+I1), s	23.0	10.1	83.0			
Green Ext Time (p_c), s	0.0	4.1	0.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			52.3			
HCM 2010 LOS			D			
<b>Notes</b>						



HCM 2010 Signalized Intersection Summary  
13: Ventura Dr & Buchanan Rd

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	555	76	25	1247	11	177	108	44	14	10	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	7	1348	1146	35	1364	12	240	182	75	131	92	151
Arrive On Green	0.00	0.73	0.73	0.02	0.75	0.75	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1757	1845	1568	1757	1826	16	1362	1244	510	1204	631	1032
Grp Volume(v), veh/h	10	603	83	27	0	1367	192	0	165	15	0	29
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1842	1362	0	1755	1204	0	1663
Q Serve(g_s), s	0.4	15.2	1.8	1.8	0.0	84.7	15.2	0.0	10.3	1.4	0.0	1.8
Cycle Q Clear(g_c), s	0.4	15.2	1.8	1.8	0.0	84.7	17.0	0.0	10.3	11.7	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.29	1.00		0.62
Lane Grp Cap(c), veh/h	7	1348	1146	35	0	1376	240	0	256	131	0	243
V/C Ratio(X)	1.53	0.45	0.07	0.77	0.00	0.99	0.80	0.00	0.64	0.11	0.00	0.12
Avail Cap(c_a), veh/h	60	1348	1146	91	0	1376	240	0	256	131	0	243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.36	0.00	0.36	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	6.3	4.5	56.8	0.0	14.4	51.1	0.0	46.9	52.4	0.0	43.2
Incr Delay (d2), s/veh	341.4	0.9	0.1	11.8	0.0	13.0	17.3	0.0	5.4	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	6.0	0.6	0.9	0.0	35.7	6.9	0.0	5.1	0.4	0.0	0.8
Lane Grp Delay (d), s/veh	399.4	7.2	4.6	68.6	0.0	27.5	68.4	0.0	52.3	52.8	0.0	43.4
Lane Grp LOS	F	A	A	E		C	E		D	D		D
Approach Vol, veh/h		696			1394			357				44
Approach Delay, s/veh		12.5			28.3			61.0				46.6
Approach LOS		B			C			E				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	89.1		6.3	91.0			21.0				21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	85.0		6.0	87.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	2.4	17.2		3.8	86.7			19.0				13.7
Green Ext Time (p_c), s	0.0	4.9		0.0	0.2			0.0				0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 15: Tuscany Meadows Dr & Buchanan Rd






















Baseline +Project AM  
 3/16/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Volume (veh/h)	627	25	36	1086	74	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	998	848	50	1107	595	531
Arrive On Green	0.54	0.54	0.03	0.60	0.34	0.34
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	682	27	39	1180	80	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	35.0	1.0	2.9	78.0	4.1	6.9
Cycle Q Clear(g_c), s	35.0	1.0	2.9	78.0	4.1	6.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	998	848	50	1107	595	531
V/C Ratio(X)	0.68	0.03	0.78	1.07	0.13	0.22
Avail Cap(c_a), veh/h	998	848	95	1107	595	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	13.9	62.8	26.0	29.8	30.7
Incr Delay (d2), s/veh	1.9	0.0	22.9	46.5	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.7	0.4	1.6	47.2	1.9	2.9
Lane Grp Delay (d), s/veh	23.7	14.0	85.7	72.5	30.3	31.7
Lane Grp LOS	C	B	F	F	C	C
Approach Vol, veh/h	709			1219	196	
Approach Delay, s/veh	23.3			73.0	31.1	
Approach LOS	C			E	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	74.3		7.7	82.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	67.0		7.0	78.0		
Max Q Clear Time (g_c+I1), s	37.0		4.9	80.0		
Green Ext Time (p_c), s	18.1		0.0	0.0		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			52.5			
HCM 2010 LOS			D			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

Baseline +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	23	0	0	0	0	61	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	20	42	0	47	99	0	20	0	106	20	125	0
Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	25	0	0	0	0	66	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	20	42	0	47	99	0	20	0	106	20	125	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00
Avail Cap(c_a), veh/h	795	6680	0	4573	14613	0	795	0	5501	795	6472	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	13.1	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0
Lane Grp LOS	B						A					
Approach Vol, veh/h	0			25			66			0		
Approach Delay, s/veh	0.0			13.1			9.8			0.0		
Approach LOS	B			B			A			A		
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.2	4.2		0.0	4.6		0.0	4.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		23.0	35.0		4.0	31.0		4.0	31.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.1	0.0		0.0	2.4		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	0.3		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.7								
HCM 2010 LOS				B								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 17: Proposed Apartments & Buchanan Rd

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	718	16	22	1060	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	861	732	301	1247	435	388
Arrive On Green	0.47	0.47	0.17	0.68	0.25	0.25
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	780	17	24	1152	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	41.0	0.6	1.2	56.5	3.1	5.2
Cycle Q Clear(g_c), s	41.0	0.6	1.2	56.5	3.1	5.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	861	732	301	1247	435	388
V/C Ratio(X)	0.91	0.02	0.08	0.92	0.15	0.25
Avail Cap(c_a), veh/h	1424	1210	301	1687	435	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	15.1	36.5	14.7	30.9	31.7
Incr Delay (d2), s/veh	5.2	0.0	0.1	7.3	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	18.8	0.2	0.5	23.6	1.5	2.2
Lane Grp Delay (d), s/veh	31.1	15.1	36.6	21.9	31.6	33.2
Lane Grp LOS	C	B	D	C	C	C
Approach Vol, veh/h	797			1176	164	
Approach Delay, s/veh	30.8			22.2	32.6	
Approach LOS	C			C	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	53.0		22.0	75.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	81.0		11.0	96.0		
Max Q Clear Time (g_c+I1), s	43.0		3.2	58.5		
Green Ext Time (p_c), s	6.0		5.0	12.4		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			26.2			
HCM 2010 LOS			C			
<b>Notes</b>						













HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy

Baseline +Project AM

3/16/2014





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	31	39	204	76	29	203	467	147	24	515	262
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	394	213	181	394	147	57	491	2852	870	39	2135	908
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.05	0.23	0.23	0.02	0.58	0.58
Sat Flow, veh/h	3408	1845	1568	3408	1269	489	3408	4073	1242	1757	3689	1568
Grp Volume(v), veh/h	113	34	42	222	0	115	221	459	209	26	560	285
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1625	1757	1845	1568
Q Serve(g_s), s	2.3	1.2	1.8	4.6	0.0	4.6	4.7	7.4	7.7	1.1	5.6	7.0
Cycle Q Clear(g_c), s	2.3	1.2	1.8	4.6	0.0	4.6	4.7	7.4	7.7	1.1	5.6	7.0
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	394	213	181	394	0	203	491	2584	1138	39	2135	908
V/C Ratio(X)	0.29	0.16	0.23	0.56	0.00	0.57	0.45	0.18	0.18	0.66	0.26	0.31
Avail Cap(c_a), veh/h	872	472	401	1055	0	544	872	2584	1138	236	2135	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	29.6	29.8	31.1	0.0	31.1	32.5	11.4	11.5	36.0	7.8	8.1
Incr Delay (d2), s/veh	0.4	0.3	0.6	1.3	0.0	2.5	0.6	0.1	0.3	17.4	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	0.6	0.7	2.0	0.0	2.2	2.1	3.8	3.5	0.7	2.3	2.6
Lane Grp Delay (d), s/veh	30.4	29.9	30.5	32.3	0.0	33.5	33.2	11.5	11.9	53.4	8.1	9.0
Lane Grp LOS	C	C	C	C		C	C	B	B	D	A	A
Approach Vol, veh/h		189			337			889			871	
Approach Delay, s/veh		30.4			32.7			17.0			9.7	
Approach LOS		C			C			B			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		12.6			12.6		14.7	56.0		5.7		47.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0			23.0		19.0	52.0		10.0		43.0
Max Q Clear Time (g_c+I1), s		4.3			6.6		6.7	9.7		3.1		9.0
Green Ext Time (p_c), s		1.9			2.0		4.1	6.1		0.0		6.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.6								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	216	258	587	534	416	289
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	690	317	728	4022	2643	749
Arrive On Green	0.20	0.20	0.36	1.00	0.48	0.48
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	235	280	638	580	452	314
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	6.7	19.6	19.8	0.0	5.2	14.8
Cycle Q Clear(g_c), s	6.7	19.6	19.8	0.0	5.2	14.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	690	317	728	4022	2643	749
V/C Ratio(X)	0.34	0.88	0.88	0.14	0.17	0.42
Avail Cap(c_a), veh/h	906	417	1238	4022	2643	749
HCM Platoon Ratio	1.00	1.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.93	0.93
Uniform Delay (d), s/veh	38.6	43.7	34.9	0.0	16.8	19.2
Incr Delay (d2), s/veh	0.3	15.9	3.7	0.1	0.1	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	1.4	8.2	0.0	2.4	6.0
Lane Grp Delay (d), s/veh	38.8	59.6	38.6	0.1	16.9	20.9
Lane Grp LOS	D	E	D	A	B	C
Approach Vol, veh/h	515			1218	766	
Approach Delay, s/veh	50.1			20.3	18.5	
Approach LOS	D			C	B	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			28.1	86.0	57.9	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			41.0	82.0	37.0	
Max Q Clear Time (g_c+I1), s			21.8	2.0	16.8	
Green Ext Time (p_c), s			2.3	11.4	8.5	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			25.9			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	208	0	259	0	0	0	0	954	422	135	572	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	409	222	377				0	3920	1111	210	4464	0
Arrive On Green	0.12	0.00	0.12				0.00	0.94	0.94	0.12	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	226	0	282				0	1037	459	147	622	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	6.8	0.0	9.5				0.0	1.6	3.0	4.5	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	9.5				0.0	1.6	3.0	4.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	409	222	377				0	3920	1111	210	4464	0
V/C Ratio(X)	0.55	0.00	0.75				0.00	0.26	0.41	0.70	0.14	0.00
Avail Cap(c_a), veh/h	750	406	690				0	3920	1111	500	4464	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.80	0.80	0.94	0.94	0.00
Uniform Delay (d), s/veh	45.2	0.0	46.4				0.0	1.0	1.0	46.9	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	3.0				0.0	0.1	0.9	4.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.0	0.0	4.0				0.0	0.5	0.9	2.0	0.0	0.0
Lane Grp Delay (d), s/veh	46.4	0.0	49.4				0.0	1.1	1.9	50.8	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		508						1496			769	
Approach Delay, s/veh		48.1						1.4			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		17.1						81.3		10.7	92.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		24.0						68.0		16.0	88.0	
Max Q Clear Time (g_c+I1), s		11.5						5.0		6.5	2.0	
Green Ext Time (p_c), s		1.6						24.5		0.3	26.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.2									
HCM 2010 LOS			B									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd



























Baseline +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	263	115	5	41	315	413	87	753	16	137	346	282
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1171	605	24	603	634	539	190	2327	48	235	1445	614
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.04	0.14	0.14	0.12	0.65	0.65
Sat Flow, veh/h	3408	1762	70	1757	1845	1568	1757	5402	112	3408	3689	1568
Grp Volume(v), veh/h	286	0	130	45	342	449	95	558	277	149	376	307
Grp Sat Flow(s),veh/h/ln	1704	0	1832	1757	1845	1568	1757	1845	1825	1704	1845	1568
Q Serve(g_s), s	4.6	0.0	3.8	1.3	11.4	20.2	4.1	10.5	10.5	3.2	3.3	7.7
Cycle Q Clear(g_c), s	4.6	0.0	3.8	1.3	11.4	20.2	4.1	10.5	10.5	3.2	3.3	7.7
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	1171	0	629	603	634	539	190	1589	786	235	1445	614
V/C Ratio(X)	0.24	0.00	0.21	0.07	0.54	0.83	0.50	0.35	0.35	0.63	0.26	0.50
Avail Cap(c_a), veh/h	1171	0	629	1009	1060	901	298	1589	786	445	1445	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.79	0.79	0.79	0.97	0.97	0.97	0.99	0.99	0.99
Uniform Delay (d), s/veh	18.0	0.0	17.8	16.9	20.3	23.1	34.9	23.2	23.2	33.0	8.6	9.4
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.6	2.8	2.0	0.6	1.2	2.8	0.4	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.0	1.7	0.6	5.2	7.9	2.0	5.3	5.4	1.4	1.3	2.7
Lane Grp Delay (d), s/veh	18.1	0.0	17.9	17.0	20.8	25.9	36.9	23.8	24.4	35.7	9.1	12.3
Lane Grp LOS	B		B	B	C	C	D	C	C	D	A	B
Approach Vol, veh/h		416			836			930			832	
Approach Delay, s/veh		18.1			23.3			25.3			15.0	
Approach LOS		B			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		30.3			30.3		12.3	37.0		9.3		34.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			44.0		13.0	33.0		10.0		30.0
Max Q Clear Time (g_c+I1), s		6.6			22.2		6.1	12.5		5.2		9.7
Green Ext Time (p_c), s		4.4			4.1		0.4	5.6		0.3		3.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.9								
HCM 2010 LOS				C								
<b>Notes</b>												















HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	396	220	184	25	350	396	600	1058	52	39	150	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	372	1364	580	35	328	279	580	1550	77	53	533	227
Arrive On Green	0.21	0.37	0.00	0.02	0.18	0.00	0.33	0.44	0.44	0.03	0.14	0.14
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3486	173	1757	3689	1568
Grp Volume(v), veh/h	430	239	0	27	380	0	652	608	599	42	163	149
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1814	1757	1845	1568
Q Serve(g_s), s	25.0	5.2	0.0	1.8	21.0	0.0	39.0	32.3	32.3	2.8	4.7	10.6
Cycle Q Clear(g_c), s	25.0	5.2	0.0	1.8	21.0	0.0	39.0	32.3	32.3	2.8	4.7	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	372	1364	580	35	328	279	580	820	806	53	533	227
V/C Ratio(X)	1.16	0.18	0.00	0.77	1.16	0.00	1.12	0.74	0.74	0.79	0.31	0.66
Avail Cap(c_a), veh/h	372	1364	580	89	328	279	580	828	814	74	594	252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	25.1	0.0	57.6	48.5	0.0	39.5	27.2	27.2	56.9	45.2	47.7
Incr Delay (d2), s/veh	96.3	0.1	0.0	29.3	99.9	0.0	76.2	3.6	3.7	29.9	0.3	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	21.0	2.3	0.0	1.1	19.1	0.0	29.9	15.7	15.5	1.7	2.2	4.6
Lane Grp Delay (d), s/veh	142.9	25.1	0.0	86.9	148.4	0.0	115.7	30.8	30.8	86.7	45.5	53.0
Lane Grp LOS	F	C		F	F		F	C	C	F	D	D
Approach Vol, veh/h		669			407			1859			354	
Approach Delay, s/veh		100.8			144.3			60.6			53.6	
Approach LOS		F			F			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	29.0	47.6		6.4	25.0		43.0	56.5		7.6	21.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	25.0	40.0		6.0	21.0		39.0	53.0		5.0	19.0	
Max Q Clear Time (g_c+I1), s	27.0	7.2		3.8	23.0		41.0	34.3		4.8	12.6	
Green Ext Time (p_c), s	0.0	4.1		0.0	0.0		0.0	9.7		0.0	4.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				78.4								
HCM 2010 LOS				E								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 23: Sequoia Dr & Somersville Rd

Baseline +Project AM  
 3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	263	11	4	1448	272	87
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	349	312	748	2506	2506	1065
Arrive On Green	0.20	0.20	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1757	1568	979	3689	3689	1568
Grp Volume(v), veh/h	286	12	4	1574	296	95
Grp Sat Flow(s),veh/h/ln	1757	1568	979	1845	1845	1568
Q Serve(g_s), s	10.2	0.4	0.1	15.7	1.8	1.4
Cycle Q Clear(g_c), s	10.2	0.4	1.9	15.7	1.8	1.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	349	312	748	2506	2506	1065
V/C Ratio(X)	0.82	0.04	0.01	0.63	0.12	0.09
Avail Cap(c_a), veh/h	937	837	1232	4331	4331	1841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	21.2	4.0	5.9	3.7	3.6
Incr Delay (d2), s/veh	4.8	0.1	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.8	0.2	0.0	5.8	0.7	0.4
Lane Grp Delay (d), s/veh	29.9	21.3	4.0	6.1	3.7	3.6
Lane Grp LOS	C	C	A	A	A	A
Approach Vol, veh/h	298			1578	391	
Approach Delay, s/veh	29.6			6.1	3.7	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				48.6	48.6	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				77.0	77.0	
Max Q Clear Time (g_c+I1), s				17.7	3.8	
Green Ext Time (p_c), s				26.9	28.9	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			8.8			
HCM 2010 LOS			A			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	9	0	7	13	1356	0	1	2	275	8	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	146	393	0	15	118	50	7	28	56	544	700	1189
Arrive On Green	0.08	0.11	0.00	0.01	0.03	0.00	0.00	0.05	0.05	0.16	0.38	0.38
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	103	10	0	8	14	0	0	0	3	299	9	43
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	1.4	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.9	0.1	0.1
Cycle Q Clear(g_c), s	1.4	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.9	0.1	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	146	393	0	15	118	50	7	0	85	544	700	1189
V/C Ratio(X)	0.71	0.03	0.00	0.53	0.12	0.00	0.00	0.00	0.04	0.55	0.01	0.04
Avail Cap(c_a), veh/h	444	11503	0	296	11192	4757	296	0	1182	1292	1710	2907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.6	9.5	0.0	11.7	11.2	0.0	0.0	0.0	10.7	9.2	4.6	0.5
Incr Delay (d2), s/veh	6.1	0.0	0.0	25.3	0.4	0.0	0.0	0.0	0.2	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Lane Grp Delay (d), s/veh	16.7	9.5	0.0	37.1	11.6	0.0	0.0	0.0	10.9	10.1	4.6	0.5
Lane Grp LOS	B	A		D	B				B	B	A	A
Approach Vol, veh/h		113			22			3			351	
Approach Delay, s/veh		16.1			20.9			10.9			8.7	
Approach LOS		B			C			B			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	6.0	6.5		4.2	4.8		0.0	5.2		7.8	13.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	74.0		4.0	72.0		4.0	17.0		9.0	22.0	
Max Q Clear Time (g_c+I1), s	3.4	2.1		2.1	2.1		0.0	2.0		3.9	2.1	
Green Ext Time (p_c), s	0.1	0.4		0.0	0.1		0.0	0.1		0.5	0.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				11.0								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	214	54	50	390	204	125	421	52	63	104	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	341	1098	272	506	881	456	663	716	89	349	821	698
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	774	2857	708	1072	2292	1188	1246	1609	200	874	1845	1568
Grp Volume(v), veh/h	45	149	143	54	340	306	136	0	515	68	113	14
Grp Sat Flow(s),veh/h/ln	774	1845	1720	1072	1845	1635	1246	0	1809	874	1845	1568
Q Serve(g_s), s	2.2	2.5	2.6	1.7	6.5	6.6	3.4	0.0	10.4	3.1	1.7	0.2
Cycle Q Clear(g_c), s	8.8	2.5	2.6	4.3	6.5	6.6	5.1	0.0	10.4	13.4	1.7	0.2
Prop In Lane	1.00		0.41	1.00		0.73	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	341	709	661	506	709	628	663	0	805	349	821	698
V/C Ratio(X)	0.13	0.21	0.22	0.11	0.48	0.49	0.21	0.00	0.64	0.19	0.14	0.02
Avail Cap(c_a), veh/h	754	1692	1577	1077	1692	1500	1943	0	2663	1246	2715	2308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	9.7	9.7	11.1	10.9	10.9	9.2	0.0	10.1	15.3	7.7	7.3
Incr Delay (d2), s/veh	0.2	0.1	0.2	0.1	0.5	0.6	0.2	0.0	0.9	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	1.0	1.0	0.4	2.6	2.4	0.9	0.0	4.1	0.6	0.7	0.1
Lane Grp Delay (d), s/veh	14.4	9.8	9.9	11.2	11.4	11.5	9.3	0.0	10.9	15.6	7.8	7.3
Lane Grp LOS	B	A	A	B	B	B	A		B	B	A	A
Approach Vol, veh/h		337			700			651				195
Approach Delay, s/veh		10.4			11.4			10.6				10.5
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs		4			8			2				6
Phs Duration (G+Y+Rc), s		22.0			22.0			24.9				24.9
Change Period (Y+Rc), s		4.0			4.0			4.0				4.0
Max Green Setting (Gmax), s		43.0			43.0			69.0				69.0
Max Q Clear Time (g_c+I1), s		10.8			8.6			12.4				15.4
Green Ext Time (p_c), s		7.2			7.3			5.4				5.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.9								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Baseline +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	182	432	2	9	975	215	6	9	12	207	13	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	235	2138	9	17	1343	295	115	156	161	309	36	353
Arrive On Green	0.13	0.58	0.58	0.01	0.46	0.46	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1757	3671	16	1757	2931	644	222	639	659	1369	147	1443
Grp Volume(v), veh/h	198	236	236	10	665	629	30	0	0	225	0	151
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1731	1520	0	0	1369	0	1590
Q Serve(g_s), s	8.1	4.5	4.5	0.4	22.5	22.7	0.0	0.0	0.0	11.3	0.0	5.8
Cycle Q Clear(g_c), s	8.1	4.5	4.5	0.4	22.5	22.7	6.9	0.0	0.0	18.0	0.0	5.8
Prop In Lane	1.00		0.01	1.00		0.37	0.23		0.43	1.00		0.91
Lane Grp Cap(c), veh/h	235	1074	1073	17	845	793	432	0	0	309	0	389
V/C Ratio(X)	0.84	0.22	0.22	0.58	0.79	0.79	0.07	0.00	0.00	0.73	0.00	0.39
Avail Cap(c_a), veh/h	358	1254	1253	96	979	918	558	0	0	421	0	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.1	7.4	7.4	36.3	16.9	16.9	21.4	0.0	0.0	31.5	0.0	23.2
Incr Delay (d2), s/veh	10.6	0.1	0.1	27.6	3.8	4.2	0.1	0.0	0.0	4.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.2	1.8	1.8	0.3	10.3	9.8	0.4	0.0	0.0	4.4	0.0	2.3
Lane Grp Delay (d), s/veh	41.7	7.5	7.5	63.9	20.6	21.1	21.4	0.0	0.0	35.6	0.0	23.8
Lane Grp LOS	D	A	A	E	C	C	C			D		C
Approach Vol, veh/h		670			1304			30				376
Approach Delay, s/veh		17.6			21.2			21.4				30.9
Approach LOS		B			C			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	14.0	47.3		4.7	38.0			23.3				23.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	15.0	50.0		4.0	39.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	10.1	6.5		2.4	24.7			8.9				20.0
Green Ext Time (p_c), s	0.2	18.2		0.0	9.6			1.6				0.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.7								
HCM 2010 LOS				C								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	194	50	486	11	113	78	917	1161	9	49	868	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	296	311	1598	27	282	264	1163	2390	1016	67	1589	272
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.34	0.65	0.65	0.04	0.34	0.34
Sat Flow, veh/h	1757	1845	3136	163	1673	1568	3408	3689	1568	1757	4606	789
Grp Volume(v), veh/h	211	54	528	135	0	85	997	1262	10	53	755	350
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1836	0	1568	1704	1845	1568	1757	1845	1706
Q Serve(g_s), s	9.4	2.1	8.2	5.4	0.0	3.9	22.5	15.1	0.2	2.5	13.9	14.0
Cycle Q Clear(g_c), s	9.4	2.1	8.2	5.4	0.0	3.9	22.5	15.1	0.2	2.5	13.9	14.0
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	296	311	1598	309	0	264	1163	2390	1016	67	1273	588
V/C Ratio(X)	0.71	0.17	0.33	0.44	0.00	0.32	0.86	0.53	0.01	0.79	0.59	0.60
Avail Cap(c_a), veh/h	383	403	1754	356	0	304	1612	2729	1160	192	1387	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	29.4	11.9	30.8	0.0	30.2	25.3	7.8	5.1	39.3	22.2	22.3
Incr Delay (d2), s/veh	4.3	0.3	0.1	1.0	0.0	0.7	3.6	0.2	0.0	18.0	0.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	1.0	2.9	2.6	0.0	1.6	9.9	6.0	0.1	1.4	6.4	6.1
Lane Grp Delay (d), s/veh	36.7	29.6	12.0	31.8	0.0	30.8	28.9	8.0	5.2	57.3	22.8	23.6
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		793			220			2269			1158	
Approach Delay, s/veh		19.8			31.4			17.1			24.6	
Approach LOS		B			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		17.9			17.9		32.1	57.4		7.2		32.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		39.0	61.0		9.0		31.0
Max Q Clear Time (g_c+I1), s		11.4			7.4		24.5	17.1		4.5		16.0
Green Ext Time (p_c), s		2.5			3.0		3.7	28.3		0.0		12.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.3								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 28: Kirker Pass Rd & Myrtle Dr


























Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	0	98	0	0	0	56	507	3	0	1625	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	166	0	148	467	174	148	77	2867	1219	3	3630	62
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.04	0.78	0.78	0.00	0.67	0.67
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5426	92
Grp Volume(v), veh/h	26	0	107	0	0	0	61	551	3	0	1201	595
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	0.8	0.0	4.1	0.0	0.0	0.0	2.1	2.4	0.0	0.0	9.9	9.9
Cycle Q Clear(g_c), s	0.8	0.0	4.1	0.0	0.0	0.0	2.1	2.4	0.0	0.0	9.9	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	166	0	148	467	174	148	77	2867	1219	3	2468	1223
V/C Ratio(X)	0.16	0.00	0.72	0.00	0.00	0.00	0.79	0.19	0.00	0.00	0.49	0.49
Avail Cap(c_a), veh/h	452	0	403	1273	474	403	310	4030	1713	113	3615	1792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	27.4	0.0	0.0	0.0	29.5	1.8	1.5	0.0	5.1	5.1
Incr Delay (d2), s/veh	0.4	0.0	6.5	0.0	0.0	0.0	16.3	0.0	0.0	0.0	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	0.0	1.8	0.0	0.0	0.0	1.3	0.6	0.0	0.0	3.4	3.4
Lane Grp Delay (d), s/veh	26.3	0.0	33.9	0.0	0.0	0.0	45.8	1.8	1.5	0.0	5.2	5.4
Lane Grp LOS	C		C				D	A	A		A	A
Approach Vol, veh/h		133			0			615			1796	
Approach Delay, s/veh		32.4			0.0			6.2			5.3	
Approach LOS		C						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		9.9			9.9		6.7	52.4		0.0		45.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		11.0	68.0		4.0		61.0
Max Q Clear Time (g_c+I1), s		6.1			0.0		4.1	4.4		0.0		11.9
Green Ext Time (p_c), s		0.4			0.0		0.1	34.1		0.0		29.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			6.9									
HCM 2010 LOS			A									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Baseline +Project AM























3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	65	69	124	377	385	90	67	413	79	50	1527	372
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	91	216	183	439	1163	494	93	2051	382	69	1893	454
Arrive On Green	0.05	0.12	0.12	0.25	0.32	0.32	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4538	846	1757	4316	1035
Grp Volume(v), veh/h	71	75	135	410	418	98	73	363	172	54	1415	649
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1695	1757	1845	1662
Q Serve(g_s), s	4.5	4.2	9.4	25.8	9.9	5.2	4.6	6.8	7.0	3.4	39.5	40.6
Cycle Q Clear(g_c), s	4.5	4.2	9.4	25.8	9.9	5.2	4.6	6.8	7.0	3.4	39.5	40.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		0.62
Lane Grp Cap(c), veh/h	91	216	183	439	1163	494	93	1667	766	69	1618	729
V/C Ratio(X)	0.78	0.35	0.74	0.93	0.36	0.20	0.79	0.22	0.22	0.78	0.87	0.89
Avail Cap(c_a), veh/h	155	261	222	482	1208	513	93	1667	766	140	1665	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	45.9	48.2	41.5	29.9	28.3	52.9	18.8	18.9	53.8	28.9	29.2
Incr Delay (d2), s/veh	13.5	1.0	9.7	24.3	0.2	0.2	34.7	0.1	0.1	16.8	5.4	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	2.1	4.3	14.5	4.7	2.1	3.0	3.0	3.0	1.9	19.3	19.3
Lane Grp Delay (d), s/veh	66.4	46.9	58.0	65.8	30.1	28.5	87.6	18.9	19.0	70.6	34.3	41.8
Lane Grp LOS	E	D	E	E	C	C	F	B	B	E	C	D
Approach Vol, veh/h		281			926			608			2118	
Approach Delay, s/veh		57.1			45.7			27.2			37.5	
Approach LOS		E			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	9.8	17.2		32.3	39.6		10.0	55.1		8.5	53.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	16.0		31.0	37.0		6.0	48.0		9.0	51.0	
Max Q Clear Time (g_c+I1), s	6.5	11.4		27.8	11.9		6.6	9.0		5.4	42.6	
Green Ext Time (p_c), s	0.0	1.8		0.5	4.7		0.0	29.1		0.0	7.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.3								
HCM 2010 LOS				D								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	210	351	34	443	1167	137	151	314	167	273	1075	521
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	286	1246	0	562	1693	0	222	1992	564	366	2227	631
Arrive On Green	0.08	0.23	0.00	0.16	0.31	0.00	0.07	0.36	0.36	0.11	0.40	0.40
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	228	382	0	482	1268	0	164	341	182	297	1168	566
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	7.4	6.4	0.0	15.4	23.1	0.0	5.3	4.7	9.4	9.6	17.9	37.8
Cycle Q Clear(g_c), s	7.4	6.4	0.0	15.4	23.1	0.0	5.3	4.7	9.4	9.6	17.9	37.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	286	1246	0	562	1693	0	222	1992	564	366	2227	631
V/C Ratio(X)	0.80	0.31	0.00	0.86	0.75	0.00	0.74	0.17	0.32	0.81	0.52	0.90
Avail Cap(c_a), veh/h	304	1246	0	730	1925	0	243	1992	564	517	2320	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	36.2	0.0	45.5	35.0	0.0	51.5	24.5	26.0	48.9	25.4	31.3
Incr Delay (d2), s/veh	13.1	0.1	0.0	8.1	1.5	0.0	10.4	0.0	0.3	6.5	0.2	14.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.8	3.0	0.0	7.4	11.0	0.0	2.6	2.2	3.7	4.5	8.3	17.2
Lane Grp Delay (d), s/veh	63.6	36.3	0.0	53.6	36.5	0.0	61.9	24.5	26.3	55.4	25.6	46.1
Lane Grp LOS	E	D		D	D		E	C	C	E	C	D
Approach Vol, veh/h		610			1750			687			2031	
Approach Delay, s/veh		46.5			41.2			33.9			35.6	
Approach LOS		D			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	13.4	29.2		22.5	38.3		11.3	44.3		16.0		49.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	10.0	25.0		24.0	39.0		8.0	38.0		17.0		47.0
Max Q Clear Time (g_c+I1), s	9.4	8.4		17.4	25.1		7.3	11.4		11.6		39.8
Green Ext Time (p_c), s	0.1	10.5		1.0	9.2		0.0	16.7		0.5		5.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			38.6									
HCM 2010 LOS			D									
<b>Notes</b>												














HCM 2010 Signalized Intersection Summary  
 31: Un Rd & Buchanan Rd

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	750	5	9	1159	11	6	0	28	7	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	17	2531	16	18	2525	24	208	0	63	184	0	63
Arrive On Green	0.01	0.69	0.69	0.01	0.69	0.69	0.04	0.00	0.04	0.04	0.00	0.04
Sat Flow, veh/h	1757	3663	22	1757	3648	35	1393	0	1568	1361	0	1568
Grp Volume(v), veh/h	9	410	410	10	637	635	7	0	30	8	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1841	1757	1845	1839	1393	0	1568	1361	0	1568
Q Serve(g_s), s	0.2	4.1	4.1	0.3	7.5	7.6	0.2	0.0	0.9	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.2	4.1	4.1	0.3	7.5	7.6	0.3	0.0	0.9	1.1	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	17	1275	1272	18	1277	1272	208	0	63	184	0	63
V/C Ratio(X)	0.54	0.32	0.32	0.55	0.50	0.50	0.03	0.00	0.47	0.04	0.00	0.06
Avail Cap(c_a), veh/h	227	3373	3365	227	3373	3361	661	0	573	627	0	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.9	2.9	2.9	22.9	3.4	3.4	21.6	0.0	21.8	22.4	0.0	21.5
Incr Delay (d2), s/veh	24.8	0.1	0.1	23.0	0.3	0.3	0.1	0.0	5.4	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.8	0.8	0.2	1.7	1.7	0.1	0.0	0.4	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	47.8	3.0	3.0	45.9	3.7	3.7	21.7	0.0	27.2	22.5	0.0	21.9
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		829			1282			37				12
Approach Delay, s/veh		3.5			4.0			26.2				22.3
Approach LOS		A			A			C				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	36.1		4.5	36.2			5.9				5.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	85.0		6.0	85.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	2.2	6.1		2.3	9.6			2.9				3.1
Green Ext Time (p_c), s	0.0	22.8		0.0	22.6			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.3								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
32: Delta Fair Blvd & Century Blvd

Baseline +Project AM  
3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			
Volume (veh/h)	101	297	716	101	106	298
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	144	2140	1320	187	454	405
Arrive On Green	0.08	0.58	0.42	0.42	0.26	0.26
Sat Flow, veh/h	1757	3689	3163	447	1757	1568
Grp Volume(v), veh/h	110	323	454	434	115	324
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1766	1757	1568
Q Serve(g_s), s	3.0	2.0	9.4	9.4	2.6	9.6
Cycle Q Clear(g_c), s	3.0	2.0	9.4	9.4	2.6	9.6
Prop In Lane	1.00			0.25	1.00	1.00
Lane Grp Cap(c), veh/h	144	2140	770	737	454	405
V/C Ratio(X)	0.77	0.15	0.59	0.59	0.25	0.80
Avail Cap(c_a), veh/h	497	4248	1453	1391	887	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	4.8	11.1	11.1	14.6	17.2
Incr Delay (d2), s/veh	8.2	0.0	0.7	0.8	0.3	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	0.7	3.8	3.7	1.1	0.4
Lane Grp Delay (d), s/veh	30.5	4.8	11.9	11.9	14.9	20.8
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		433	888		439	
Approach Delay, s/veh		11.3	11.9		19.3	
Approach LOS		B	B		B	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	8.0	32.7	24.7			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	57.0	39.0			
Max Q Clear Time (g_c+I1), s	5.0	4.0	11.4			
Green Ext Time (p_c), s	0.2	10.7	9.3			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			13.6			
HCM 2010 LOS			B			
<b>Notes</b>						

### HCM 2010 Signalized Intersection Summary 33: Somersville Rd & Fairview Dr

Baseline +Project AM  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	42	0	102	0	0	0	802	764	0	2	238	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	223	0	141	66	166	0	917	2956	0	2	918	95
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.52	0.80	0.00	0.00	0.56	0.56
Sat Flow, veh/h	1757	0	1568	1264	1845	0	1757	3689	0	1757	3290	340
Grp Volume(v), veh/h	46	0	111	0	0	0	872	830	0	2	144	142
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1264	1845	0	1757	1845	0	1757	1845	1785
Q Serve(g_s), s	2.7	0.0	7.6	0.0	0.0	0.0	51.8	6.3	0.0	0.1	4.5	4.6
Cycle Q Clear(g_c), s	2.7	0.0	7.6	0.0	0.0	0.0	51.8	6.3	0.0	0.1	4.5	4.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.19
Lane Grp Cap(c), veh/h	223	0	141	66	166	0	917	2956	0	2	515	498
V/C Ratio(X)	0.21	0.00	0.79	0.00	0.00	0.00	0.95	0.28	0.00	1.25	0.28	0.28
Avail Cap(c_a), veh/h	322	0	228	136	269	0	1216	2956	0	64	515	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	0.00	0.28	0.28	0.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	46.7	0.0	48.9	0.0	0.0	0.0	24.9	2.8	0.0	54.9	18.5	18.5
Incr Delay (d2), s/veh	0.5	0.0	9.3	0.0	0.0	0.0	4.8	0.1	0.0	425.8	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	0.0	3.4	0.0	0.0	0.0	23.3	2.2	0.0	0.2	2.1	2.0
Lane Grp Delay (d), s/veh	47.2	0.0	58.3	0.0	0.0	0.0	29.8	2.9	0.0	480.7	19.8	19.9
Lane Grp LOS	D		E				C	A		F	B	B
Approach Vol, veh/h		157			0			1702				288
Approach Delay, s/veh		55.0			0.0			16.6				23.1
Approach LOS		E						B				C
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.9			13.9		61.3	92.0		3.9		34.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		76.0	88.0		4.0		16.0
Max Q Clear Time (g_c+I1), s		9.6			0.0		53.8	8.3		2.1		6.6
Green Ext Time (p_c), s		0.3			0.0		3.5	7.3		0.0		1.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.3								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

Baseline +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↶	↷		↷	↶
Volume (veh/h)	11	344	155	22	457	7	614	6	29	8	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	21	519	229	38	809	13	860	8	912	210	47	30
Arrive On Green	0.01	0.21	0.21	0.02	0.22	0.22	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1757	2427	1073	1757	3621	58	1290	14	1568	202	80	51
Grp Volume(v), veh/h	12	283	259	24	253	252	674	0	32	13	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1655	1757	1845	1834	1304	0	1568	333	0	0
Q Serve(g_s), s	0.4	9.4	9.6	0.9	8.1	8.1	0.0	0.0	0.6	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.4	9.4	9.6	0.9	8.1	8.1	30.5	0.0	0.6	30.7	0.0	0.0
Prop In Lane	1.00		0.65	1.00		0.03	0.99		1.00	0.69		0.15
Lane Grp Cap(c), veh/h	21	394	354	38	412	410	868	0	912	287	0	0
V/C Ratio(X)	0.57	0.72	0.73	0.63	0.61	0.61	0.78	0.00	0.04	0.05	0.00	0.00
Avail Cap(c_a), veh/h	107	450	403	107	450	447	1289	0	1385	721	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.3	24.0	24.1	31.9	22.9	23.0	12.1	0.0	5.9	12.5	0.0	0.0
Incr Delay (d2), s/veh	22.0	4.7	5.8	16.1	2.2	2.2	1.8	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	4.7	4.4	0.5	3.8	3.8	8.7	0.0	0.2	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	54.3	28.7	29.9	47.9	25.1	25.1	13.9	0.0	5.9	12.6	0.0	0.0
Lane Grp LOS	D	C	C	D	C	C	B		A	B		
Approach Vol, veh/h		554			529			706				13
Approach Delay, s/veh		29.8			26.2			13.5				12.6
Approach LOS		C			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.8	18.0		5.4	18.7			42.2				42.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0			58.0				58.0
Max Q Clear Time (g_c+I1), s	2.4	11.6		2.9	10.1			32.5				32.7
Green Ext Time (p_c), s	0.0	2.5		0.0	3.1			5.5				5.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.2								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Cumulative Plus Project AM With Bypass























3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕		↕	↕		↕	↕	↕
Volume (veh/h)	0	0	0	161	323	194	745	827	155	268	829	324
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				201	417	265	893	1305	244	358	1376	585
Arrive On Green				0.25	0.25	0.25	0.44	0.72	0.72	0.20	0.37	0.00
Sat Flow, veh/h				789	1636	1041	3408	3025	565	1757	3689	1568
Grp Volume(v), veh/h				400	0	337	810	548	519	291	901	0
Grp Sat Flow(s),veh/h/ln				1805	0	1661	1704	1845	1745	1757	1845	1568
Q Serve(g_s), s				23.1	0.0	20.6	24.1	18.0	18.0	17.2	22.1	0.0
Cycle Q Clear(g_c), s				23.1	0.0	20.6	24.1	18.0	18.0	17.2	22.1	0.0
Prop In Lane				0.44		0.63	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h				460	0	423	893	796	753	358	1376	585
V/C Ratio(X)				0.87	0.00	0.80	0.91	0.69	0.69	0.81	0.65	0.00
Avail Cap(c_a), veh/h				530	0	488	1126	796	753	468	1376	585
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.57	0.57	0.57	1.00	1.00	0.00
Uniform Delay (d), s/veh				38.9	0.0	37.9	29.4	11.2	11.2	41.4	28.3	0.0
Incr Delay (d2), s/veh				13.2	0.0	7.8	5.6	2.8	3.0	8.1	2.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				12.4	0.0	9.7	9.9	6.3	6.0	8.5	10.7	0.0
Lane Grp Delay (d), s/veh				52.0	0.0	45.8	34.9	14.0	14.2	49.5	30.8	0.0
Lane Grp LOS				D		D	C	B	B	D	C	
Approach Vol, veh/h					737			1877			1192	
Approach Delay, s/veh					49.2			23.1			35.4	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					31.8		32.6	51.0		26.2	44.6	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					32.0		36.0	47.0		29.0	40.0	
Max Q Clear Time (g_c+I1), s					25.1		26.1	20.0		19.2	24.1	
Green Ext Time (p_c), s					2.6		2.4	8.2		3.0	6.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					32.0							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Cumulative Plus Project AM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			 					  			 	
Volume (veh/h)	329	0	483	0	0	0	0	1088	276	281	675	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	418	438	745				0	1644	417	473	2548	0
Arrive On Green	0.24	0.00	0.24				0.00	0.39	0.39	0.54	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4262	1081	1757	3689	0
Grp Volume(v), veh/h	358	0	525				0	1024	459	305	734	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1654	1757	1845	0
Q Serve(g_s), s	21.8	0.0	17.1				0.0	26.3	26.3	13.7	0.0	0.0
Cycle Q Clear(g_c), s	21.8	0.0	17.1				0.0	26.3	26.3	13.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	418	438	745				0	1423	638	473	2548	0
V/C Ratio(X)	0.86	0.00	0.70				0.00	0.72	0.72	0.65	0.29	0.00
Avail Cap(c_a), veh/h	551	579	984				0	1423	638	473	2548	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.67	0.67	0.00
Uniform Delay (d), s/veh	40.7	0.0	38.9				0.0	29.1	29.1	22.0	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.0	1.5				0.0	3.2	6.9	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.8	0.0	6.9				0.0	12.7	12.1	5.2	0.1	0.0
Lane Grp Delay (d), s/veh	50.8	0.0	40.4				0.0	32.3	36.0	24.0	0.2	0.0
Lane Grp LOS	D		D					C	D	C	A	
Approach Vol, veh/h		883						1483			1039	
Approach Delay, s/veh		44.6						33.4			7.2	
Approach LOS		D						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		30.5						47.0		34.0	81.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		35.0						43.0		30.0	77.0	
Max Q Clear Time (g_c+I1), s		23.8						28.3		15.7	2.0	
Green Ext Time (p_c), s		2.8						8.8		5.3	7.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.3									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd

Cumulative Plus Project AM With Bypass




























3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	478	4	92	584	287	130	806	59	143	354	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	339	1304	10	127	871	370	402	1090	463	189	643	273
Arrive On Green	0.19	0.36	0.36	0.07	0.24	0.24	0.23	0.30	0.30	0.11	0.17	0.17
Sat Flow, veh/h	1757	3656	28	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	299	262	262	100	635	312	141	876	64	155	385	297
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	15.8	10.2	10.2	5.3	15.1	13.6	6.4	20.9	2.2	8.2	9.2	11.0
Cycle Q Clear(g_c), s	15.8	10.2	10.2	5.3	15.1	13.6	6.4	20.9	2.2	8.2	9.2	11.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	658	656	127	871	370	402	1090	463	189	643	273
V/C Ratio(X)	0.88	0.40	0.40	0.79	0.73	0.84	0.35	0.80	0.14	0.82	0.60	1.09
Avail Cap(c_a), veh/h	498	774	772	240	1006	428	402	1394	592	276	1316	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	23.0	23.0	43.5	33.6	19.5	30.8	31.0	14.9	41.6	36.3	17.4
Incr Delay (d2), s/veh	12.1	0.4	0.4	10.1	2.3	12.7	0.5	2.7	0.1	11.8	0.9	54.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.1	4.7	4.7	2.7	7.2	6.4	2.9	10.0	1.1	4.3	4.4	8.3
Lane Grp Delay (d), s/veh	49.5	23.4	23.4	53.6	35.9	32.2	31.4	33.8	15.1	53.4	37.2	71.8
Lane Grp LOS	D	C	C	D	D	C	C	C	B	D	D	F
Approach Vol, veh/h		823			1047			1081				837
Approach Delay, s/veh		32.9			36.5			32.3				52.4
Approach LOS		C			D			C				D
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	22.4	38.0		10.9	26.5		25.8	32.2		14.3		20.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	27.0	40.0		13.0	26.0		17.0	36.0		15.0		34.0
Max Q Clear Time (g_c+I1), s	17.8	12.2		7.3	17.1		8.4	22.9		10.2		13.0
Green Ext Time (p_c), s	0.6	10.3		0.1	5.4		0.6	5.3		0.2		3.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.0								
HCM 2010 LOS				D								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd






























Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	94	102	30	865	57	113	8	841	336	198	579	73
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	583	612	521	1132	612	521	85	1390	591	257	1753	745
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.38	0.38	0.15	0.48	0.48
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	102	111	33	940	62	123	9	914	365	215	629	79
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.4	3.5	1.2	21.1	1.9	4.7	0.4	17.0	15.7	9.9	8.9	2.3
Cycle Q Clear(g_c), s	3.4	3.5	1.2	21.1	1.9	4.7	0.4	17.0	15.7	9.9	8.9	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	583	612	521	1132	612	521	85	1390	591	257	1753	745
V/C Ratio(X)	0.17	0.18	0.06	0.83	0.10	0.24	0.11	0.66	0.62	0.84	0.36	0.11
Avail Cap(c_a), veh/h	583	612	521	1643	889	756	339	1690	718	424	1868	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	19.7	18.9	25.6	19.2	20.1	37.8	21.4	21.0	34.4	13.8	12.0
Incr Delay (d2), s/veh	0.1	0.1	0.1	2.5	0.1	0.2	0.5	0.7	1.1	7.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	1.6	0.5	8.7	0.8	1.8	0.2	7.6	6.1	4.8	3.9	0.8
Lane Grp Delay (d), s/veh	19.8	19.8	19.0	28.0	19.2	20.3	38.3	22.1	22.1	41.8	13.9	12.1
Lane Grp LOS	B	B	B	C	B	C	D	C	C	D	B	B
Approach Vol, veh/h		246			1125			1288			923	
Approach Delay, s/veh		19.7			26.7			22.2			20.2	
Approach LOS		B			C			C			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		31.5			31.5		8.0	35.3		16.2		43.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			40.0		16.0	38.0		20.0		42.0
Max Q Clear Time (g_c+I1), s		5.5			23.1		2.4	19.0		11.9		10.9
Green Ext Time (p_c), s		4.3			4.4		0.0	12.2		0.4		16.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance





























Cumulative Plus Project AM With Bypass

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



















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 		 		 	 		 	
Volume (veh/h)	130	46	44	1275	15	332	14	755	539	53	1250	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	2	1	2	2	1	2	1
Cap, veh/h	801	841	715	1554	841	1430	24	1687	1434	192	1476	627
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.01	0.46	0.46	0.40	0.40	0.40
Sat Flow, veh/h	1757	1845	1568	3408	1845	3136	1757	3689	3136	377	3689	1568
Grp Volume(v), veh/h	141	50	48	1386	16	361	15	821	586	58	1359	48
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	377	1845	1568
Q Serve(g_s), s	4.4	1.4	1.6	34.4	0.4	6.5	0.8	14.3	11.5	11.7	32.3	1.7
Cycle Q Clear(g_c), s	4.4	1.4	1.6	34.4	0.4	6.5	0.8	14.3	11.5	20.7	32.3	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	801	841	715	1554	841	1430	24	1687	1434	192	1476	627
V/C Ratio(X)	0.18	0.06	0.07	0.89	0.02	0.25	0.62	0.49	0.41	0.30	0.92	0.08
Avail Cap(c_a), veh/h	801	841	715	1738	941	1599	76	1801	1531	193	1481	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	14.0	14.1	23.0	13.8	15.4	45.2	17.5	16.7	26.5	26.3	17.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	5.8	0.0	0.1	22.8	0.2	0.2	0.9	9.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.6	0.6	15.5	0.2	2.5	0.5	6.4	4.4	1.1	16.5	0.7
Lane Grp Delay (d), s/veh	14.9	14.1	14.1	28.8	13.8	15.5	68.0	17.7	16.9	27.4	36.0	17.2
Lane Grp LOS	B	B	B	C	B	B	E	B	B	C	D	B
Approach Vol, veh/h		239			1763			1422			1465	
Approach Delay, s/veh		14.6			26.0			17.9			35.0	
Approach LOS		B			C			B			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2			6	
Phs Duration (G+Y+Rc), s		46.0			46.0		5.3	46.2			40.9	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	
Max Green Setting (Gmax), s		16.0			47.0		4.0	45.0			37.0	
Max Q Clear Time (g_c+I1), s		6.4			36.4		2.8	16.3			34.3	
Green Ext Time (p_c), s		5.9			5.7		0.0	23.0			2.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Cumulative Plus Project AM With Bypass  
3/16/2014





























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	156	601	129	115	535	199	218	657	241	249	314	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	206	870	370	156	765	325	281	1118	475	313	849	286
Arrive On Green	0.12	0.24	0.24	0.09	0.21	0.21	0.16	0.30	0.30	0.18	0.32	0.32
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2641	891
Grp Volume(v), veh/h	170	653	140	125	582	216	237	714	262	271	236	222
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1687
Q Serve(g_s), s	7.8	13.6	6.2	5.8	12.2	10.4	10.8	13.8	11.5	12.4	8.2	8.5
Cycle Q Clear(g_c), s	7.8	13.6	6.2	5.8	12.2	10.4	10.8	13.8	11.5	12.4	8.2	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	206	870	370	156	765	325	281	1118	475	313	593	542
V/C Ratio(X)	0.82	0.75	0.38	0.80	0.76	0.66	0.84	0.64	0.55	0.87	0.40	0.41
Avail Cap(c_a), veh/h	256	939	399	192	805	342	447	1118	475	405	593	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	29.3	26.4	36.8	30.8	30.0	33.7	24.8	24.0	32.9	21.8	21.9
Incr Delay (d2), s/veh	16.1	3.2	0.6	17.4	4.1	4.5	8.2	2.8	4.5	14.5	2.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.4	6.6	2.4	3.3	6.1	4.4	5.4	6.7	5.0	6.7	4.0	3.8
Lane Grp Delay (d), s/veh	51.6	32.4	27.1	54.3	34.8	34.5	41.9	27.6	28.6	47.5	23.8	24.1
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		963			923			1213			729	
Approach Delay, s/veh		35.0			37.4			30.6			32.7	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.7	23.5		11.3	21.1		17.2	29.0		18.7	30.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	21.0		9.0	18.0		21.0	25.0		19.0	23.0	
Max Q Clear Time (g_c+I1), s	9.8	15.6		7.8	14.2		12.8	15.8		14.4	10.5	
Green Ext Time (p_c), s	0.1	3.9		0.0	2.8		0.4	5.5		0.3	6.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				33.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	442	5	2	772	98	103	110	3	145	36	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	163	1141	12	24	1009	858	136	231	6	184	43	208
Arrive On Green	0.09	0.63	0.63	0.01	0.55	0.55	0.08	0.13	0.13	0.10	0.16	0.16
Sat Flow, veh/h	1757	1822	19	1757	1845	1568	1757	1792	45	1757	275	1334
Grp Volume(v), veh/h	138	0	485	2	839	107	112	0	123	158	0	228
Grp Sat Flow(s),veh/h/ln	1757	0	1841	1757	1845	1568	1757	0	1837	1757	0	1609
Q Serve(g_s), s	9.8	0.0	16.9	0.1	47.7	2.6	7.9	0.0	7.9	11.2	0.0	17.6
Cycle Q Clear(g_c), s	9.8	0.0	16.9	0.1	47.7	2.6	7.9	0.0	7.9	11.2	0.0	17.6
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.02	1.00		0.83
Lane Grp Cap(c), veh/h	163	0	1153	24	1009	858	136	0	236	184	0	251
V/C Ratio(X)	0.84	0.00	0.42	0.08	0.83	0.12	0.82	0.00	0.52	0.86	0.00	0.91
Avail Cap(c_a), veh/h	195	0	1153	56	1009	858	153	0	236	209	0	255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.00	0.74	0.24	0.24	0.24	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	0.0	12.0	61.4	23.7	5.5	57.3	0.0	51.3	55.6	0.0	52.4
Incr Delay (d2), s/veh	19.0	0.0	0.8	0.3	2.1	0.1	26.6	0.0	2.0	26.3	0.0	33.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	7.3	0.1	21.3	1.6	4.6	0.0	3.9	6.4	0.0	9.7
Lane Grp Delay (d), s/veh	75.3	0.0	12.8	61.8	25.8	5.6	83.9	0.0	53.4	81.9	0.0	85.6
Lane Grp LOS	E		B	E	C	A	F		D	F		F
Approach Vol, veh/h		623			948			235				386
Approach Delay, s/veh		26.6			23.6			67.9				84.1
Approach LOS		C			C			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	15.7	83.0		5.7	73.0		13.8	20.2		17.2		23.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	14.0	79.0		4.0	69.0		11.0	16.0		15.0		20.0
Max Q Clear Time (g_c+I1), s	11.8	18.9		2.1	49.7		9.9	9.9		13.2		19.6
Green Ext Time (p_c), s	0.1	3.4		0.1	6.4		0.0	0.5		0.1		0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.9								
HCM 2010 LOS				D								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 					 		 
Volume (veh/h)	36	300	24	729	370	150	23	55	86	85	104	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	62	991	79	1561	2643	1123	189	198	168	189	168	25
Arrive On Green	0.04	0.29	0.29	0.46	0.72	0.72	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1757	3374	268	3408	3689	1568	1757	1845	1568	1757	1567	236
Grp Volume(v), veh/h	39	177	175	792	402	163	25	60	93	92	0	130
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1803
Q Serve(g_s), s	1.9	6.4	6.5	14.0	3.0	2.8	1.1	2.6	4.8	4.2	0.0	5.9
Cycle Q Clear(g_c), s	1.9	6.4	6.5	14.0	3.0	2.8	1.1	2.6	4.8	4.2	0.0	5.9
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	62	542	528	1561	2643	1123	189	198	168	189	0	194
V/C Ratio(X)	0.63	0.33	0.33	0.51	0.15	0.15	0.13	0.30	0.55	0.49	0.00	0.67
Avail Cap(c_a), veh/h	144	542	528	1721	2643	1123	371	390	331	371	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	23.5	23.5	16.3	3.8	3.8	34.4	35.1	36.1	35.8	0.0	36.6
Incr Delay (d2), s/veh	10.0	1.6	1.7	0.1	0.1	0.1	0.3	0.8	2.8	1.9	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	3.1	3.1	5.7	1.1	0.9	0.5	1.2	2.0	2.0	0.0	2.9
Lane Grp Delay (d), s/veh	50.5	25.1	25.2	16.4	3.9	4.0	34.7	35.9	38.9	37.7	0.0	40.5
Lane Grp LOS	D	C	C	B	A	A	C	D	D	D		D
Approach Vol, veh/h		391			1357			178			222	
Approach Delay, s/veh		27.7			11.2			37.3			39.4	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	7.0	29.0		43.0	65.0			13.1			13.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	7.0	25.0		43.0	61.0			18.0			18.0	
Max Q Clear Time (g_c+I1), s	3.9	8.5		16.0	5.0			6.8			7.9	
Green Ext Time (p_c), s	1.1	1.8		3.3	3.6			1.3			1.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd



















Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	66	291	49	151	3	637	329	96	8	240	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	435	306	260	100	244	4	792	1711	490	65	1567	666
Arrive On Green	0.13	0.17	0.17	0.03	0.07	0.07	0.23	0.62	0.62	0.04	0.42	0.42
Sat Flow, veh/h	3408	1845	1568	3408	3612	66	3408	2759	790	1757	3689	1568
Grp Volume(v), veh/h	124	72	316	53	84	83	692	238	224	9	261	621
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1705	1757	1845	1568
Q Serve(g_s), s	3.6	3.7	18.0	1.7	4.8	4.8	21.2	6.1	6.2	0.5	4.7	40.9
Cycle Q Clear(g_c), s	3.6	3.7	18.0	1.7	4.8	4.8	21.2	6.1	6.2	0.5	4.7	40.9
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	435	306	260	100	125	124	792	1144	1058	65	1567	666
V/C Ratio(X)	0.29	0.24	1.21	0.53	0.67	0.67	0.87	0.21	0.21	0.14	0.17	0.93
Avail Cap(c_a), veh/h	435	306	260	126	272	270	912	1144	1058	259	1803	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	39.2	45.2	51.9	49.4	49.4	40.1	9.0	9.0	50.5	19.3	29.7
Incr Delay (d2), s/veh	0.4	0.4	126.2	4.3	6.1	6.2	8.5	0.1	0.1	1.0	0.0	16.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	1.8	16.3	0.8	2.5	2.5	10.2	2.7	2.5	0.3	2.2	18.9
Lane Grp Delay (d), s/veh	43.2	39.6	171.4	56.2	55.4	55.6	48.6	9.1	9.1	51.5	19.4	46.6
Lane Grp LOS	D	D	F	E	E	E	D	A	A	D	B	D
Approach Vol, veh/h		512			220			1154			891	
Approach Delay, s/veh		121.8			55.7			32.8			38.6	
Approach LOS		F			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	17.8	22.0		7.2	11.3		29.2	71.2		8.0	50.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	18.0		4.0	16.0		29.0	66.0		16.0	53.0	
Max Q Clear Time (g_c+I1), s	5.6	20.0		3.7	6.8		23.2	8.2		2.5	42.9	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.5		2.0	6.5		0.0	3.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				52.9								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Cumulative Plus Project AM With Bypass

3/16/2014













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	455	0	407	0	0	0	0	743	201	141	520	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1111	0	511				0	1843	783	217	2214	0
Arrive On Green	0.33	0.00	0.33				0.00	0.50	0.50	0.06	0.60	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	495	0	442				0	808	218	153	565	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	12.4	0.0	28.7				0.0	15.2	8.8	4.8	7.8	0.0
Cycle Q Clear(g_c), s	12.4	0.0	28.7				0.0	15.2	8.8	4.8	7.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1111	0	511				0	1843	783	217	2214	0
V/C Ratio(X)	0.45	0.00	0.86				0.00	0.44	0.28	0.71	0.26	0.00
Avail Cap(c_a), veh/h	1479	0	680				0	1843	783	378	2214	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	28.8	0.0	34.3				0.0	17.4	15.8	49.7	10.2	0.0
Incr Delay (d2), s/veh	0.3	0.0	8.9				0.0	0.8	0.9	3.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	12.4				0.0	7.0	3.5	2.2	3.5	0.0
Lane Grp Delay (d), s/veh	29.1	0.0	43.1				0.0	18.1	16.6	53.5	10.5	0.0
Lane Grp LOS	C		D					B	B	D	B	
Approach Vol, veh/h		937						1026			718	
Approach Delay, s/veh		35.7						17.8			19.7	
Approach LOS		D						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		39.3						58.1		10.9	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						49.0		12.0	65.0	
Max Q Clear Time (g_c+I1), s		30.7						17.2		6.8	9.8	
Green Ext Time (p_c), s		4.7						13.3		0.2	15.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	199	257	180	189	739	197	256	621	139	198	383	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	304	1198	509	290	1184	503	326	1143	486	303	786	334
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.19	0.31	0.31	0.09	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	216	279	196	205	803	214	278	675	151	215	416	185
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.1	4.6	8.1	4.9	15.8	9.0	12.8	12.9	6.1	5.1	8.4	8.8
Cycle Q Clear(g_c), s	5.1	4.6	8.1	4.9	15.8	9.0	12.8	12.9	6.1	5.1	8.4	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1198	509	290	1184	503	326	1143	486	303	786	334
V/C Ratio(X)	0.71	0.23	0.38	0.71	0.68	0.43	0.85	0.59	0.31	0.71	0.53	0.55
Avail Cap(c_a), veh/h	531	1679	713	490	1634	695	631	1811	770	531	1060	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	20.6	21.8	37.2	24.6	22.3	32.9	24.4	22.0	37.0	29.1	29.3
Incr Delay (d2), s/veh	3.1	0.1	0.5	3.1	0.7	0.6	6.4	0.5	0.4	3.1	0.6	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	2.1	3.1	2.2	7.1	3.5	6.2	5.9	2.4	2.3	3.9	3.5
Lane Grp Delay (d), s/veh	40.1	20.7	22.2	40.3	25.3	22.9	39.3	24.8	22.4	40.1	29.7	30.7
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		691			1222			1104			816	
Approach Delay, s/veh		27.2			27.4			28.1			32.7	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.4	31.1		11.1	30.8		19.5	29.9		11.4	21.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	38.0		12.0	37.0		30.0	41.0		13.0	24.0	
Max Q Clear Time (g_c+I1), s	7.1	10.1		6.9	17.8		14.8	14.9		7.1	10.8	
Green Ext Time (p_c), s	0.3	10.7		0.3	9.0		0.7	10.0		0.3	7.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.7									
HCM 2010 LOS			C									
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	295	313	868	336	203	208
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	365	1462	1022	868	257	229
Arrive On Green	0.21	0.79	1.00	1.00	0.15	0.15
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	321	340	943	365	221	226
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	23.0	6.1	0.0	0.0	16.0	18.7
Cycle Q Clear(g_c), s	23.0	6.1	0.0	0.0	16.0	18.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	365	1462	1022	868	257	229
V/C Ratio(X)	0.88	0.23	0.92	0.42	0.86	0.99
Avail Cap(c_a), veh/h	365	1462	1022	868	257	229
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.47	0.47	1.00	1.00
Uniform Delay (d), s/veh	49.9	3.4	0.0	0.0	54.2	55.4
Incr Delay (d2), s/veh	18.3	0.3	8.1	0.7	24.4	55.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.1	2.2	2.3	0.2	9.0	18.6
Lane Grp Delay (d), s/veh	68.3	3.8	8.1	0.7	78.6	110.7
Lane Grp LOS	E	A	A	A	E	F
Approach Vol, veh/h		661	1308		447	
Approach Delay, s/veh		35.1	6.1		94.8	
Approach LOS		D	A		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	31.0	107.0	76.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	27.0	103.0	72.0			
Max Q Clear Time (g_c+I1), s	25.0	8.1	2.0			
Green Ext Time (p_c), s	0.7	3.2	12.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			30.4			
HCM 2010 LOS			C			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	444	73	31	1037	12	156	118	59	15	11	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	15	1328	1129	43	1339	15	251	186	93	123	96	169
Arrive On Green	0.02	1.00	1.00	0.02	0.74	0.74	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1757	1845	1568	1757	1820	21	1357	1161	581	1175	603	1055
Grp Volume(v), veh/h	11	483	79	34	0	1140	170	0	192	16	0	33
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1841	1357	0	1742	1175	0	1658
Q Serve(g_s), s	0.8	0.0	0.0	2.4	0.0	53.7	15.4	0.0	13.0	1.6	0.0	2.1
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.4	0.0	53.7	17.5	0.0	13.0	14.6	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.33	1.00		0.64
Lane Grp Cap(c), veh/h	15	1328	1129	43	0	1355	251	0	278	123	0	265
V/C Ratio(X)	0.74	0.36	0.07	0.79	0.00	0.84	0.68	0.00	0.69	0.13	0.00	0.12
Avail Cap(c_a), veh/h	56	1328	1129	84	0	1355	273	0	307	142	0	292
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.44	0.00	0.44	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.3	0.0	0.0	60.7	0.0	11.5	52.5	0.0	49.6	56.5	0.0	45.0
Incr Delay (d2), s/veh	45.7	0.7	0.1	13.2	0.0	3.0	5.9	0.0	5.7	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.2	0.0	1.2	0.0	21.7	5.8	0.0	6.4	0.5	0.0	0.9
Lane Grp Delay (d), s/veh	107.0	0.7	0.1	73.8	0.0	14.4	58.4	0.0	55.3	57.0	0.0	45.2
Lane Grp LOS	F	A	A	E		B	E		E	E		D
Approach Vol, veh/h		573			1174			362				49
Approach Delay, s/veh		2.6			16.1			56.8				49.1
Approach LOS		A			B			E				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.1	94.0		7.1	96.0			24.0				24.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	90.0		6.0	92.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	2.8	2.0		4.4	55.7			19.5				16.6
Green Ext Time (p_c), s	0.2	3.6		0.0	13.3			0.5				0.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

Cumulative Plus Project AM With Bypass  
 3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	532	19	36	1470	42	54	82	94	44	29	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	91	2062	75	52	2001	57	75	115	132	60	58	167
Arrive On Green	0.05	0.58	0.58	0.03	0.56	0.56	0.04	0.15	0.15	0.03	0.14	0.14
Sat Flow, veh/h	1757	3538	128	1757	3569	102	1757	786	900	1757	421	1210
Grp Volume(v), veh/h	71	301	298	39	824	820	59	0	191	48	0	124
Grp Sat Flow(s),veh/h/ln	1757	1845	1822	1757	1845	1827	1757	0	1686	1757	0	1631
Q Serve(g_s), s	3.1	6.3	6.3	1.7	27.4	27.6	2.6	0.0	8.4	2.1	0.0	5.5
Cycle Q Clear(g_c), s	3.1	6.3	6.3	1.7	27.4	27.6	2.6	0.0	8.4	2.1	0.0	5.5
Prop In Lane	1.00		0.07	1.00		0.06	1.00		0.53	1.00		0.74
Lane Grp Cap(c), veh/h	91	1075	1062	52	1034	1024	75	0	247	60	0	225
V/C Ratio(X)	0.78	0.28	0.28	0.76	0.80	0.80	0.79	0.00	0.77	0.80	0.00	0.55
Avail Cap(c_a), veh/h	137	1123	1110	137	1123	1112	114	0	350	114	0	338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.2	8.0	8.0	37.2	13.5	13.5	36.6	0.0	31.7	37.0	0.0	31.0
Incr Delay (d2), s/veh	15.3	0.1	0.1	19.8	3.8	4.0	18.5	0.0	6.8	21.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.7	2.6	2.6	1.0	12.1	12.1	1.5	0.0	4.0	1.3	0.0	2.3
Lane Grp Delay (d), s/veh	51.5	8.2	8.2	57.0	17.3	17.5	55.2	0.0	38.5	58.1	0.0	33.1
Lane Grp LOS	D	A	A	E	B	B	E		D	E		C
Approach Vol, veh/h		670			1683			250				172
Approach Delay, s/veh		12.8			18.3			42.4				40.1
Approach LOS		B			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	8.0	49.0		6.3	47.3		7.3	15.3		6.6		14.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	47.0		6.0	47.0		5.0	16.0		5.0		16.0
Max Q Clear Time (g_c+I1), s	5.1	8.3		3.7	29.6		4.6	10.4		4.1		7.5
Green Ext Time (p_c), s	0.0	24.6		0.0	13.7		0.0	0.9		0.0		1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.5								
HCM 2010 LOS				C								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↙	↗
Volume (veh/h)	549	12	36	911	34	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	958	814	50	1069	625	558
Arrive On Green	0.52	0.52	0.03	0.58	0.36	0.36
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	597	13	39	990	37	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	28.5	0.5	2.7	60.2	1.7	6.4
Cycle Q Clear(g_c), s	28.5	0.5	2.7	60.2	1.7	6.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	958	814	50	1069	625	558
V/C Ratio(X)	0.62	0.02	0.79	0.93	0.06	0.21
Avail Cap(c_a), veh/h	999	849	99	1163	625	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	14.4	59.7	23.6	26.2	27.7
Incr Delay (d2), s/veh	1.1	0.0	23.1	11.9	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.7	0.2	1.6	28.8	0.8	2.6
Lane Grp Delay (d), s/veh	22.3	14.4	82.9	35.5	26.4	28.6
Lane Grp LOS	C	B	F	D	C	C
Approach Vol, veh/h	610			1029	153	
Approach Delay, s/veh	22.1			37.2	28.1	
Approach LOS	C			D	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	68.2		7.5	75.7		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	67.0		7.0	78.0		
Max Q Clear Time (g_c+I1), s	30.5		4.7	62.2		
Green Ext Time (p_c), s	14.9		0.0	9.5		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			31.3			
HCM 2010 LOS			C			
<b>Notes</b>						























HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr













Cumulative Plus Project AM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	555	15	13	1355	4	30	23	40	11	15	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	59	2117	56	24	2102	6	48	90	155	21	22	189
Arrive On Green	0.03	0.59	0.59	0.01	0.57	0.57	0.03	0.15	0.15	0.01	0.13	0.13
Sat Flow, veh/h	1757	3578	95	1757	3678	10	1757	610	1049	1757	164	1428
Grp Volume(v), veh/h	45	311	308	14	739	738	33	0	68	12	0	155
Grp Sat Flow(s),veh/h/ln	1757	1845	1828	1757	1845	1843	1757	0	1659	1757	0	1593
Q Serve(g_s), s	1.7	5.6	5.6	0.5	19.5	19.5	1.3	0.0	2.5	0.5	0.0	6.4
Cycle Q Clear(g_c), s	1.7	5.6	5.6	0.5	19.5	19.5	1.3	0.0	2.5	0.5	0.0	6.4
Prop In Lane	1.00		0.05	1.00		0.01	1.00		0.63	1.00		0.90
Lane Grp Cap(c), veh/h	59	1091	1081	24	1054	1053	48	0	245	21	0	210
V/C Ratio(X)	0.76	0.28	0.29	0.58	0.70	0.70	0.69	0.00	0.28	0.57	0.00	0.74
Avail Cap(c_a), veh/h	129	1329	1317	103	1302	1301	129	0	415	103	0	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	6.8	6.8	33.3	10.4	10.4	32.8	0.0	25.8	33.4	0.0	28.4
Incr Delay (d2), s/veh	17.9	0.1	0.1	20.4	1.3	1.3	16.1	0.0	0.6	22.3	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	2.2	2.2	0.4	8.2	8.2	0.8	0.0	1.0	0.3	0.0	2.8
Lane Grp Delay (d), s/veh	50.5	7.0	7.0	53.8	11.7	11.7	48.9	0.0	26.4	55.7	0.0	33.3
Lane Grp LOS	D	A	A	D	B	B	D		C	E		C
Approach Vol, veh/h		664			1491			101				167
Approach Delay, s/veh		9.9			12.1			33.7				34.9
Approach LOS		A			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	6.3	44.2		4.9	42.9		5.9	14.0		4.8		13.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	5.0	49.0		4.0	48.0		5.0	17.0		4.0		16.0
Max Q Clear Time (g_c+I1), s	3.7	7.6		2.5	21.5		3.3	4.5		2.5		8.4
Green Ext Time (p_c), s	0.0	22.7		0.0	17.4		0.0	1.0		0.0		0.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				14.0								
HCM 2010 LOS				B								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	640	16	22	885	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	783	666	193	1066	589	526
Arrive On Green	0.42	0.42	0.11	0.58	0.34	0.34
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	696	17	24	962	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	32.2	0.6	1.1	42.5	2.4	4.0
Cycle Q Clear(g_c), s	32.2	0.6	1.1	42.5	2.4	4.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	783	666	193	1066	589	526
V/C Ratio(X)	0.89	0.03	0.12	0.90	0.11	0.18
Avail Cap(c_a), veh/h	1517	1290	209	1817	589	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	15.5	37.1	17.2	21.2	21.7
Incr Delay (d2), s/veh	3.7	0.0	0.3	3.8	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	14.7	0.2	0.5	17.7	1.1	1.6
Lane Grp Delay (d), s/veh	28.2	15.5	37.4	21.0	21.6	22.5
Lane Grp LOS	C	B	D	C	C	C
Approach Vol, veh/h	713			986	164	
Approach Delay, s/veh	27.9			21.4	22.1	
Approach LOS	C			C	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	43.2		14.2	57.4		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	76.0		11.0	91.0		
Max Q Clear Time (g_c+I1), s	34.2		3.1	44.5		
Green Ext Time (p_c), s	5.0		4.0	8.9		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			24.0			
HCM 2010 LOS			C			
<b>Notes</b>						




















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	34	46	225	83	32	228	522	162	26	568	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	410	222	189	410	152	59	594	2879	871	41	2045	869
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.06	0.23	0.23	0.02	0.55	0.55
Sat Flow, veh/h	3408	1845	1568	3408	1266	492	3408	4082	1234	1757	3689	1568
Grp Volume(v), veh/h	124	37	50	245	0	125	248	511	232	28	617	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1627	1757	1845	1568
Q Serve(g_s), s	2.6	1.4	2.3	5.4	0.0	5.3	5.6	8.8	9.1	1.3	7.1	8.8
Cycle Q Clear(g_c), s	2.6	1.4	2.3	5.4	0.0	5.3	5.6	8.8	9.1	1.3	7.1	8.8
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	410	222	189	410	0	211	594	2602	1147	41	2045	869
V/C Ratio(X)	0.30	0.17	0.27	0.60	0.00	0.59	0.42	0.20	0.20	0.69	0.30	0.36
Avail Cap(c_a), veh/h	773	418	355	944	0	487	859	2602	1147	177	2045	869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	31.3	31.7	33.1	0.0	33.1	33.5	12.4	12.5	38.5	9.5	9.8
Incr Delay (d2), s/veh	0.4	0.4	0.7	1.4	0.0	2.6	0.5	0.2	0.4	18.5	0.4	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.7	0.9	2.4	0.0	2.5	2.6	4.5	4.2	0.8	3.0	3.4
Lane Grp Delay (d), s/veh	32.3	31.7	32.5	34.5	0.0	35.7	34.0	12.5	12.9	57.0	9.9	11.0
Lane Grp LOS	C	C	C	C		D	C	B	B	E	A	B
Approach Vol, veh/h		211			370			991			957	
Approach Delay, s/veh		32.2			34.9			18.0			11.6	
Approach LOS		C			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.5			13.5		17.8	60.0		5.8		48.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			22.0		20.0	56.0		8.0		44.0
Max Q Clear Time (g_c+I1), s		4.6			7.4		7.6	11.1		3.3		10.8
Green Ext Time (p_c), s		2.1			2.1		4.7	7.1		0.0		7.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.2								
HCM 2010 LOS				B								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	236	293	553	602	464	316
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	775	357	716	3882	2522	715
Arrive On Green	0.23	0.23	0.07	0.23	0.46	0.46
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	257	318	601	654	504	343
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	7.1	22.1	19.6	10.6	6.1	17.2
Cycle Q Clear(g_c), s	7.1	22.1	19.6	10.6	6.1	17.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	775	357	716	3882	2522	715
V/C Ratio(X)	0.33	0.89	0.84	0.17	0.20	0.48
Avail Cap(c_a), veh/h	999	459	1120	3882	2522	715
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.91	0.91
Uniform Delay (d), s/veh	36.3	42.2	50.5	17.0	18.3	21.3
Incr Delay (d2), s/veh	0.2	16.1	3.2	0.1	0.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.1	1.6	9.4	5.4	2.8	7.1
Lane Grp Delay (d), s/veh	36.6	58.3	53.8	17.1	18.5	23.4
Lane Grp LOS	D	E	D	B	B	C
Approach Vol, veh/h	575			1255	847	
Approach Delay, s/veh	48.6			34.7	20.5	
Approach LOS	D			C	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			27.7	83.0	55.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			37.0	79.0	38.0	
Max Q Clear Time (g_c+I1), s			21.6	12.6	19.2	
Green Ext Time (p_c), s			2.1	13.5	9.2	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			33.2			
HCM 2010 LOS			C			
<b>Notes</b>						


























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	228	0	290	0	0	0	0	863	495	148	646	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	439	238	404				0	3868	1096	223	4427	0
Arrive On Green	0.13	0.00	0.13				0.00	1.00	1.00	0.13	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	248	0	315				0	938	538	161	702	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.7	0.0	10.9				0.0	0.0	0.0	5.1	0.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	10.9				0.0	0.0	0.0	5.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	439	238	404				0	3868	1096	223	4427	0
V/C Ratio(X)	0.56	0.00	0.78				0.00	0.24	0.49	0.72	0.16	0.00
Avail Cap(c_a), veh/h	666	361	613				0	3868	1096	485	4427	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	0.79	0.79	0.94	0.94	0.00
Uniform Delay (d), s/veh	46.0	0.0	47.4				0.0	0.0	0.0	47.9	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	3.6				0.0	0.1	1.2	4.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	0.0	4.6				0.0	0.0	0.4	2.3	0.0	0.0
Lane Grp Delay (d), s/veh	47.2	0.0	51.1				0.0	0.1	1.2	52.0	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		563						1476			863	
Approach Delay, s/veh		49.3						0.5			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		18.5						82.6		11.4	94.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		22.0						70.0		16.0	90.0	
Max Q Clear Time (g_c+I1), s		12.9						2.0		7.1	2.0	
Green Ext Time (p_c), s		1.6						25.8		0.3	27.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.7									
HCM 2010 LOS			B									
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd













Cumulative Plus Project AM With Bypass  
 3/16/2014



























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	288	126	7	47	345	452	97	568	19	150	405	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1533	776	45	790	830	705	292	1892	64	236	954	405
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.05	0.12	0.12	0.02	0.09	0.09
Sat Flow, veh/h	3408	1726	101	1757	1845	1568	1757	5322	180	3408	3689	1568
Grp Volume(v), veh/h	313	0	145	51	375	491	105	427	211	163	440	335
Grp Sat Flow(s),veh/h/ln	1704	0	1827	1757	1845	1568	1757	1845	1813	1704	1845	1568
Q Serve(g_s), s	5.3	0.0	4.5	1.6	13.4	24.0	5.5	10.2	10.2	4.5	10.9	20.1
Cycle Q Clear(g_c), s	5.3	0.0	4.5	1.6	13.4	24.0	5.5	10.2	10.2	4.5	10.9	20.1
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	1533	0	822	790	830	705	292	1312	645	236	954	405
V/C Ratio(X)	0.20	0.00	0.18	0.06	0.45	0.70	0.36	0.33	0.33	0.69	0.46	0.83
Avail Cap(c_a), veh/h	1533	0	822	790	830	705	292	1312	645	356	1157	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.75	0.75	0.99	0.99	0.99	0.98	0.98	0.98
Uniform Delay (d), s/veh	15.9	0.0	15.7	14.9	18.2	21.1	40.3	31.7	31.7	45.7	37.4	41.6
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	1.3	4.3	0.7	0.7	1.3	3.5	0.3	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	0.0	2.0	0.7	6.2	9.8	2.6	5.2	5.3	2.2	5.5	9.6
Lane Grp Delay (d), s/veh	16.0	0.0	15.8	15.0	19.5	25.3	41.0	32.3	33.0	49.2	37.7	50.9
Lane Grp LOS	B		B	B	B	C	D	C	C	D	D	D
Approach Vol, veh/h		458			917			743			938	
Approach Delay, s/veh		16.0			22.4			33.8			44.4	
Approach LOS		B			C			C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		47.0			47.0		19.9	38.0		10.6		28.7
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			43.0		14.0	34.0		10.0		30.0
Max Q Clear Time (g_c+I1), s		7.3			26.0		7.5	12.2		6.5		22.1
Green Ext Time (p_c), s		4.6			6.2		0.5	4.2		0.2		2.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Cumulative Plus Project AM With Bypass  
 3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	425	244	37	27	384	433	416	699	58	43	197	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	464	1714	729	37	409	347	449	1156	96	60	452	192
Arrive On Green	0.26	0.46	0.00	0.02	0.22	0.00	0.26	0.34	0.34	0.03	0.12	0.12
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3362	279	1757	3689	1568
Grp Volume(v), veh/h	462	265	0	29	417	0	452	417	406	47	214	161
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1796	1757	1845	1568
Q Serve(g_s), s	30.8	4.9	0.0	1.9	26.0	0.0	30.0	22.5	22.5	3.1	6.3	11.8
Cycle Q Clear(g_c), s	30.8	4.9	0.0	1.9	26.0	0.0	30.0	22.5	22.5	3.1	6.3	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	464	1714	729	37	409	347	449	634	617	60	452	192
V/C Ratio(X)	1.00	0.15	0.00	0.79	1.02	0.00	1.01	0.66	0.66	0.78	0.47	0.84
Avail Cap(c_a), veh/h	464	1714	729	90	409	347	449	634	617	120	534	227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	18.1	0.0	57.2	45.7	0.0	43.7	32.6	32.7	56.2	48.0	50.4
Incr Delay (d2), s/veh	40.6	0.0	0.0	30.5	49.9	0.0	44.2	2.5	2.6	19.2	0.8	20.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	18.7	2.1	0.0	1.2	18.0	0.0	19.0	11.0	10.7	1.7	3.1	5.8
Lane Grp Delay (d), s/veh	83.8	18.2	0.0	87.7	95.6	0.0	87.9	35.1	35.2	75.5	48.7	70.8
Lane Grp LOS	F	B		F	F		F	D	D	E	D	E
Approach Vol, veh/h		727			446			1275			422	
Approach Delay, s/veh		59.9			95.1			53.8			60.1	
Approach LOS		E			F			D			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	35.0	58.6		6.4	30.0		34.0	44.4		8.0	18.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	31.0	51.0		6.0	26.0		30.0	39.0		8.0	17.0	
Max Q Clear Time (g_c+I1), s	32.8	6.9		3.9	28.0		32.0	24.5		5.1	13.8	
Green Ext Time (p_c), s	0.0	4.8		0.0	0.0		0.0	6.3		0.0	0.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				62.7								
HCM 2010 LOS				E								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	175	11	4	1660	314	59
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	239	213	804	2786	2786	1184
Arrive On Green	0.14	0.14	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1757	1568	967	3689	3689	1568
Grp Volume(v), veh/h	190	12	4	1804	341	64
Grp Sat Flow(s),veh/h/ln	1757	1568	967	1845	1845	1568
Q Serve(g_s), s	7.7	0.5	0.1	17.2	1.8	0.8
Cycle Q Clear(g_c), s	7.7	0.5	1.9	17.2	1.8	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	239	213	804	2786	2786	1184
V/C Ratio(X)	0.79	0.06	0.00	0.65	0.12	0.05
Avail Cap(c_a), veh/h	574	512	1232	4418	4418	1878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	27.6	2.7	4.3	2.4	2.3
Incr Delay (d2), s/veh	5.9	0.1	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	0.2	0.0	5.9	0.6	0.2
Lane Grp Delay (d), s/veh	36.7	27.7	2.7	4.6	2.4	2.3
Lane Grp LOS	D	C	A	A	A	A
Approach Vol, veh/h	202			1808	405	
Approach Delay, s/veh	36.1			4.6	2.4	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				59.5	59.5	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				88.0	88.0	
Max Q Clear Time (g_c+I1), s				19.2	3.8	
Green Ext Time (p_c), s				36.3	39.6	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			6.8			
HCM 2010 LOS			A			
<b>Notes</b>						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 					 		 
Volume (veh/h)	186	370	0	4	1284	660	0	1	2	289	9	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	243	2383	0	7	1888	802	2	23	46	404	383	651
Arrive On Green	0.14	0.65	0.00	0.00	0.51	0.00	0.00	0.04	0.04	0.12	0.21	0.21
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	202	402	0	4	1396	0	0	0	3	314	10	77
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	9.4	3.7	0.0	0.2	25.1	0.0	0.0	0.0	0.1	7.5	0.4	1.7
Cycle Q Clear(g_c), s	9.4	3.7	0.0	0.2	25.1	0.0	0.0	0.0	0.1	7.5	0.4	1.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	243	2383	0	7	1888	802	2	0	69	404	383	651
V/C Ratio(X)	0.83	0.17	0.00	0.54	0.74	0.00	0.00	0.00	0.04	0.78	0.03	0.12
Avail Cap(c_a), veh/h	396	3018	0	83	2362	1004	83	0	333	566	591	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	5.9	0.0	41.9	16.2	0.0	0.0	0.0	38.8	36.1	26.6	27.1
Incr Delay (d2), s/veh	7.7	0.0	0.0	48.9	1.0	0.0	0.0	0.0	0.3	4.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.7	1.4	0.0	0.2	11.1	0.0	0.0	0.0	0.1	3.5	0.2	0.6
Lane Grp Delay (d), s/veh	43.1	6.0	0.0	90.9	17.1	0.0	0.0	0.0	39.1	40.6	26.6	27.2
Lane Grp LOS	D	A		F	B				D	D	C	C
Approach Vol, veh/h		604			1400			3			401	
Approach Delay, s/veh		18.4			17.3			39.1			37.7	
Approach LOS		B			B			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	15.7	58.5		4.4	47.2		0.0	7.5		14.0	21.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	19.0	69.0		4.0	54.0		4.0	17.0		14.0	27.0	
Max Q Clear Time (g_c+I1), s	11.4	5.7		2.2	27.1		0.0	2.1		9.5	3.7	
Green Ext Time (p_c), s	0.3	23.9		0.0	16.1		0.0	0.2		0.5	0.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd





















Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	230	59	55	429	223	137	461	57	69	114	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	301	1118	280	478	901	465	653	748	93	315	857	728
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	730	2849	714	1051	2296	1184	1230	1610	199	836	1845	1568
Grp Volume(v), veh/h	53	160	154	60	374	334	149	0	563	75	124	17
Grp Sat Flow(s),veh/h/ln	730	1845	1719	1051	1845	1636	1230	0	1809	836	1845	1568
Q Serve(g_s), s	3.3	3.2	3.3	2.3	8.6	8.7	4.4	0.0	13.5	4.3	2.2	0.3
Cycle Q Clear(g_c), s	12.1	3.2	3.3	5.6	8.6	8.7	6.6	0.0	13.5	17.8	2.2	0.3
Prop In Lane	1.00		0.42	1.00		0.72	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	301	724	674	478	724	642	653	0	841	315	857	728
V/C Ratio(X)	0.18	0.22	0.23	0.13	0.52	0.52	0.23	0.00	0.67	0.24	0.14	0.02
Avail Cap(c_a), veh/h	577	1420	1323	875	1420	1259	1601	0	2235	959	2278	1936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	11.3	11.3	13.2	12.9	13.0	10.5	0.0	11.6	18.5	8.6	8.1
Incr Delay (d2), s/veh	0.3	0.2	0.2	0.1	0.6	0.7	0.2	0.0	0.9	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	1.3	1.3	0.5	3.5	3.2	1.2	0.0	5.4	0.9	0.8	0.1
Lane Grp Delay (d), s/veh	17.8	11.4	11.5	13.3	13.5	13.6	10.7	0.0	12.6	18.9	8.7	8.1
Lane Grp LOS	B	B	B	B	B	B	B		B	B	A	A
Approach Vol, veh/h		367			768			712				216
Approach Delay, s/veh		12.4			13.5			12.2				12.2
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs		4			8			2				6
Phs Duration (G+Y+Rc), s		25.9			25.9			30.0				30.0
Change Period (Y+Rc), s		4.0			4.0			4.0				4.0
Max Green Setting (Gmax), s		43.0			43.0			69.0				69.0
Max Q Clear Time (g_c+I1), s		14.1			10.7			15.5				19.8
Green Ext Time (p_c), s		7.9			8.1			6.2				6.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.7								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Cumulative Plus Project AM With Bypass

3/16/2014




























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	492	2	10	1563	235	7	10	13	226	14	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	236	2442	9	19	1795	172	86	111	108	211	27	275
Arrive On Green	0.13	0.66	0.66	0.01	0.54	0.54	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3673	14	1757	3316	317	187	586	570	1367	144	1446
Grp Volume(v), veh/h	217	269	268	11	934	930	33	0	0	246	0	166
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1789	1343	0	0	1367	0	1590
Q Serve(g_s), s	10.9	5.1	5.1	0.6	42.1	44.4	0.1	0.0	0.0	8.5	0.0	8.4
Cycle Q Clear(g_c), s	10.9	5.1	5.1	0.6	42.1	44.4	8.5	0.0	0.0	17.0	0.0	8.4
Prop In Lane	1.00		0.01	1.00		0.18	0.24		0.42	1.00		0.91
Lane Grp Cap(c), veh/h	236	1226	1225	19	998	968	305	0	0	211	0	302
V/C Ratio(X)	0.92	0.22	0.22	0.59	0.94	0.96	0.11	0.00	0.00	1.17	0.00	0.55
Avail Cap(c_a), veh/h	236	1226	1225	79	1011	981	305	0	0	211	0	302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	5.9	5.9	44.0	19.1	19.6	29.9	0.0	0.0	42.1	0.0	32.7
Incr Delay (d2), s/veh	37.6	0.1	0.1	25.7	15.2	19.7	0.2	0.0	0.0	115.0	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.3	2.0	2.0	0.4	21.9	23.4	0.6	0.0	0.0	11.5	0.0	3.5
Lane Grp Delay (d), s/veh	75.8	6.0	6.0	69.7	34.2	39.2	30.1	0.0	0.0	157.0	0.0	34.8
Lane Grp LOS	E	A	A	E	C	D	C			F		C
Approach Vol, veh/h		754			1875			33				412
Approach Delay, s/veh		26.1			36.9			30.1				107.8
Approach LOS		C			D			C				F
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	16.0	63.4		5.0	52.4			21.0				21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	12.0	57.0		4.0	49.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	12.9	7.1		2.6	46.4			10.5				19.0
Green Ext Time (p_c), s	0.0	32.9		0.0	2.0			1.1				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				43.7								
HCM 2010 LOS				D								
<b>Notes</b>												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	218	55	545	12	124	85	1006	1270	10	54	950	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	300	315	1674	28	286	267	1238	2407	1023	76	1527	264
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.36	0.65	0.65	0.04	0.33	0.33
Sat Flow, veh/h	1757	1845	3136	161	1675	1568	3408	3689	1568	1757	4598	795
Grp Volume(v), veh/h	237	60	592	148	0	92	1093	1380	11	59	828	384
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1837	0	1568	1704	1845	1568	1757	1845	1704
Q Serve(g_s), s	11.6	2.5	9.7	6.5	0.0	4.6	26.9	18.6	0.2	3.0	17.3	17.4
Cycle Q Clear(g_c), s	11.6	2.5	9.7	6.5	0.0	4.6	26.9	18.6	0.2	3.0	17.3	17.4
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	300	315	1674	313	0	267	1238	2407	1023	76	1225	566
V/C Ratio(X)	0.79	0.19	0.35	0.47	0.00	0.34	0.88	0.57	0.01	0.78	0.68	0.68
Avail Cap(c_a), veh/h	333	350	1734	328	0	280	1522	2595	1103	157	1277	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	31.9	12.0	33.5	0.0	32.7	26.7	8.6	5.4	42.5	25.8	25.8
Incr Delay (d2), s/veh	11.1	0.3	0.1	1.1	0.0	0.8	5.5	0.3	0.0	15.9	1.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.1	1.2	3.5	3.1	0.0	1.9	12.3	7.6	0.1	1.7	8.1	7.7
Lane Grp Delay (d), s/veh	46.7	32.1	12.1	34.6	0.0	33.5	32.3	8.9	5.5	58.3	27.1	28.7
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		889			240			2484				1271
Approach Delay, s/veh		22.7			34.2			19.2				29.1
Approach LOS		C			C			B				C
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		19.3			19.3		36.5	62.5		7.9		33.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			16.0		40.0	63.0		8.0		31.0
Max Q Clear Time (g_c+I1), s		13.6			8.5		28.9	20.6		5.0		19.4
Green Ext Time (p_c), s		1.7			3.0		3.6	30.7		0.0		10.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					23.1							
HCM 2010 LOS					C							
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr

Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	26	0	107	0	0	0	61	559	3	0	1786	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	176	0	157	495	184	157	84	2897	1231	3	3687	65
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.05	0.79	0.79	0.00	0.68	0.68
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5422	95
Grp Volume(v), veh/h	28	0	116	0	0	0	66	608	3	0	1320	655
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	3.0	0.0	0.0	12.4	12.5
Cycle Q Clear(g_c), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	3.0	0.0	0.0	12.4	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	176	0	157	495	184	157	84	2897	1231	3	2509	1243
V/C Ratio(X)	0.16	0.00	0.74	0.00	0.00	0.00	0.78	0.21	0.00	0.00	0.53	0.53
Avail Cap(c_a), veh/h	403	0	360	1136	423	360	252	3596	1528	101	3279	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	30.5	0.0	0.0	0.0	32.8	1.9	1.6	0.0	5.6	5.6
Incr Delay (d2), s/veh	0.4	0.0	6.7	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.0	2.2	0.0	0.0	0.0	1.5	0.8	0.0	0.0	4.5	4.5
Lane Grp Delay (d), s/veh	29.1	0.0	37.2	0.0	0.0	0.0	47.3	2.0	1.6	0.0	5.7	5.9
Lane Grp LOS	C		D				D	A	A		A	A
Approach Vol, veh/h		144			0			677			1975	
Approach Delay, s/veh		35.6			0.0			6.4			5.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		11.0			11.0		7.3	58.8		0.0		51.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		10.0	68.0		4.0		62.0
Max Q Clear Time (g_c+I1), s		7.0			0.0		4.6	5.0		0.0		14.5
Green Ext Time (p_c), s		0.4			0.0		0.0	39.6		0.0		33.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				7.5								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Cumulative Plus Project AM With Bypass

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	75	136	412	421	98	73	456	86	55	1678	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	361	208	177	450	602	256	90	2052	376	77	1919	454
Arrive On Green	0.21	0.11	0.11	0.26	0.16	0.16	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4553	834	1757	4329	1024
Grp Volume(v), veh/h	78	82	148	448	458	107	79	400	189	60	1547	720
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1697	1757	1845	1664
Q Serve(g_s), s	4.3	4.8	10.8	29.8	13.9	6.2	5.2	7.8	8.1	4.0	47.1	49.7
Cycle Q Clear(g_c), s	4.3	4.8	10.8	29.8	13.9	6.2	5.2	7.8	8.1	4.0	47.1	49.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		0.62
Lane Grp Cap(c), veh/h	361	208	177	450	602	256	90	1663	765	77	1636	738
V/C Ratio(X)	0.22	0.39	0.84	1.00	0.76	0.42	0.88	0.24	0.25	0.78	0.95	0.98
Avail Cap(c_a), veh/h	361	252	214	450	1071	455	90	1663	765	135	1638	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	48.3	50.9	43.5	46.8	33.0	55.2	19.8	19.9	55.4	31.3	32.0
Incr Delay (d2), s/veh	0.3	1.2	21.0	41.2	2.0	1.1	57.0	0.1	0.2	15.4	11.8	27.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	2.4	5.4	18.6	6.8	2.5	3.8	3.6	3.5	2.1	24.4	26.1
Lane Grp Delay (d), s/veh	39.0	49.5	72.0	84.7	48.8	34.1	112.2	19.9	20.1	70.9	43.1	58.9
Lane Grp LOS	D	D	E	F	D	C	F	B	C	E	D	E
Approach Vol, veh/h		308			1013			668			2327	
Approach Delay, s/veh		57.6			63.2			30.9			48.7	
Approach LOS		E			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	28.1	17.2		34.0	23.1		10.0	56.8		9.1	55.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	16.0		30.0	34.0		6.0	49.0		9.0	52.0	
Max Q Clear Time (g_c+I1), s	6.3	12.8		31.8	15.9		7.2	10.1		6.0	51.7	
Green Ext Time (p_c), s	0.9	0.4		0.0	3.2		0.0	31.7		0.0	0.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				50.0								
HCM 2010 LOS				D								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
30: Ygnacio Valley Rd & Clayton Blvd














Cumulative Plus Project AM With Bypass  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	231	384	37	485	1277	150	165	346	183	300	1182	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	307	1262	0	605	1747	0	234	1887	535	393	2146	608
Arrive On Green	0.09	0.23	0.00	0.18	0.32	0.00	0.07	0.34	0.34	0.12	0.39	0.39
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	251	417	0	527	1388	0	179	376	199	326	1285	621
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Cycle Q Clear(g_c), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1262	0	605	1747	0	234	1887	535	393	2146	608
V/C Ratio(X)	0.82	0.33	0.00	0.87	0.79	0.00	0.77	0.20	0.37	0.83	0.60	1.02
Avail Cap(c_a), veh/h	323	1262	0	764	1907	0	235	1887	535	529	2146	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	37.4	0.0	46.4	36.3	0.0	53.1	27.0	28.9	50.2	28.3	35.5
Incr Delay (d2), s/veh	14.6	0.2	0.0	8.9	2.2	0.0	13.9	0.1	0.4	8.0	0.5	42.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.5	0.0	8.4	12.8	0.0	3.1	2.6	4.5	5.2	10.1	24.7
Lane Grp Delay (d), s/veh	66.4	37.5	0.0	55.3	38.5	0.0	67.0	27.1	29.3	58.2	28.8	77.6
Lane Grp LOS	E	D		E	D		E	C	C	E	C	F
Approach Vol, veh/h		668			1915			754			2232	
Approach Delay, s/veh		48.4			43.1			37.2			46.7	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	14.4	30.5		24.6	40.6		12.0	43.6		17.4	49.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	25.0		26.0	40.0		8.0	35.0		18.0	45.0	
Max Q Clear Time (g_c+I1), s	10.4	9.3		19.5	28.6		8.0	13.1		12.9	47.0	
Green Ext Time (p_c), s	0.1	10.9		1.2	8.1		0.0	16.0		0.5	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				44.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd






















Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	692	5	10	999	12	7	0	31	8	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	18	2346	16	20	2335	28	241	0	72	215	0	72
Arrive On Green	0.01	0.64	0.64	0.01	0.64	0.64	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1757	3661	24	1757	3638	44	1393	0	1568	1356	0	1568
Grp Volume(v), veh/h	10	379	378	11	551	548	8	0	34	9	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1837	1393	0	1568	1356	0	1568
Q Serve(g_s), s	0.2	3.7	3.7	0.2	6.1	6.1	0.2	0.0	0.8	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.2	3.7	3.7	0.2	6.1	6.1	0.3	0.0	0.8	1.1	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1182	1179	20	1184	1179	241	0	72	215	0	72
V/C Ratio(X)	0.54	0.32	0.32	0.54	0.47	0.47	0.03	0.00	0.47	0.04	0.00	0.06
Avail Cap(c_a), veh/h	354	3758	3749	354	3758	3742	843	0	749	800	0	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	3.2	3.2	19.5	3.6	3.6	18.3	0.0	18.5	19.0	0.0	18.1
Incr Delay (d2), s/veh	22.4	0.2	0.2	20.8	0.3	0.3	0.1	0.0	4.8	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.8	0.8	0.2	1.3	1.3	0.1	0.0	0.4	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	42.0	3.4	3.4	40.4	3.9	3.9	18.4	0.0	23.3	19.1	0.0	18.5
Lane Grp LOS	D	A	A	D	A	A	B		C	B		B
Approach Vol, veh/h		767			1110			42				13
Approach Delay, s/veh		3.9			4.3			22.3				18.9
Approach LOS		A			A			C				B
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	29.5		4.5	29.5			5.8				5.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	81.0		8.0	81.0			19.0				19.0
Max Q Clear Time (g_c+I1), s	2.2	5.7		2.2	8.1			2.8				3.1
Green Ext Time (p_c), s	0.0	17.5		0.0	17.5			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.6								
HCM 2010 LOS				A								
<b>Notes</b>												

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			
Volume (veh/h)	110	325	782	116	118	326
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	157	2170	1345	199	475	424
Arrive On Green	0.09	0.59	0.43	0.43	0.27	0.27
Sat Flow, veh/h	1757	3689	3141	466	1757	1568
Grp Volume(v), veh/h	120	353	499	477	128	354
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1762	1757	1568
Q Serve(g_s), s	3.8	2.5	12.0	12.0	3.2	12.0
Cycle Q Clear(g_c), s	3.8	2.5	12.0	12.0	3.2	12.0
Prop In Lane	1.00			0.26	1.00	1.00
Lane Grp Cap(c), veh/h	157	2170	790	755	475	424
V/C Ratio(X)	0.77	0.16	0.63	0.63	0.27	0.84
Avail Cap(c_a), veh/h	435	3789	1306	1248	747	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	5.3	12.7	12.7	16.2	19.4
Incr Delay (d2), s/veh	7.6	0.0	0.8	0.9	0.3	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.9	5.0	4.8	1.4	0.6
Lane Grp Delay (d), s/veh	32.8	5.3	13.5	13.5	16.5	24.8
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		473	976		482	
Approach Delay, s/veh		12.3	13.5		22.6	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	9.0	37.2	28.2			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	58.0	40.0			
Max Q Clear Time (g_c+I1), s	5.8	4.5	14.0			
Green Ext Time (p_c), s	0.2	12.4	10.2			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			15.5			
HCM 2010 LOS			B			
<b>Notes</b>						





















HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	114	0	0	0	882	478	0	2	291	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	237	0	154	65	181	0	1001	2932	0	2	746	68
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.57	0.79	0.00	0.00	0.22	0.22
Sat Flow, veh/h	1757	0	1568	1250	1845	0	1757	3689	0	1757	3332	304
Grp Volume(v), veh/h	50	0	124	0	0	0	959	520	0	2	174	171
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1250	1845	0	1757	1845	0	1757	1845	1791
Q Serve(g_s), s	2.9	0.0	8.6	0.0	0.0	0.0	57.3	3.7	0.0	0.1	9.0	9.1
Cycle Q Clear(g_c), s	2.9	0.0	8.6	0.0	0.0	0.0	57.3	3.7	0.0	0.1	9.0	9.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.17
Lane Grp Cap(c), veh/h	237	0	154	65	181	0	1001	2932	0	2	413	401
V/C Ratio(X)	0.21	0.00	0.81	0.00	0.00	0.00	0.96	0.18	0.00	1.26	0.42	0.43
Avail Cap(c_a), veh/h	319	0	227	123	267	0	1190	2932	0	63	413	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.40	0.40	0.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	46.4	0.0	48.9	0.0	0.0	0.0	22.6	2.7	0.0	55.4	36.8	36.9
Incr Delay (d2), s/veh	0.4	0.0	12.3	0.0	0.0	0.0	8.1	0.1	0.0	390.0	2.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	4.0	0.0	0.0	0.0	26.2	1.3	0.0	0.2	4.5	4.4
Lane Grp Delay (d), s/veh	46.8	0.0	61.2	0.0	0.0	0.0	30.7	2.8	0.0	445.3	39.2	39.4
Lane Grp LOS	D		E				C	A		F	D	D
Approach Vol, veh/h		174			0			1479			347	
Approach Delay, s/veh		57.1			0.0			20.9			41.6	
Approach LOS		E						C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		14.9			14.9		67.1	92.0		3.9		28.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		75.0	88.0		4.0		17.0
Max Q Clear Time (g_c+I1), s		10.6			0.0		59.3	5.7		2.1		11.1
Green Ext Time (p_c), s		0.3			0.0		3.8	4.1		0.0		1.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					27.6							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
34: Fairview Dr & Delta Fair Blvd

Cumulative Plus Project AM With Bypass  
3/16/2014

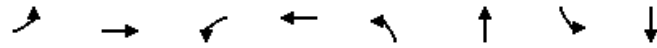
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	376	174	24	500	8	681	7	32	9	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	22	493	225	39	779	13	903	9	959	190	38	24
Arrive On Green	0.01	0.21	0.21	0.02	0.22	0.22	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1757	2400	1096	1757	3619	60	1320	14	1568	176	62	40
Grp Volume(v), veh/h	13	313	285	26	277	275	748	0	35	14	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1651	1757	1845	1834	1334	0	1568	278	0	0
Q Serve(g_s), s	0.6	12.2	12.4	1.1	10.4	10.4	0.0	0.0	0.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.6	12.2	12.4	1.1	10.4	10.4	37.9	0.0	0.7	38.2	0.0	0.0
Prop In Lane	1.00		0.66	1.00		0.03	0.99		1.00	0.71		0.14
Lane Grp Cap(c), veh/h	22	379	339	39	397	395	912	0	959	253	0	0
V/C Ratio(X)	0.58	0.83	0.84	0.66	0.70	0.70	0.82	0.00	0.04	0.06	0.00	0.00
Avail Cap(c_a), veh/h	94	395	353	94	397	395	1140	0	1216	486	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.7	28.4	28.5	36.3	27.1	27.1	13.0	0.0	5.8	15.0	0.0	0.0
Incr Delay (d2), s/veh	22.0	13.1	15.8	17.5	5.3	5.3	4.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	6.9	6.6	0.7	5.3	5.3	11.8	0.0	0.2	0.2	0.0	0.0
Lane Grp Delay (d), s/veh	58.8	41.5	44.4	53.8	32.4	32.4	16.9	0.0	5.8	15.0	0.0	0.0
Lane Grp LOS	E	D	D	D	C	C	B		A	B		
Approach Vol, veh/h		611			578			783				14
Approach Delay, s/veh		43.2			33.4			16.4				15.0
Approach LOS		D			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.9	19.4		5.7	20.1			49.8				49.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0			58.0				58.0
Max Q Clear Time (g_c+I1), s	2.6	14.4		3.1	12.4			39.9				40.2
Green Ext Time (p_c), s	0.0	1.0		0.0	2.2			5.6				5.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.6								
HCM 2010 LOS				C								
<b>Notes</b>												

Queues

Existing AM

36: Meadows Ave & Buchanan Rd

3/17/2014



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	480	33	1040	36	32	20	18
v/c Ratio	0.26	0.45	0.39	0.96	0.09	0.07	0.05	0.03
Control Delay	67.5	15.7	73.5	43.6	35.2	12.8	34.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.5	15.7	73.5	43.6	35.2	12.8	34.8	0.1
Queue Length 50th (ft)	18	214	28	797	23	1	12	0
Queue Length 95th (ft)	48	297	64	#1139	51	27	34	0
Internal Link Dist (ft)		1192		1986		545		245
Turn Bay Length (ft)	150		200		100		100	
Base Capacity (vph)	86	1144	86	1154	409	492	403	593
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.42	0.38	0.90	0.09	0.07	0.05	0.03

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.



Queues  
15: Tuscany Meadows Dr & Buchanan Rd

Existing +Project AM  
3/17/2014



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	597	27	39	1108	80	116
v/c Ratio	0.61	0.03	0.43	1.00	0.14	0.19
Control Delay	25.0	11.3	74.7	53.7	30.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.0	11.3	74.7	53.7	30.6	6.0
Queue Length 50th (ft)	350	7	32	-889	47	0
Queue Length 95th (ft)	477	23	72	#1230	85	42
Internal Link Dist (ft)	1986			1210	883	
Turn Bay Length (ft)		75	75		100	
Base Capacity (vph)	981	838	94	1107	592	607
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.03	0.41	1.00	0.14	0.19

Intersection Summary

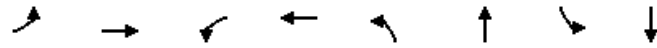
- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues

Baseline AM

36: Meadows Ave & Buchanan Rd

3/17/2014



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	563	34	1117	37	34	20	18
v/c Ratio	0.28	0.51	0.42	1.01	0.09	0.07	0.05	0.03
Control Delay	68.6	16.8	75.5	54.3	35.4	12.5	34.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.6	16.8	75.5	54.3	35.4	12.5	34.8	0.1
Queue Length 50th (ft)	19	269	28	~1015	23	1	12	0
Queue Length 95th (ft)	50	368	65	#1278	53	28	34	0
Internal Link Dist (ft)		1192		1986		545		245
Turn Bay Length (ft)	150		200		100		100	
Base Capacity (vph)	83	1104	83	1111	393	476	387	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.51	0.41	1.01	0.09	0.07	0.05	0.03

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
15: Tuscany Meadows Dr & Buchanan Rd

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	682	27	39	1180	80	116
v/c Ratio	0.70	0.03	0.43	1.07	0.14	0.19
Control Delay	28.0	11.8	74.7	73.0	30.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	11.8	74.7	73.0	30.6	6.0
Queue Length 50th (ft)	428	7	32	-1097	47	0
Queue Length 95th (ft)	581	23	72	#1358	85	42
Internal Link Dist (ft)	1986			1210	883	
Turn Bay Length (ft)		75	75		100	
Base Capacity (vph)	981	838	94	1107	592	607
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.03	0.41	1.07	0.14	0.19

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
15: Tuscany Meadows Dr & Buchanan Rd

No Bypass Cumulative +Project AM

3/17/2014

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	773	27	39	1285	80	116
v/c Ratio	0.79	0.03	0.43	1.16	0.14	0.19
Control Delay	32.5	12.2	74.7	109.1	30.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	12.2	74.7	109.1	30.6	6.0
Queue Length 50th (ft)	527	8	32	~1281	47	0
Queue Length 95th (ft)	716	23	72	#1545	85	42
Internal Link Dist (ft)	1986			1210	883	
Turn Bay Length (ft)		75	75		100	
Base Capacity (vph)	981	838	94	1107	592	607
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.03	0.41	1.16	0.14	0.19

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
15: Tuscany Meadows Dr & Buchanan Rd

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	597	13	39	990	37	116
v/c Ratio	0.63	0.02	0.40	0.95	0.06	0.18
Control Delay	25.1	12.1	71.2	42.6	28.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	12.1	71.2	42.6	28.6	6.0
Queue Length 50th (ft)	350	3	32	683	20	0
Queue Length 95th (ft)	477	14	72	#1020	47	42
Internal Link Dist (ft)	1986			1210	883	
Turn Bay Length (ft)		75	75		100	
Base Capacity (vph)	1031	879	102	1201	643	649
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.01	0.38	0.82	0.06	0.18



















Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Baseline +Project AM Without Metering





















3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	197	387	269	717	755	160	199	874	388
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				234	474	351	823	1330	282	247	1289	548
Arrive On Green				0.31	0.31	0.31	0.40	0.75	0.75	0.14	0.35	0.00
Sat Flow, veh/h				762	1545	1143	3408	2953	626	1757	3689	1568
Grp Volume(v), veh/h				507	0	420	779	513	482	216	950	0
Grp Sat Flow(s),veh/h/ln				1807	0	1643	1704	1845	1734	1757	1845	1568
Q Serve(g_s), s				31.7	0.0	27.9	25.9	15.1	15.1	14.1	26.5	0.0
Cycle Q Clear(g_c), s				31.7	0.0	27.9	25.9	15.1	15.1	14.1	26.5	0.0
Prop In Lane				0.42		0.70	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h				555	0	504	823	831	781	247	1289	548
V/C Ratio(X)				0.91	0.00	0.83	0.95	0.62	0.62	0.87	0.74	0.00
Avail Cap(c_a), veh/h				585	0	532	842	831	781	359	1289	548
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.44	0.44	0.44	1.00	1.00	0.00
Uniform Delay (d), s/veh				39.2	0.0	37.8	34.3	9.9	9.9	49.4	33.4	0.0
Incr Delay (d2), s/veh				18.5	0.0	10.4	10.5	1.5	1.6	15.1	3.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				17.5	0.0	13.1	11.4	5.0	4.7	7.5	13.1	0.0
Lane Grp Delay (d), s/veh				57.7	0.0	48.3	44.8	11.4	11.5	64.5	37.2	0.0
Lane Grp LOS				E		D	D	B	B	E	D	
Approach Vol, veh/h					927			1774			1166	
Approach Delay, s/veh					53.4			26.1			42.3	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					40.0		32.3	56.8		20.5	45.0	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					33.7		27.9	17.1		16.1	28.5	
Green Ext Time (p_c), s					2.3		0.4	17.1		0.4	9.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					37.5							
HCM 2010 LOS					D							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Baseline +Project AM Without Metering

3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	392	0	471	0	0	0	0	1139	311	303	802	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	475	499	849				0	1564	427	442	2435	0
Arrive On Green	0.27	0.00	0.27				0.00	0.37	0.37	0.50	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4189	1143	1757	3689	0
Grp Volume(v), veh/h	426	0	512				0	1090	486	329	872	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1643	1757	1845	0
Q Serve(g_s), s	26.9	0.0	16.4				0.0	30.3	30.3	17.1	0.0	0.0
Cycle Q Clear(g_c), s	26.9	0.0	16.4				0.0	30.3	30.3	17.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.70	1.00		0.00
Lane Grp Cap(c), veh/h	475	499	849				0	1378	613	442	2435	0
V/C Ratio(X)	0.90	0.00	0.60				0.00	0.79	0.79	0.74	0.36	0.00
Avail Cap(c_a), veh/h	549	577	980				0	1378	613	442	2435	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.55	0.55	0.00
Uniform Delay (d), s/veh	40.4	0.0	36.6				0.0	32.1	32.1	25.6	0.0	0.0
Incr Delay (d2), s/veh	15.8	0.0	0.8				0.0	4.7	10.1	3.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	14.0	0.0	6.6				0.0	15.0	14.3	6.8	0.1	0.0
Lane Grp Delay (d), s/veh	56.3	0.0	37.4				0.0	36.8	42.2	29.4	0.2	0.0
Lane Grp LOS	E		D					D	D	C	A	
Approach Vol, veh/h		938						1576			1201	
Approach Delay, s/veh		46.0						38.5			8.2	
Approach LOS		D						D			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		35.2						47.0		33.0		80.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		36.0						43.0		29.0		76.0
Max Q Clear Time (g_c+I1), s		28.9						32.3		19.1		2.0
Green Ext Time (p_c), s		2.3						7.4		5.0		9.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			30.6									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

Baseline +Project AM Without Metering  
3/19/2014

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	297	435	95	158	529	320	144	874	106	185	504	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	357	812	176	205	701	298	189	1144	486	255	1283	545
Arrive On Green	0.20	0.28	0.28	0.12	0.19	0.19	0.11	0.31	0.31	0.15	0.35	0.35
Sat Flow, veh/h	1757	2941	636	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	323	296	280	172	575	348	157	950	115	201	548	272
Grp Sat Flow(s),veh/h/ln	1757	1845	1732	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	18.9	14.6	14.7	10.1	15.8	14.6	9.2	25.2	4.2	11.6	12.0	14.4
Cycle Q Clear(g_c), s	18.9	14.6	14.7	10.1	15.8	14.6	9.2	25.2	4.2	11.6	12.0	14.4
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	510	479	205	701	298	189	1144	486	255	1283	545
V/C Ratio(X)	0.91	0.58	0.59	0.84	0.82	1.17	0.83	0.83	0.24	0.79	0.43	0.50
Avail Cap(c_a), veh/h	433	510	479	333	770	327	317	1364	580	283	1294	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	32.9	33.0	45.6	41.0	22.6	46.1	33.8	14.1	43.5	26.3	27.1
Incr Delay (d2), s/veh	19.9	1.7	1.8	9.8	6.6	105.9	9.0	3.8	0.2	12.6	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.5	7.0	6.7	5.1	8.1	14.3	4.7	12.2	1.6	6.1	5.5	5.7
Lane Grp Delay (d), s/veh	60.9	34.5	34.8	55.4	47.5	128.5	55.1	37.6	14.3	56.1	26.6	27.8
Lane Grp LOS	E	C	C	E	D	F	E	D	B	E	C	C
Approach Vol, veh/h		899			1095			1222			1021	
Approach Delay, s/veh		44.1			74.5			37.7			32.7	
Approach LOS		D			E			D			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	25.4	33.1		16.3	24.0		15.4	36.7		19.3	40.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	26.0	28.0		20.0	22.0		19.0	39.0		17.0	37.0	
Max Q Clear Time (g_c+I1), s	20.9	16.7		12.1	17.8		11.2	27.2		13.6	16.4	
Green Ext Time (p_c), s	0.5	6.4		0.3	2.3		0.2	5.5		1.7	5.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				47.4								
HCM 2010 LOS				D								
<b>Notes</b>												















HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Baseline +Project AM Without Metering

3/19/2014

























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	86	93	27	1202	52	161	7	444	440	89	518	67
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	794	834	709	1541	834	709	83	1241	527	124	1328	564
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.05	0.34	0.34	0.07	0.36	0.36
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	93	101	29	1307	57	175	8	483	478	97	563	73
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.6	2.7	0.9	29.0	1.5	5.9	0.4	8.5	24.8	4.6	9.8	2.7
Cycle Q Clear(g_c), s	2.6	2.7	0.9	29.0	1.5	5.9	0.4	8.5	24.8	4.6	9.8	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	794	834	709	1541	834	709	83	1241	527	124	1328	564
V/C Ratio(X)	0.12	0.12	0.04	0.85	0.07	0.25	0.10	0.39	0.91	0.78	0.42	0.13
Avail Cap(c_a), veh/h	794	834	709	2241	1213	1031	330	1343	571	206	1328	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	13.5	13.0	20.7	13.2	14.4	38.8	21.6	27.0	38.9	20.6	18.3
Incr Delay (d2), s/veh	0.1	0.1	0.0	2.2	0.0	0.2	0.5	0.2	17.4	10.2	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	1.1	0.3	11.5	0.6	2.1	0.2	3.9	12.0	2.4	4.4	1.0
Lane Grp Delay (d), s/veh	13.6	13.6	13.0	22.9	13.2	14.6	39.4	21.8	44.4	49.1	20.8	18.4
Lane Grp LOS	B	B	B	C	B	B	D	C	D	D	C	B
Approach Vol, veh/h		223			1539			969			733	
Approach Delay, s/veh		13.5			21.6			33.1			24.3	
Approach LOS		B			C			C			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		42.5			42.5		8.0	32.6		10.0		34.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			56.0		16.0	31.0		10.0		25.0
Max Q Clear Time (g_c+I1), s		4.7			31.0		2.4	26.8		6.6		11.8
Green Ext Time (p_c), s		6.1			7.5		0.0	1.9		0.1		7.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				24.9								
HCM 2010 LOS				C								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	162	40	13	729	1536	54
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	226	201	24	2800	2441	86
Arrive On Green	0.13	0.13	0.01	0.76	0.69	0.69
Sat Flow, veh/h	1757	1568	1757	3689	3543	125
Grp Volume(v), veh/h	176	43	14	792	867	862
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1823
Q Serve(g_s), s	6.9	1.7	0.6	4.7	19.6	19.8
Cycle Q Clear(g_c), s	6.9	1.7	0.6	4.7	19.6	19.8
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	226	201	24	2800	1271	1256
V/C Ratio(X)	0.78	0.21	0.59	0.28	0.68	0.69
Avail Cap(c_a), veh/h	396	353	99	3426	1506	1488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	27.8	34.9	2.6	6.5	6.5
Incr Delay (d2), s/veh	5.8	0.5	20.8	0.1	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	0.0	0.4	1.6	7.6	7.6
Lane Grp Delay (d), s/veh	35.8	28.3	55.6	2.7	7.5	7.6
Lane Grp LOS	D	C	E	A	A	A
Approach Vol, veh/h	219			806	1729	
Approach Delay, s/veh	34.3			3.6	7.5	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			5.0	57.9	53.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			4.0	66.0	58.0	
Max Q Clear Time (g_c+I1), s			2.6	6.7	21.8	
Green Ext Time (p_c), s			0.0	38.3	27.1	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			8.5			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Baseline +Project AM Without Metering
























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	145	559	118	105	507	182	206	601	220	228	287	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	198	957	407	146	847	360	273	979	416	296	733	251
Arrive On Green	0.11	0.26	0.26	0.08	0.23	0.23	0.16	0.27	0.27	0.17	0.28	0.28
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2630	901
Grp Volume(v), veh/h	158	608	128	114	551	198	224	653	239	248	217	204
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1686
Q Serve(g_s), s	6.3	10.5	4.7	4.6	9.7	8.0	8.8	11.3	9.5	9.8	6.9	7.1
Cycle Q Clear(g_c), s	6.3	10.5	4.7	4.6	9.7	8.0	8.8	11.3	9.5	9.8	6.9	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	198	957	407	146	847	360	273	979	416	296	514	470
V/C Ratio(X)	0.80	0.64	0.31	0.78	0.65	0.55	0.82	0.67	0.57	0.84	0.42	0.43
Avail Cap(c_a), veh/h	319	1134	482	246	980	416	491	1237	526	442	567	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	23.5	21.4	32.2	25.0	24.3	29.3	23.5	22.8	28.8	21.1	21.2
Incr Delay (d2), s/veh	7.2	0.9	0.4	8.8	1.2	1.3	6.0	0.9	1.3	8.7	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.1	4.8	1.8	2.3	4.5	3.1	4.3	5.1	3.7	4.9	3.2	3.0
Lane Grp Delay (d), s/veh	38.1	24.4	21.8	40.9	26.2	25.6	35.3	24.4	24.0	37.5	21.7	21.8
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		894			863			1116			669	
Approach Delay, s/veh		26.4			28.0			26.5			27.6	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	12.1	22.6		9.9	20.4		15.1	23.0		16.1		23.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	13.0	22.0		10.0	19.0		20.0	24.0		18.0		22.0
Max Q Clear Time (g_c+I1), s	8.3	12.5		6.6	11.7		10.8	13.3		11.8		9.1
Green Ext Time (p_c), s	0.2	5.8		0.1	4.8		0.4	5.7		0.4		6.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 7: Buchanan Rd & Harbor St




























Baseline +Project AM Without Metering

3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	116	494	5	2	1224	103	94	101	3	135	33	159
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	95	1207	11	54	1178	1001	108	220	6	108	34	164
Arrive On Green	0.05	0.66	0.66	0.03	0.64	0.64	0.06	0.12	0.12	0.06	0.12	0.12
Sat Flow, veh/h	1757	1825	17	1757	1845	1568	1757	1787	49	1757	277	1332
Grp Volume(v), veh/h	126	0	542	2	1330	112	102	0	113	147	0	209
Grp Sat Flow(s),veh/h/ln	1757	0	1842	1757	1845	1568	1757	0	1836	1757	0	1610
Q Serve(g_s), s	7.0	0.0	18.3	0.1	83.0	2.4	7.5	0.0	7.5	8.0	0.0	16.0
Cycle Q Clear(g_c), s	7.0	0.0	18.3	0.1	83.0	2.4	7.5	0.0	7.5	8.0	0.0	16.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.03	1.00		0.83
Lane Grp Cap(c), veh/h	95	0	1218	54	1178	1001	108	0	226	108	0	198
V/C Ratio(X)	1.33	0.00	0.44	0.04	1.13	0.11	0.94	0.00	0.50	1.36	0.00	1.06
Avail Cap(c_a), veh/h	95	0	1218	54	1178	1001	108	0	226	108	0	198
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.00	0.72	0.26	0.26	0.26	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.5	0.0	10.6	61.1	23.5	4.0	60.8	0.0	53.3	61.0	0.0	57.0
Incr Delay (d2), s/veh	192.0	0.0	0.8	0.1	61.4	0.1	68.5	0.0	1.7	210.3	0.0	79.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.2	0.0	7.7	0.1	54.4	1.3	5.5	0.0	3.7	10.0	0.0	11.1
Lane Grp Delay (d), s/veh	253.5	0.0	11.4	61.2	84.9	4.0	129.3	0.0	55.0	271.3	0.0	136.2
Lane Grp LOS	F		B	E	F	A	F		D	F		F
Approach Vol, veh/h		668			1444			215				356
Approach Delay, s/veh		57.1			78.6			90.2				192.0
Approach LOS		E			E			F				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	11.0	90.0		8.0	87.0		12.0	20.0		12.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	7.0	86.0		4.0	83.0		8.0	16.0		8.0		16.0
Max Q Clear Time (g_c+I1), s	9.0	20.3		2.1	85.0		9.5	9.5		10.0		18.0
Green Ext Time (p_c), s	0.0	3.9		0.1	0.0		0.0	0.4		0.0		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				89.2								
HCM 2010 LOS				F								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave























Baseline +Project AM Without Metering  
3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 						 	
Volume (veh/h)	33	274	22	685	338	137	21	50	82	78	95	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	60	955	76	1586	2635	1120	182	191	163	182	162	25
Arrive On Green	0.03	0.28	0.28	0.47	0.71	0.71	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1757	3372	270	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	36	162	160	745	367	149	23	54	89	85	0	119
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.6	5.6	5.7	12.1	2.6	2.4	1.0	2.2	4.4	3.7	0.0	5.1
Cycle Q Clear(g_c), s	1.6	5.6	5.7	12.1	2.6	2.4	1.0	2.2	4.4	3.7	0.0	5.1
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	60	523	509	1586	2635	1120	182	191	163	182	0	187
V/C Ratio(X)	0.60	0.31	0.31	0.47	0.14	0.13	0.13	0.28	0.55	0.47	0.00	0.64
Avail Cap(c_a), veh/h	173	523	509	1805	2635	1120	389	409	348	433	0	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	22.9	22.9	14.9	3.7	3.7	33.1	33.6	34.6	34.3	0.0	34.9
Incr Delay (d2), s/veh	9.2	1.5	1.6	0.1	0.1	0.2	0.3	0.8	2.9	1.9	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	2.8	2.8	4.9	0.9	0.8	0.4	1.0	1.8	1.7	0.0	2.5
Lane Grp Delay (d), s/veh	47.8	24.4	24.5	15.0	3.8	3.8	33.4	34.4	37.4	36.1	0.0	38.5
Lane Grp LOS	D	C	C	B	A	A	C	C	D	D		D
Approach Vol, veh/h		358			1261			166			204	
Approach Delay, s/veh		26.8			10.4			35.9			37.5	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.8	27.0		41.8	62.0			12.4			12.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	8.0	23.0		43.0	58.0			18.0			20.0	
Max Q Clear Time (g_c+I1), s	3.6	7.7		14.1	4.6			6.4			7.1	
Green Ext Time (p_c), s	1.4	1.6		3.1	3.2			1.2			1.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 9: Loveridge Rd & California Ave/N Park Blvd

Baseline +Project AM Without Metering




















3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	60	269	45	154	3	587	301	94	7	219	522
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	180	385	327	110	680	12	845	1527	468	14	1193	507
Arrive On Green	0.05	0.21	0.21	0.03	0.19	0.19	0.25	0.56	0.56	0.01	0.32	0.32
Sat Flow, veh/h	3408	1845	1568	3408	3613	65	3408	2711	831	1757	3689	1568
Grp Volume(v), veh/h	113	65	292	49	85	85	638	221	208	8	238	567
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1698	1757	1845	1568
Q Serve(g_s), s	2.8	2.5	15.4	1.2	3.3	3.4	14.8	5.1	5.2	0.4	4.0	21.6
Cycle Q Clear(g_c), s	2.8	2.5	15.4	1.2	3.3	3.4	14.8	5.1	5.2	0.4	4.0	21.6
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	180	385	327	110	347	345	845	1039	956	14	1193	507
V/C Ratio(X)	0.63	0.17	0.89	0.45	0.24	0.25	0.76	0.21	0.22	0.56	0.20	1.12
Avail Cap(c_a), veh/h	280	433	368	160	368	366	1199	1644	1514	82	2164	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	27.7	32.8	40.5	29.4	29.4	29.7	9.2	9.3	42.1	20.9	17.7
Incr Delay (d2), s/veh	3.6	0.2	21.3	2.8	0.4	0.4	1.7	0.1	0.1	30.4	0.1	64.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	1.2	7.9	0.6	1.6	1.6	6.5	2.2	2.1	0.3	1.8	17.0
Lane Grp Delay (d), s/veh	43.1	27.9	54.1	43.3	29.8	29.8	31.4	9.3	9.4	72.6	20.9	81.9
Lane Grp LOS	D	C	D	D	C	C	C	A	A	E	C	F
Approach Vol, veh/h		470			219			1067			813	
Approach Delay, s/veh		47.8			32.8			22.5			63.9	
Approach LOS		D			C			C			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	8.5	21.8		6.7	20.1		25.1	52.0		4.7		31.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	7.0	20.0		4.0	17.0		30.0	76.0		4.0		50.0
Max Q Clear Time (g_c+I1), s	4.8	17.4		3.2	5.4		16.8	7.2		2.4		23.6
Green Ext Time (p_c), s	0.1	0.4		0.1	0.8		4.4	5.9		0.0		4.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				41.1								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Baseline +Project AM Without Metering

























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	422	0	373	0	0	0	0	684	193	129	478	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1037	0	477				0	1922	817	205	2285	0
Arrive On Green	0.30	0.00	0.30				0.00	0.52	0.52	0.06	0.62	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	459	0	405				0	743	210	140	520	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	11.4	0.0	25.4				0.0	12.7	7.8	4.2	6.6	0.0
Cycle Q Clear(g_c), s	11.4	0.0	25.4				0.0	12.7	7.8	4.2	6.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1037	0	477				0	1922	817	205	2285	0
V/C Ratio(X)	0.44	0.00	0.85				0.00	0.39	0.26	0.68	0.23	0.00
Avail Cap(c_a), veh/h	1527	0	702				0	1922	817	422	2285	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.92	0.92	0.00
Uniform Delay (d), s/veh	29.3	0.0	34.2				0.0	15.1	13.9	48.3	8.8	0.0
Incr Delay (d2), s/veh	0.3	0.0	6.5				0.0	0.6	0.8	3.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.9	0.0	10.8				0.0	5.8	3.1	2.0	2.8	0.0
Lane Grp Delay (d), s/veh	29.6	0.0	40.7				0.0	15.7	14.7	52.0	9.1	0.0
Lane Grp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		864						953			660	
Approach Delay, s/veh		34.8						15.4			18.2	
Approach LOS		C						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		35.9						58.7		10.3	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						48.0		13.0	65.0	
Max Q Clear Time (g_c+I1), s		27.4						14.7		6.2	8.6	
Green Ext Time (p_c), s		4.5						12.1		0.2	13.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			22.9									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

Baseline +Project AM Without Metering













3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	184	237	169	175	676	180	252	579	133	181	354	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	292	1150	489	279	1137	483	326	1161	493	288	789	335
Arrive On Green	0.09	0.31	0.31	0.08	0.31	0.31	0.19	0.31	0.31	0.08	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	200	258	184	190	735	196	274	629	145	197	385	168
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	4.4	4.0	7.1	4.2	13.3	7.6	11.6	10.9	5.4	4.3	7.1	7.3
Cycle Q Clear(g_c), s	4.4	4.0	7.1	4.2	13.3	7.6	11.6	10.9	5.4	4.3	7.1	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	1150	489	279	1137	483	326	1161	493	288	789	335
V/C Ratio(X)	0.69	0.22	0.38	0.68	0.65	0.41	0.84	0.54	0.29	0.68	0.49	0.50
Avail Cap(c_a), veh/h	529	1767	751	485	1719	731	705	2101	893	529	1194	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	19.7	20.7	34.5	23.1	21.1	30.4	21.9	20.0	34.4	26.7	26.7
Incr Delay (d2), s/veh	2.9	0.1	0.5	2.9	0.6	0.5	5.8	0.4	0.3	2.9	0.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	1.8	2.7	1.9	6.0	2.9	5.6	4.9	2.0	1.9	3.3	2.9
Lane Grp Delay (d), s/veh	37.2	19.8	21.2	37.4	23.7	21.7	36.2	22.3	20.3	37.2	27.1	27.9
Lane Grp LOS	D	B	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		642			1121			1048			750	
Approach Delay, s/veh		25.6			25.7			25.7			29.9	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.6	28.1		10.3	27.8		18.3	28.3		10.5	20.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	37.0		11.0	36.0		31.0	44.0		12.0	25.0	
Max Q Clear Time (g_c+I1), s	6.4	9.1		6.2	15.3		13.6	12.9		6.3	9.3	
Green Ext Time (p_c), s	0.3	9.6		0.2	8.5		0.7	9.7		0.3	7.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					26.6							
HCM 2010 LOS					C							
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
12: Buchanan Rd & Loveridge Rd






















Baseline +Project AM Without Metering  
3/19/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	270	429	1380	543	198	190
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	230	1504	1206	1025	216	193
Arrive On Green	0.13	0.82	0.65	0.65	0.12	0.12
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	293	466	1500	590	215	207
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	17.0	8.1	85.0	27.1	15.9	16.0
Cycle Q Clear(g_c), s	17.0	8.1	85.0	27.1	15.9	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	230	1504	1206	1025	216	193
V/C Ratio(X)	1.28	0.31	1.24	0.58	0.99	1.07
Avail Cap(c_a), veh/h	230	1504	1206	1025	216	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	56.5	3.0	22.5	12.5	57.0	57.0
Incr Delay (d2), s/veh	150.5	0.5	110.3	0.2	59.5	85.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	17.2	2.8	71.5	9.4	10.8	17.6
Lane Grp Delay (d), s/veh	207.0	3.4	132.8	12.7	116.5	142.4
Lane Grp LOS	F	A	F	B	F	F
Approach Vol, veh/h		759	2090		422	
Approach Delay, s/veh		82.0	98.9		129.2	
Approach LOS		F	F		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	21.0	110.0	89.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	17.0	106.0	85.0			
Max Q Clear Time (g_c+I1), s	19.0	10.1	87.0			
Green Ext Time (p_c), s	0.0	4.1	0.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			98.9			
HCM 2010 LOS			F			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
13: Ventura Dr & Buchanan Rd

Baseline +Project AM Without Metering

3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	555	76	25	1507	11	177	108	44	14	10	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	7	1364	1160	35	1382	10	228	171	70	119	87	142
Arrive On Green	0.00	0.74	0.74	0.02	0.76	0.76	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1757	1845	1568	1757	1829	13	1362	1244	510	1204	631	1032
Grp Volume(v), veh/h	10	603	83	27	0	1650	192	0	165	15	0	29
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1842	1362	0	1755	1204	0	1663
Q Serve(g_s), s	0.4	14.7	1.7	1.8	0.0	88.0	14.2	0.0	10.4	1.4	0.0	1.8
Cycle Q Clear(g_c), s	0.4	14.7	1.7	1.8	0.0	88.0	16.0	0.0	10.4	11.8	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.29	1.00		0.62
Lane Grp Cap(c), veh/h	7	1364	1160	35	0	1392	228	0	241	119	0	228
V/C Ratio(X)	1.53	0.44	0.07	0.77	0.00	1.18	0.84	0.00	0.68	0.13	0.00	0.13
Avail Cap(c_a), veh/h	60	1364	1160	91	0	1392	228	0	241	119	0	228
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.09	0.00	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	5.9	4.2	56.8	0.0	14.2	52.1	0.0	47.8	53.4	0.0	44.1
Incr Delay (d2), s/veh	341.4	0.9	0.1	3.2	0.0	84.0	23.7	0.0	7.8	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	5.7	0.6	0.8	0.0	63.8	7.3	0.0	5.2	0.5	0.0	0.8
Lane Grp Delay (d), s/veh	399.4	6.7	4.3	60.0	0.0	98.2	75.7	0.0	55.6	53.9	0.0	44.3
Lane Grp LOS	F	A	A	E		F	E		E	D		D
Approach Vol, veh/h		696			1677			357				44
Approach Delay, s/veh		12.1			97.6			66.4				47.6
Approach LOS		B			F			E				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	90.1		6.3	92.0			20.0				20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	86.0		6.0	88.0			16.0				16.0
Max Q Clear Time (g_c+I1), s	2.4	16.7		3.8	90.0			18.0				13.8
Green Ext Time (p_c), s	0.0	4.9		0.0	0.0			0.0				0.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				71.3								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 15: Tuscany Meadows Dr & Buchanan Rd

Baseline +Project AM Without Metering

3/19/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	627	25	36	1136	74	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1330	1131	51	1476	176	157
Arrive On Green	0.72	0.72	0.03	0.80	0.10	0.10
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	682	27	39	1235	80	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	13.1	0.4	1.8	32.4	3.4	5.8
Cycle Q Clear(g_c), s	13.1	0.4	1.8	32.4	3.4	5.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1330	1131	51	1476	176	157
V/C Ratio(X)	0.51	0.02	0.77	0.84	0.46	0.74
Avail Cap(c_a), veh/h	2189	1861	154	2443	351	313
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.9	3.2	38.6	4.8	34.0	35.0
Incr Delay (d2), s/veh	0.3	0.0	20.9	1.4	1.8	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	0.1	1.1	7.8	1.6	2.5
Lane Grp Delay (d), s/veh	5.2	3.2	59.5	6.2	35.8	41.7
Lane Grp LOS	A	A	E	A	D	D
Approach Vol, veh/h	709			1274	196	
Approach Delay, s/veh	5.2			7.8	39.3	
Approach LOS	A			A	D	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	61.7		6.3	68.1		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	95.0		7.0	106.0		
Max Q Clear Time (g_c+I1), s	15.1		3.8	34.4		
Green Ext Time (p_c), s	30.7		0.0	29.6		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			9.8			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

Baseline +Project AM Without Metering

3/19/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	23	0	0	0	0	61	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	20	42	0	47	99	0	20	0	106	20	125	0
Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	25	0	0	0	0	66	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	20	42	0	47	99	0	20	0	106	20	125	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00
Avail Cap(c_a), veh/h	795	6680	0	4573	14613	0	795	0	5501	795	6472	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	13.1	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0
Lane Grp LOS	B						A					
Approach Vol, veh/h	0			25			66			0		
Approach Delay, s/veh	0.0			13.1			9.8			0.0		
Approach LOS	B			B			A			A		
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.2	4.2		0.0	4.6		0.0	4.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		23.0	35.0		4.0	31.0		4.0	31.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.1	0.0		0.0	2.4		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	0.3		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.7								
HCM 2010 LOS				B								
<b>Notes</b>												













	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	718	16	22	1320	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	868	738	572	1543	145	129
Arrive On Green	0.47	0.47	0.33	0.84	0.08	0.08
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	780	17	24	1435	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	38.3	0.6	0.9	56.5	3.6	6.0
Cycle Q Clear(g_c), s	38.3	0.6	0.9	56.5	3.6	6.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	868	738	572	1543	145	129
V/C Ratio(X)	0.90	0.02	0.04	0.93	0.46	0.75
Avail Cap(c_a), veh/h	1796	1527	572	1983	285	254
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	14.0	22.7	5.9	43.1	44.2
Incr Delay (d2), s/veh	3.7	0.0	0.0	7.2	2.3	8.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	17.4	0.2	0.4	17.4	1.7	2.7
Lane Grp Delay (d), s/veh	27.6	14.0	22.8	13.1	45.4	52.6
Lane Grp LOS	C	B	C	B	D	D
Approach Vol, veh/h	797			1459	164	
Approach Delay, s/veh	27.4			13.3	49.7	
Approach LOS	C			B	D	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	50.4		36.1	86.5		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	96.0		6.0	106.0		
Max Q Clear Time (g_c+I1), s	40.3		2.9	58.5		
Green Ext Time (p_c), s	6.1		2.7	23.9		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			20.4			
HCM 2010 LOS			C			
<b>Notes</b>						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	31	39	204	76	29	203	467	147	24	515	262
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	394	213	181	394	147	57	491	2852	870	39	2135	908
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.05	0.23	0.23	0.02	0.58	0.58
Sat Flow, veh/h	3408	1845	1568	3408	1269	489	3408	4073	1242	1757	3689	1568
Grp Volume(v), veh/h	113	34	42	222	0	115	221	459	209	26	560	285
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1625	1757	1845	1568
Q Serve(g_s), s	2.3	1.2	1.8	4.6	0.0	4.6	4.7	7.4	7.7	1.1	5.6	7.0
Cycle Q Clear(g_c), s	2.3	1.2	1.8	4.6	0.0	4.6	4.7	7.4	7.7	1.1	5.6	7.0
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	394	213	181	394	0	203	491	2584	1138	39	2135	908
V/C Ratio(X)	0.29	0.16	0.23	0.56	0.00	0.57	0.45	0.18	0.18	0.66	0.26	0.31
Avail Cap(c_a), veh/h	872	472	401	1055	0	544	872	2584	1138	236	2135	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	29.6	29.8	31.1	0.0	31.1	32.5	11.4	11.5	36.0	7.8	8.1
Incr Delay (d2), s/veh	0.4	0.3	0.6	1.3	0.0	2.5	0.6	0.1	0.3	17.4	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	0.6	0.7	2.0	0.0	2.2	2.1	3.8	3.5	0.7	2.3	2.6
Lane Grp Delay (d), s/veh	30.4	29.9	30.5	32.3	0.0	33.5	33.2	11.5	11.9	53.4	8.1	9.0
Lane Grp LOS	C	C	C	C		C	C	B	B	D	A	A
Approach Vol, veh/h		189			337			889			871	
Approach Delay, s/veh		30.4			32.7			17.0			9.7	
Approach LOS		C			C			B			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		12.6			12.6		14.7	56.0		5.7		47.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0			23.0		19.0	52.0		10.0		43.0
Max Q Clear Time (g_c+I1), s		4.3			6.6		6.7	9.7		3.1		9.0
Green Ext Time (p_c), s		1.9			2.0		4.1	6.1		0.0		6.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.6								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Baseline +Project AM Without Metering





















3/19/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	216	258	587	534	416	289
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	690	317	728	4022	2643	749
Arrive On Green	0.20	0.20	0.36	1.00	0.48	0.48
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	235	280	638	580	452	314
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	6.7	19.6	19.8	0.0	5.2	14.8
Cycle Q Clear(g_c), s	6.7	19.6	19.8	0.0	5.2	14.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	690	317	728	4022	2643	749
V/C Ratio(X)	0.34	0.88	0.88	0.14	0.17	0.42
Avail Cap(c_a), veh/h	906	417	1238	4022	2643	749
HCM Platoon Ratio	1.00	1.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.93	0.93
Uniform Delay (d), s/veh	38.6	43.7	34.9	0.0	16.8	19.2
Incr Delay (d2), s/veh	0.3	15.9	3.7	0.1	0.1	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	1.4	8.2	0.0	2.4	6.0
Lane Grp Delay (d), s/veh	38.8	59.6	38.6	0.1	16.9	20.9
Lane Grp LOS	D	E	D	A	B	C
Approach Vol, veh/h	515			1218	766	
Approach Delay, s/veh	50.1			20.3	18.5	
Approach LOS	D			C	B	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			28.1	86.0	57.9	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			41.0	82.0	37.0	
Max Q Clear Time (g_c+I1), s			21.8	2.0	16.8	
Green Ext Time (p_c), s			2.3	11.4	8.5	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			25.9			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
20: Somersville Rd & EB SR-4 Ramps

Baseline +Project AM Without Metering

3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	208	0	259	0	0	0	0	954	422	135	572	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	409	222	377				0	3920	1111	210	4464	0
Arrive On Green	0.12	0.00	0.12				0.00	0.94	0.94	0.12	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	226	0	282				0	1037	459	147	622	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	6.8	0.0	9.5				0.0	1.6	3.0	4.5	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	9.5				0.0	1.6	3.0	4.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	409	222	377				0	3920	1111	210	4464	0
V/C Ratio(X)	0.55	0.00	0.75				0.00	0.26	0.41	0.70	0.14	0.00
Avail Cap(c_a), veh/h	750	406	690				0	3920	1111	500	4464	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	0.80	0.80	0.94	0.94	0.00
Uniform Delay (d), s/veh	45.2	0.0	46.4				0.0	1.0	1.0	46.9	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	3.0				0.0	0.1	0.9	4.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.0	0.0	4.0				0.0	0.5	0.9	2.0	0.0	0.0
Lane Grp Delay (d), s/veh	46.4	0.0	49.4				0.0	1.1	1.9	50.8	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		508						1496			769	
Approach Delay, s/veh		48.1						1.4			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		17.1						81.3		10.7	92.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		24.0						68.0		16.0	88.0	
Max Q Clear Time (g_c+I1), s		11.5						5.0		6.5	2.0	
Green Ext Time (p_c), s		1.6						24.5		0.3	26.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.2									
HCM 2010 LOS			B									
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

Baseline +Project AM Without Metering













3/19/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	263	115	5	41	315	413	87	753	16	137	346	282
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1171	605	24	603	634	539	190	2327	48	235	1445	614
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.04	0.14	0.14	0.12	0.65	0.65
Sat Flow, veh/h	3408	1762	70	1757	1845	1568	1757	5402	112	3408	3689	1568
Grp Volume(v), veh/h	286	0	130	45	342	449	95	558	277	149	376	307
Grp Sat Flow(s),veh/h/ln	1704	0	1832	1757	1845	1568	1757	1845	1825	1704	1845	1568
Q Serve(g_s), s	4.6	0.0	3.8	1.3	11.4	20.2	4.1	10.5	10.5	3.2	3.3	7.7
Cycle Q Clear(g_c), s	4.6	0.0	3.8	1.3	11.4	20.2	4.1	10.5	10.5	3.2	3.3	7.7
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	1171	0	629	603	634	539	190	1589	786	235	1445	614
V/C Ratio(X)	0.24	0.00	0.21	0.07	0.54	0.83	0.50	0.35	0.35	0.63	0.26	0.50
Avail Cap(c_a), veh/h	1171	0	629	1009	1060	901	298	1589	786	445	1445	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.79	0.79	0.79	0.97	0.97	0.97	0.99	0.99	0.99
Uniform Delay (d), s/veh	18.0	0.0	17.8	16.9	20.3	23.1	34.9	23.2	23.2	33.0	8.6	9.4
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.6	2.8	2.0	0.6	1.2	2.8	0.4	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.0	1.7	0.6	5.2	7.9	2.0	5.3	5.4	1.4	1.3	2.7
Lane Grp Delay (d), s/veh	18.1	0.0	17.9	17.0	20.8	25.9	36.9	23.8	24.4	35.7	9.1	12.3
Lane Grp LOS	B		B	B	C	C	D	C	C	D	A	B
Approach Vol, veh/h		416			836			930			832	
Approach Delay, s/veh		18.1			23.3			25.3			15.0	
Approach LOS		B			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		30.3			30.3		12.3	37.0		9.3		34.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			44.0		13.0	33.0		10.0		30.0
Max Q Clear Time (g_c+I1), s		6.6			22.2		6.1	12.5		5.2		9.7
Green Ext Time (p_c), s		4.4			4.1		0.4	5.6		0.3		3.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Baseline +Project AM Without Metering  
 3/19/2014























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	396	220	184	25	415	396	795	1058	52	39	150	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	311	1296	551	35	358	304	623	1615	80	53	514	218
Arrive On Green	0.18	0.35	0.00	0.02	0.19	0.00	0.35	0.46	0.46	0.03	0.14	0.14
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3486	173	1757	3689	1568
Grp Volume(v), veh/h	430	239	0	27	451	0	864	608	599	42	163	149
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1814	1757	1845	1568
Q Serve(g_s), s	21.0	5.3	0.0	1.8	23.0	0.0	42.0	31.3	31.3	2.8	4.7	10.7
Cycle Q Clear(g_c), s	21.0	5.3	0.0	1.8	23.0	0.0	42.0	31.3	31.3	2.8	4.7	10.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	311	1296	551	35	358	304	623	855	840	53	514	218
V/C Ratio(X)	1.38	0.18	0.00	0.77	1.26	0.00	1.39	0.71	0.71	0.79	0.32	0.68
Avail Cap(c_a), veh/h	311	1296	551	89	358	304	623	856	842	74	560	238
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	26.7	0.0	57.8	47.8	0.0	38.3	25.5	25.5	57.1	45.9	48.5
Incr Delay (d2), s/veh	190.5	0.1	0.0	29.5	137.6	0.0	184.3	2.8	2.8	30.1	0.4	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	25.8	2.4	0.0	1.1	24.6	0.0	50.5	15.0	14.8	1.7	2.3	4.7
Lane Grp Delay (d), s/veh	239.2	26.7	0.0	87.3	185.4	0.0	222.5	28.2	28.3	87.2	46.3	55.5
Lane Grp LOS	F	C		F	F		F	C	C	F	D	E
Approach Vol, veh/h		669			478			2071			354	
Approach Delay, s/veh		163.3			179.8			109.3			55.0	
Approach LOS		F			F			F			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	25.0	45.6		6.4	27.0		46.0	58.9		7.6	20.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	21.0	38.0		6.0	23.0		42.0	55.0		5.0	18.0	
Max Q Clear Time (g_c+I1), s	23.0	7.3		3.8	25.0		44.0	33.3		4.8	12.7	
Green Ext Time (p_c), s	0.0	4.7		0.0	0.0		0.0	10.6		0.0	3.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			123.5									
HCM 2010 LOS			F									
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	263	11	4	1448	272	87
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	349	312	748	2506	2506	1065
Arrive On Green	0.20	0.20	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1757	1568	979	3689	3689	1568
Grp Volume(v), veh/h	286	12	4	1574	296	95
Grp Sat Flow(s),veh/h/ln	1757	1568	979	1845	1845	1568
Q Serve(g_s), s	10.2	0.4	0.1	15.7	1.8	1.4
Cycle Q Clear(g_c), s	10.2	0.4	1.9	15.7	1.8	1.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	349	312	748	2506	2506	1065
V/C Ratio(X)	0.82	0.04	0.01	0.63	0.12	0.09
Avail Cap(c_a), veh/h	937	837	1232	4331	4331	1841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	21.2	4.0	5.9	3.7	3.6
Incr Delay (d2), s/veh	4.8	0.1	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.8	0.2	0.0	5.8	0.7	0.4
Lane Grp Delay (d), s/veh	29.9	21.3	4.0	6.1	3.7	3.6
Lane Grp LOS	C	C	A	A	A	A
Approach Vol, veh/h	298			1578	391	
Approach Delay, s/veh	29.6			6.1	3.7	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				48.6	48.6	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				77.0	77.0	
Max Q Clear Time (g_c+I1), s				17.7	3.8	
Green Ext Time (p_c), s				26.9	28.9	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			8.8			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd






















Baseline +Project AM Without Metering

3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	9	0	7	13	1356	0	1	2	275	8	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	146	393	0	15	118	50	7	28	56	544	700	1189
Arrive On Green	0.08	0.11	0.00	0.01	0.03	0.00	0.00	0.05	0.05	0.16	0.38	0.38
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	103	10	0	8	14	0	0	0	3	299	9	43
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	1.4	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.9	0.1	0.1
Cycle Q Clear(g_c), s	1.4	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.9	0.1	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	146	393	0	15	118	50	7	0	85	544	700	1189
V/C Ratio(X)	0.71	0.03	0.00	0.53	0.12	0.00	0.00	0.00	0.04	0.55	0.01	0.04
Avail Cap(c_a), veh/h	444	11503	0	296	11192	4757	296	0	1182	1292	1710	2907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.6	9.5	0.0	11.7	11.2	0.0	0.0	0.0	10.7	9.2	4.6	0.5
Incr Delay (d2), s/veh	6.1	0.0	0.0	25.3	0.4	0.0	0.0	0.0	0.2	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Lane Grp Delay (d), s/veh	16.7	9.5	0.0	37.1	11.6	0.0	0.0	0.0	10.9	10.1	4.6	0.5
Lane Grp LOS	B	A		D	B				B	B	A	A
Approach Vol, veh/h		113			22			3			351	
Approach Delay, s/veh		16.1			20.9			10.9			8.7	
Approach LOS		B			C			B			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	6.0	6.5		4.2	4.8		0.0	5.2		7.8	13.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	74.0		4.0	72.0		4.0	17.0		9.0	22.0	
Max Q Clear Time (g_c+I1), s	3.4	2.1		2.1	2.1		0.0	2.0		3.9	2.1	
Green Ext Time (p_c), s	0.1	0.4		0.0	0.1		0.0	0.1		0.5	0.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				11.0								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

Baseline +Project AM Without Metering  
3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	214	54	50	390	204	125	421	52	63	104	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	341	1098	272	506	881	456	663	716	89	349	821	698
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	774	2857	708	1072	2292	1188	1246	1609	200	874	1845	1568
Grp Volume(v), veh/h	45	149	143	54	340	306	136	0	515	68	113	14
Grp Sat Flow(s),veh/h/ln	774	1845	1720	1072	1845	1635	1246	0	1809	874	1845	1568
Q Serve(g_s), s	2.2	2.5	2.6	1.7	6.5	6.6	3.4	0.0	10.4	3.1	1.7	0.2
Cycle Q Clear(g_c), s	8.8	2.5	2.6	4.3	6.5	6.6	5.1	0.0	10.4	13.4	1.7	0.2
Prop In Lane	1.00		0.41	1.00		0.73	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	341	709	661	506	709	628	663	0	805	349	821	698
V/C Ratio(X)	0.13	0.21	0.22	0.11	0.48	0.49	0.21	0.00	0.64	0.19	0.14	0.02
Avail Cap(c_a), veh/h	754	1692	1577	1077	1692	1500	1943	0	2663	1246	2715	2308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	9.7	9.7	11.1	10.9	10.9	9.2	0.0	10.1	15.3	7.7	7.3
Incr Delay (d2), s/veh	0.2	0.1	0.2	0.1	0.5	0.6	0.2	0.0	0.9	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	1.0	1.0	0.4	2.6	2.4	0.9	0.0	4.1	0.6	0.7	0.1
Lane Grp Delay (d), s/veh	14.4	9.8	9.9	11.2	11.4	11.5	9.3	0.0	10.9	15.6	7.8	7.3
Lane Grp LOS	B	A	A	B	B	B	A		B	B	A	A
Approach Vol, veh/h		337			700			651				195
Approach Delay, s/veh		10.4			11.4			10.6				10.5
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs		4			8			2				6
Phs Duration (G+Y+Rc), s		22.0			22.0			24.9				24.9
Change Period (Y+Rc), s		4.0			4.0			4.0				4.0
Max Green Setting (Gmax), s		43.0			43.0			69.0				69.0
Max Q Clear Time (g_c+I1), s		10.8			8.6			12.4				15.4
Green Ext Time (p_c), s		7.2			7.3			5.4				5.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.9								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Baseline +Project AM Without Metering
























3/19/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	182	432	2	9	975	215	6	9	12	207	13	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	235	2138	9	17	1343	295	115	156	161	309	36	353
Arrive On Green	0.13	0.58	0.58	0.01	0.46	0.46	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1757	3671	16	1757	2931	644	222	639	659	1369	147	1443
Grp Volume(v), veh/h	198	236	236	10	665	629	30	0	0	225	0	151
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1731	1520	0	0	1369	0	1590
Q Serve(g_s), s	8.1	4.5	4.5	0.4	22.5	22.7	0.0	0.0	0.0	11.3	0.0	5.8
Cycle Q Clear(g_c), s	8.1	4.5	4.5	0.4	22.5	22.7	6.9	0.0	0.0	18.0	0.0	5.8
Prop In Lane	1.00		0.01	1.00		0.37	0.23		0.43	1.00		0.91
Lane Grp Cap(c), veh/h	235	1074	1073	17	845	793	432	0	0	309	0	389
V/C Ratio(X)	0.84	0.22	0.22	0.58	0.79	0.79	0.07	0.00	0.00	0.73	0.00	0.39
Avail Cap(c_a), veh/h	358	1254	1253	96	979	918	558	0	0	421	0	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.1	7.4	7.4	36.3	16.9	16.9	21.4	0.0	0.0	31.5	0.0	23.2
Incr Delay (d2), s/veh	10.6	0.1	0.1	27.6	3.8	4.2	0.1	0.0	0.0	4.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.2	1.8	1.8	0.3	10.3	9.8	0.4	0.0	0.0	4.4	0.0	2.3
Lane Grp Delay (d), s/veh	41.7	7.5	7.5	63.9	20.6	21.1	21.4	0.0	0.0	35.6	0.0	23.8
Lane Grp LOS	D	A	A	E	C	C	C			D		C
Approach Vol, veh/h		670			1304			30				376
Approach Delay, s/veh		17.6			21.2			21.4				30.9
Approach LOS		B			C			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	14.0	47.3		4.7	38.0			23.3				23.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	15.0	50.0		4.0	39.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	10.1	6.5		2.4	24.7			8.9				20.0
Green Ext Time (p_c), s	0.2	18.2		0.0	9.6			1.6				0.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

Baseline +Project AM Without Metering
























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	194	50	486	11	113	78	917	1161	9	49	868	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	296	311	1598	27	282	264	1163	2390	1016	67	1589	272
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.34	0.65	0.65	0.04	0.34	0.34
Sat Flow, veh/h	1757	1845	3136	163	1673	1568	3408	3689	1568	1757	4606	789
Grp Volume(v), veh/h	211	54	528	135	0	85	997	1262	10	53	755	350
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1836	0	1568	1704	1845	1568	1757	1845	1706
Q Serve(g_s), s	9.4	2.1	8.2	5.4	0.0	3.9	22.5	15.1	0.2	2.5	13.9	14.0
Cycle Q Clear(g_c), s	9.4	2.1	8.2	5.4	0.0	3.9	22.5	15.1	0.2	2.5	13.9	14.0
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	296	311	1598	309	0	264	1163	2390	1016	67	1273	588
V/C Ratio(X)	0.71	0.17	0.33	0.44	0.00	0.32	0.86	0.53	0.01	0.79	0.59	0.60
Avail Cap(c_a), veh/h	383	403	1754	356	0	304	1612	2729	1160	192	1387	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	29.4	11.9	30.8	0.0	30.2	25.3	7.8	5.1	39.3	22.2	22.3
Incr Delay (d2), s/veh	4.3	0.3	0.1	1.0	0.0	0.7	3.6	0.2	0.0	18.0	0.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	1.0	2.9	2.6	0.0	1.6	9.9	6.0	0.1	1.4	6.4	6.1
Lane Grp Delay (d), s/veh	36.7	29.6	12.0	31.8	0.0	30.8	28.9	8.0	5.2	57.3	22.8	23.6
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		793			220			2269			1158	
Approach Delay, s/veh		19.8			31.4			17.1			24.6	
Approach LOS		B			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		17.9			17.9		32.1	57.4		7.2		32.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		39.0	61.0		9.0		31.0
Max Q Clear Time (g_c+I1), s		11.4			7.4		24.5	17.1		4.5		16.0
Green Ext Time (p_c), s		2.5			3.0		3.7	28.3		0.0		12.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.3								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 28: Kirker Pass Rd & Myrtle Dr

Baseline +Project AM Without Metering

3/19/2014



























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	0	98	0	0	0	56	507	3	0	1625	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	166	0	148	467	174	148	77	2867	1219	3	3630	62
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.04	0.78	0.78	0.00	0.67	0.67
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5426	92
Grp Volume(v), veh/h	26	0	107	0	0	0	61	551	3	0	1201	595
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	0.8	0.0	4.1	0.0	0.0	0.0	2.1	2.4	0.0	0.0	9.9	9.9
Cycle Q Clear(g_c), s	0.8	0.0	4.1	0.0	0.0	0.0	2.1	2.4	0.0	0.0	9.9	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	166	0	148	467	174	148	77	2867	1219	3	2468	1223
V/C Ratio(X)	0.16	0.00	0.72	0.00	0.00	0.00	0.79	0.19	0.00	0.00	0.49	0.49
Avail Cap(c_a), veh/h	452	0	403	1273	474	403	310	4030	1713	113	3615	1792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	27.4	0.0	0.0	0.0	29.5	1.8	1.5	0.0	5.1	5.1
Incr Delay (d2), s/veh	0.4	0.0	6.5	0.0	0.0	0.0	16.3	0.0	0.0	0.0	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	0.0	1.8	0.0	0.0	0.0	1.3	0.6	0.0	0.0	3.4	3.4
Lane Grp Delay (d), s/veh	26.3	0.0	33.9	0.0	0.0	0.0	45.8	1.8	1.5	0.0	5.2	5.4
Lane Grp LOS	C		C				D	A	A		A	A
Approach Vol, veh/h		133			0			615			1796	
Approach Delay, s/veh		32.4			0.0			6.2			5.3	
Approach LOS		C						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2			1	6
Phs Duration (G+Y+Rc), s		9.9			9.9		6.7	52.4			0.0	45.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0			16.0		11.0	68.0			4.0	61.0
Max Q Clear Time (g_c+I1), s		6.1			0.0		4.1	4.4			0.0	11.9
Green Ext Time (p_c), s		0.4			0.0		0.1	34.1			0.0	29.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			6.9									
HCM 2010 LOS			A									
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Baseline +Project AM Without Metering

3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	65	69	124	377	385	90	67	413	79	50	1527	372
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	91	216	183	439	1163	494	93	2051	382	69	1893	454
Arrive On Green	0.05	0.12	0.12	0.25	0.32	0.32	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4538	846	1757	4316	1035
Grp Volume(v), veh/h	71	75	135	410	418	98	73	363	172	54	1415	649
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1695	1757	1845	1662
Q Serve(g_s), s	4.5	4.2	9.4	25.8	9.9	5.2	4.6	6.8	7.0	3.4	39.5	40.6
Cycle Q Clear(g_c), s	4.5	4.2	9.4	25.8	9.9	5.2	4.6	6.8	7.0	3.4	39.5	40.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		0.62
Lane Grp Cap(c), veh/h	91	216	183	439	1163	494	93	1667	766	69	1618	729
V/C Ratio(X)	0.78	0.35	0.74	0.93	0.36	0.20	0.79	0.22	0.22	0.78	0.87	0.89
Avail Cap(c_a), veh/h	155	261	222	482	1208	513	93	1667	766	140	1665	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	45.9	48.2	41.5	29.9	28.3	52.9	18.8	18.9	53.8	28.9	29.2
Incr Delay (d2), s/veh	13.5	1.0	9.7	24.3	0.2	0.2	34.7	0.1	0.1	16.8	5.4	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	2.1	4.3	14.5	4.7	2.1	3.0	3.0	3.0	1.9	19.3	19.3
Lane Grp Delay (d), s/veh	66.4	46.9	58.0	65.8	30.1	28.5	87.6	18.9	19.0	70.6	34.3	41.8
Lane Grp LOS	E	D	E	E	C	C	F	B	B	E	C	D
Approach Vol, veh/h		281			926			608			2118	
Approach Delay, s/veh		57.1			45.7			27.2			37.5	
Approach LOS		E			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	9.8	17.2		32.3	39.6		10.0	55.1		8.5	53.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	16.0		31.0	37.0		6.0	48.0		9.0	51.0	
Max Q Clear Time (g_c+I1), s	6.5	11.4		27.8	11.9		6.6	9.0		5.4	42.6	
Green Ext Time (p_c), s	0.0	1.8		0.5	4.7		0.0	29.1		0.0	7.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.3								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd

Baseline +Project AM Without Metering






















3/19/2014












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	210	351	34	443	1167	137	151	314	167	273	1075	521
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	286	1246	0	562	1693	0	222	1992	564	366	2227	631
Arrive On Green	0.08	0.23	0.00	0.16	0.31	0.00	0.07	0.36	0.36	0.11	0.40	0.40
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	228	382	0	482	1268	0	164	341	182	297	1168	566
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	7.4	6.4	0.0	15.4	23.1	0.0	5.3	4.7	9.4	9.6	17.9	37.8
Cycle Q Clear(g_c), s	7.4	6.4	0.0	15.4	23.1	0.0	5.3	4.7	9.4	9.6	17.9	37.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	286	1246	0	562	1693	0	222	1992	564	366	2227	631
V/C Ratio(X)	0.80	0.31	0.00	0.86	0.75	0.00	0.74	0.17	0.32	0.81	0.52	0.90
Avail Cap(c_a), veh/h	304	1246	0	730	1925	0	243	1992	564	517	2320	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	36.2	0.0	45.5	35.0	0.0	51.5	24.5	26.0	48.9	25.4	31.3
Incr Delay (d2), s/veh	13.1	0.1	0.0	8.1	1.5	0.0	10.4	0.0	0.3	6.5	0.2	14.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.8	3.0	0.0	7.4	11.0	0.0	2.6	2.2	3.7	4.5	8.3	17.2
Lane Grp Delay (d), s/veh	63.6	36.3	0.0	53.6	36.5	0.0	61.9	24.5	26.3	55.4	25.6	46.1
Lane Grp LOS	E	D		D	D		E	C	C	E	C	D
Approach Vol, veh/h		610			1750			687			2031	
Approach Delay, s/veh		46.5			41.2			33.9			35.6	
Approach LOS		D			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.4	29.2		22.5	38.3		11.3	44.3		16.0	49.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	25.0		24.0	39.0		8.0	38.0		17.0	47.0	
Max Q Clear Time (g_c+I1), s	9.4	8.4		17.4	25.1		7.3	11.4		11.6	39.8	
Green Ext Time (p_c), s	0.1	10.5		1.0	9.2		0.0	16.7		0.5	5.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.6								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Baseline +Project AM Without Metering






















3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	750	5	9	1419	11	6	0	28	7	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	16	2729	17	18	2727	21	173	0	59	150	0	59
Arrive On Green	0.01	0.74	0.74	0.01	0.75	0.75	0.04	0.00	0.04	0.04	0.00	0.04
Sat Flow, veh/h	1757	3663	22	1757	3656	28	1393	0	1568	1361	0	1568
Grp Volume(v), veh/h	9	410	410	10	778	776	7	0	30	8	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1841	1757	1845	1840	1393	0	1568	1361	0	1568
Q Serve(g_s), s	0.3	4.2	4.2	0.3	10.7	10.7	0.3	0.0	1.1	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.3	4.2	4.2	0.3	10.7	10.7	0.4	0.0	1.1	1.4	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	16	1374	1371	18	1376	1372	173	0	59	150	0	59
V/C Ratio(X)	0.55	0.30	0.30	0.55	0.57	0.57	0.04	0.00	0.51	0.05	0.00	0.07
Avail Cap(c_a), veh/h	152	2770	2764	152	2770	2763	506	0	433	475	0	433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.6	2.4	2.4	28.5	3.2	3.2	27.1	0.0	27.3	28.0	0.0	26.9
Incr Delay (d2), s/veh	25.8	0.1	0.1	24.0	0.4	0.4	0.1	0.0	6.6	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.8	0.8	0.3	2.3	2.3	0.1	0.0	0.5	0.1	0.0	0.1
Lane Grp Delay (d), s/veh	54.4	2.5	2.5	52.5	3.6	3.6	27.2	0.0	33.9	28.2	0.0	27.4
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		829			1564			37				12
Approach Delay, s/veh		3.1			3.9			32.7				27.9
Approach LOS		A			A			C				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.5	47.2		4.6	47.2			6.2				6.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	5.0	87.0		5.0	87.0			16.0				16.0
Max Q Clear Time (g_c+I1), s	2.3	6.2		2.3	12.7			3.1				3.4
Green Ext Time (p_c), s	0.0	31.2		0.0	30.5			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.2								
HCM 2010 LOS				A								
<b>Notes</b>												

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	101	297	716	101	106	298
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	144	2140	1320	187	454	405
Arrive On Green	0.08	0.58	0.42	0.42	0.26	0.26
Sat Flow, veh/h	1757	3689	3163	447	1757	1568
Grp Volume(v), veh/h	110	323	454	434	115	324
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1766	1757	1568
Q Serve(g_s), s	3.0	2.0	9.4	9.4	2.6	9.6
Cycle Q Clear(g_c), s	3.0	2.0	9.4	9.4	2.6	9.6
Prop In Lane	1.00			0.25	1.00	1.00
Lane Grp Cap(c), veh/h	144	2140	770	737	454	405
V/C Ratio(X)	0.77	0.15	0.59	0.59	0.25	0.80
Avail Cap(c_a), veh/h	497	4248	1453	1391	887	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	4.8	11.1	11.1	14.6	17.2
Incr Delay (d2), s/veh	8.2	0.0	0.7	0.8	0.3	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	0.7	3.8	3.7	1.1	0.4
Lane Grp Delay (d), s/veh	30.5	4.8	11.9	11.9	14.9	20.8
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		433	888		439	
Approach Delay, s/veh		11.3	11.9		19.3	
Approach LOS		B	B		B	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	8.0	32.7	24.7			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	57.0	39.0			
Max Q Clear Time (g_c+I1), s	5.0	4.0	11.4			
Green Ext Time (p_c), s	0.2	10.7	9.3			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			13.6			
HCM 2010 LOS			B			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Baseline +Project AM Without Metering  
 3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	42	0	102	0	0	0	802	764	0	2	238	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	223	0	141	66	166	0	917	2956	0	2	918	95
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.52	0.80	0.00	0.00	0.56	0.56
Sat Flow, veh/h	1757	0	1568	1264	1845	0	1757	3689	0	1757	3290	340
Grp Volume(v), veh/h	46	0	111	0	0	0	872	830	0	2	144	142
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1264	1845	0	1757	1845	0	1757	1845	1785
Q Serve(g_s), s	2.7	0.0	7.6	0.0	0.0	0.0	51.8	6.3	0.0	0.1	4.5	4.6
Cycle Q Clear(g_c), s	2.7	0.0	7.6	0.0	0.0	0.0	51.8	6.3	0.0	0.1	4.5	4.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.19
Lane Grp Cap(c), veh/h	223	0	141	66	166	0	917	2956	0	2	515	498
V/C Ratio(X)	0.21	0.00	0.79	0.00	0.00	0.00	0.95	0.28	0.00	1.25	0.28	0.28
Avail Cap(c_a), veh/h	322	0	228	136	269	0	1216	2956	0	64	515	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.24	0.24	0.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	46.7	0.0	48.9	0.0	0.0	0.0	24.9	2.8	0.0	54.9	18.5	18.5
Incr Delay (d2), s/veh	0.5	0.0	9.3	0.0	0.0	0.0	4.3	0.1	0.0	425.8	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	0.0	3.4	0.0	0.0	0.0	23.1	2.2	0.0	0.2	2.1	2.0
Lane Grp Delay (d), s/veh	47.2	0.0	58.3	0.0	0.0	0.0	29.3	2.9	0.0	480.7	19.8	19.9
Lane Grp LOS	D		E				C	A		F	B	B
Approach Vol, veh/h		157			0			1702			288	
Approach Delay, s/veh		55.0			0.0			16.4			23.1	
Approach LOS		E						B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.9			13.9		61.3	92.0		3.9		34.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		76.0	88.0		4.0		16.0
Max Q Clear Time (g_c+I1), s		9.6			0.0		53.8	8.3		2.1		6.6
Green Ext Time (p_c), s		0.3			0.0		3.5	7.3		0.0		1.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

Baseline +Project AM Without Metering



















3/19/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	344	155	22	457	7	614	6	29	8	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	21	519	229	38	809	13	860	8	912	210	47	30
Arrive On Green	0.01	0.21	0.21	0.02	0.22	0.22	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1757	2427	1073	1757	3621	58	1290	14	1568	202	80	51
Grp Volume(v), veh/h	12	283	259	24	253	252	674	0	32	13	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1655	1757	1845	1834	1304	0	1568	333	0	0
Q Serve(g_s), s	0.4	9.4	9.6	0.9	8.1	8.1	0.0	0.0	0.6	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.4	9.4	9.6	0.9	8.1	8.1	30.5	0.0	0.6	30.7	0.0	0.0
Prop In Lane	1.00		0.65	1.00		0.03	0.99		1.00	0.69		0.15
Lane Grp Cap(c), veh/h	21	394	354	38	412	410	868	0	912	287	0	0
V/C Ratio(X)	0.57	0.72	0.73	0.63	0.61	0.61	0.78	0.00	0.04	0.05	0.00	0.00
Avail Cap(c_a), veh/h	107	450	403	107	450	447	1289	0	1385	721	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.3	24.0	24.1	31.9	22.9	23.0	12.1	0.0	5.9	12.5	0.0	0.0
Incr Delay (d2), s/veh	22.0	4.7	5.8	16.1	2.2	2.2	1.8	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	4.7	4.4	0.5	3.8	3.8	8.7	0.0	0.2	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	54.3	28.7	29.9	47.9	25.1	25.1	13.9	0.0	5.9	12.6	0.0	0.0
Lane Grp LOS	D	C	C	D	C	C	B		A	B		
Approach Vol, veh/h		554			529			706				13
Approach Delay, s/veh		29.8			26.2			13.5				12.6
Approach LOS		C			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.8	18.0		5.4	18.7			42.2				42.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0			58.0				58.0
Max Q Clear Time (g_c+I1), s	2.4	11.6		2.9	10.1			32.5				32.7
Green Ext Time (p_c), s	0.0	2.5		0.0	3.1			5.5				5.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.2								
HCM 2010 LOS				C								
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Cumulative+PR AM wBypass without Metering

3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	161	323	194	745	827	155	268	829	324
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				201	417	265	893	1305	244	358	1376	585
Arrive On Green				0.25	0.25	0.25	0.44	0.72	0.72	0.20	0.37	0.00
Sat Flow, veh/h				789	1636	1041	3408	3025	565	1757	3689	1568
Grp Volume(v), veh/h				400	0	337	810	548	519	291	901	0
Grp Sat Flow(s),veh/h/ln				1805	0	1661	1704	1845	1745	1757	1845	1568
Q Serve(g_s), s				23.1	0.0	20.6	24.1	18.0	18.0	17.2	22.1	0.0
Cycle Q Clear(g_c), s				23.1	0.0	20.6	24.1	18.0	18.0	17.2	22.1	0.0
Prop In Lane				0.44		0.63	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h				460	0	423	893	796	753	358	1376	585
V/C Ratio(X)				0.87	0.00	0.80	0.91	0.69	0.69	0.81	0.65	0.00
Avail Cap(c_a), veh/h				530	0	488	1126	796	753	468	1376	585
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.57	0.57	0.57	1.00	1.00	0.00
Uniform Delay (d), s/veh				38.9	0.0	37.9	29.4	11.2	11.2	41.4	28.3	0.0
Incr Delay (d2), s/veh				13.2	0.0	7.8	5.6	2.8	3.0	8.1	2.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				12.4	0.0	9.7	9.9	6.3	6.0	8.5	10.7	0.0
Lane Grp Delay (d), s/veh				52.0	0.0	45.8	34.9	14.0	14.2	49.5	30.8	0.0
Lane Grp LOS				D		D	C	B	B	D	C	
Approach Vol, veh/h					737			1877			1192	
Approach Delay, s/veh					49.2			23.1			35.4	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					31.8		32.6	51.0		26.2	44.6	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					32.0		36.0	47.0		29.0	40.0	
Max Q Clear Time (g_c+I1), s					25.1		26.1	20.0		19.2	24.1	
Green Ext Time (p_c), s					2.6		2.4	8.2		3.0	6.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					32.0							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary Cumulative+PR AM wBypass without Metering  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave 3/19/2014
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	329	0	483	0	0	0	0	1088	276	281	675	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	418	438	745				0	1644	417	473	2548	0
Arrive On Green	0.24	0.00	0.24				0.00	0.39	0.39	0.54	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4262	1081	1757	3689	0
Grp Volume(v), veh/h	358	0	525				0	1024	459	305	734	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1654	1757	1845	0
Q Serve(g_s), s	21.8	0.0	17.1				0.0	26.3	26.3	13.7	0.0	0.0
Cycle Q Clear(g_c), s	21.8	0.0	17.1				0.0	26.3	26.3	13.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	418	438	745				0	1423	638	473	2548	0
V/C Ratio(X)	0.86	0.00	0.70				0.00	0.72	0.72	0.65	0.29	0.00
Avail Cap(c_a), veh/h	551	579	984				0	1423	638	473	2548	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.67	0.67	0.00
Uniform Delay (d), s/veh	40.7	0.0	38.9				0.0	29.1	29.1	22.0	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.0	1.5				0.0	3.2	6.9	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.8	0.0	6.9				0.0	12.7	12.1	5.2	0.1	0.0
Lane Grp Delay (d), s/veh	50.8	0.0	40.4				0.0	32.3	36.0	24.0	0.2	0.0
Lane Grp LOS	D		D					C		D	C	A
Approach Vol, veh/h		883						1483			1039	
Approach Delay, s/veh		44.6						33.4			7.2	
Approach LOS		D						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		30.5						47.0		34.0		81.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0						43.0		30.0		77.0
Max Q Clear Time (g_c+I1), s		23.8						28.3		15.7		2.0
Green Ext Time (p_c), s		2.8						8.8		5.3		7.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.3									
HCM 2010 LOS			C									
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

Cumulative+PR AM wBypass without Metering




























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	478	4	92	584	287	130	806	59	143	354	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	339	1304	10	127	871	370	402	1090	463	189	643	273
Arrive On Green	0.19	0.36	0.36	0.07	0.24	0.24	0.23	0.30	0.30	0.11	0.17	0.17
Sat Flow, veh/h	1757	3656	28	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	299	262	262	100	635	312	141	876	64	155	385	297
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	15.8	10.2	10.2	5.3	15.1	13.6	6.4	20.9	2.2	8.2	9.2	11.0
Cycle Q Clear(g_c), s	15.8	10.2	10.2	5.3	15.1	13.6	6.4	20.9	2.2	8.2	9.2	11.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	658	656	127	871	370	402	1090	463	189	643	273
V/C Ratio(X)	0.88	0.40	0.40	0.79	0.73	0.84	0.35	0.80	0.14	0.82	0.60	1.09
Avail Cap(c_a), veh/h	498	774	772	240	1006	428	402	1394	592	276	1316	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	23.0	23.0	43.5	33.6	19.5	30.8	31.0	14.9	41.6	36.3	17.4
Incr Delay (d2), s/veh	12.1	0.4	0.4	10.1	2.3	12.7	0.5	2.7	0.1	11.8	0.9	54.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.1	4.7	4.7	2.7	7.2	6.4	2.9	10.0	1.1	4.3	4.4	8.3
Lane Grp Delay (d), s/veh	49.5	23.4	23.4	53.6	35.9	32.2	31.4	33.8	15.1	53.4	37.2	71.8
Lane Grp LOS	D	C	C	D	D	C	C	C	B	D	D	F
Approach Vol, veh/h		823			1047			1081			837	
Approach Delay, s/veh		32.9			36.5			32.3			52.4	
Approach LOS		C			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.4	38.0		10.9	26.5		25.8	32.2		14.3	20.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	27.0	40.0		13.0	26.0		17.0	36.0		15.0	34.0	
Max Q Clear Time (g_c+I1), s	17.8	12.2		7.3	17.1		8.4	22.9		10.2	13.0	
Green Ext Time (p_c), s	0.6	10.3		0.1	5.4		0.6	5.3		0.2	3.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.0								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Cumulative+PR AM wBypass without Metering






























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	94	102	30	1021	57	152	8	841	336	198	579	73
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	669	702	597	1298	702	597	79	1251	532	254	1617	687
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.05	0.34	0.34	0.14	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	102	111	33	1110	62	165	9	914	365	215	629	79
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.4	3.5	1.2	26.4	1.9	6.4	0.4	19.2	17.7	10.6	10.2	2.6
Cycle Q Clear(g_c), s	3.4	3.5	1.2	26.4	1.9	6.4	0.4	19.2	17.7	10.6	10.2	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	669	702	597	1298	702	597	79	1251	532	254	1617	687
V/C Ratio(X)	0.15	0.16	0.06	0.86	0.09	0.28	0.11	0.73	0.69	0.85	0.39	0.11
Avail Cap(c_a), veh/h	669	702	597	1696	918	780	318	1460	621	358	1617	687
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	18.0	17.3	25.1	17.5	18.9	40.5	25.7	25.2	36.9	16.8	14.7
Incr Delay (d2), s/veh	0.1	0.1	0.0	3.6	0.1	0.2	0.6	1.6	2.6	12.5	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	1.5	0.4	11.1	0.8	2.4	0.2	9.0	7.2	5.5	4.5	1.0
Lane Grp Delay (d), s/veh	18.1	18.1	17.4	28.7	17.6	19.2	41.1	27.3	27.7	49.4	17.0	14.8
Lane Grp LOS	B	B	B	C	B	B	D	C	C	D	B	B
Approach Vol, veh/h		246			1337			1288			923	
Approach Delay, s/veh		18.0			27.0			27.5			24.3	
Approach LOS		B			C			C			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		37.7			37.7		8.0	34.0		16.8		42.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			44.0		16.0	35.0		18.0		37.0
Max Q Clear Time (g_c+I1), s		5.5			28.4		2.4	21.2		12.6		12.2
Green Ext Time (p_c), s		5.2			5.2		0.0	8.7		0.3		14.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

Cumulative+PR AM wBypass without Metering





























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 		 		 	 		 	
Volume (veh/h)	130	46	44	1275	15	332	14	755	539	53	1250	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	2	1	2	2	1	2	1
Cap, veh/h	801	841	715	1554	841	1430	24	1687	1434	192	1476	627
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.01	0.46	0.46	0.40	0.40	0.40
Sat Flow, veh/h	1757	1845	1568	3408	1845	3136	1757	3689	3136	377	3689	1568
Grp Volume(v), veh/h	141	50	48	1386	16	361	15	821	586	58	1359	48
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	377	1845	1568
Q Serve(g_s), s	4.4	1.4	1.6	34.4	0.4	6.5	0.8	14.3	11.5	11.7	32.3	1.7
Cycle Q Clear(g_c), s	4.4	1.4	1.6	34.4	0.4	6.5	0.8	14.3	11.5	20.7	32.3	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	801	841	715	1554	841	1430	24	1687	1434	192	1476	627
V/C Ratio(X)	0.18	0.06	0.07	0.89	0.02	0.25	0.62	0.49	0.41	0.30	0.92	0.08
Avail Cap(c_a), veh/h	801	841	715	1738	941	1599	76	1801	1531	193	1481	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	14.0	14.1	23.0	13.8	15.4	45.2	17.5	16.7	26.5	26.3	17.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	5.8	0.0	0.1	22.8	0.2	0.2	0.9	9.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.6	0.6	15.5	0.2	2.5	0.5	6.4	4.4	1.1	16.5	0.7
Lane Grp Delay (d), s/veh	14.9	14.1	14.1	28.8	13.8	15.5	68.0	17.7	16.9	27.4	36.0	17.2
Lane Grp LOS	B	B	B	C	B	B	E	B	B	C	D	B
Approach Vol, veh/h		239			1763			1422			1465	
Approach Delay, s/veh		14.6			26.0			17.9			35.0	
Approach LOS		B			C			B			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2				6
Phs Duration (G+Y+Rc), s		46.0			46.0		5.3	46.2				40.9
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0			47.0		4.0	45.0				37.0
Max Q Clear Time (g_c+I1), s		6.4			36.4		2.8	16.3				34.3
Green Ext Time (p_c), s		5.9			5.7		0.0	23.0				2.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Cumulative+PR AM wBypass without Metering
























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	156	601	129	115	535	199	218	657	241	249	314	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	206	870	370	156	765	325	281	1118	475	313	849	286
Arrive On Green	0.12	0.24	0.24	0.09	0.21	0.21	0.16	0.30	0.30	0.18	0.32	0.32
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2641	891
Grp Volume(v), veh/h	170	653	140	125	582	216	237	714	262	271	236	222
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1687
Q Serve(g_s), s	7.8	13.6	6.2	5.8	12.2	10.4	10.8	13.8	11.5	12.4	8.2	8.5
Cycle Q Clear(g_c), s	7.8	13.6	6.2	5.8	12.2	10.4	10.8	13.8	11.5	12.4	8.2	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	206	870	370	156	765	325	281	1118	475	313	593	542
V/C Ratio(X)	0.82	0.75	0.38	0.80	0.76	0.66	0.84	0.64	0.55	0.87	0.40	0.41
Avail Cap(c_a), veh/h	256	939	399	192	805	342	447	1118	475	405	593	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	29.3	26.4	36.8	30.8	30.0	33.7	24.8	24.0	32.9	21.8	21.9
Incr Delay (d2), s/veh	16.1	3.2	0.6	17.4	4.1	4.5	8.2	2.8	4.5	14.5	2.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.4	6.6	2.4	3.3	6.1	4.4	5.4	6.7	5.0	6.7	4.0	3.8
Lane Grp Delay (d), s/veh	51.6	32.4	27.1	54.3	34.8	34.5	41.9	27.6	28.6	47.5	23.8	24.1
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		963			923			1213			729	
Approach Delay, s/veh		35.0			37.4			30.6			32.7	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.7	23.5		11.3	21.1		17.2	29.0		18.7	30.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	21.0		9.0	18.0		21.0	25.0		19.0	23.0	
Max Q Clear Time (g_c+I1), s	9.8	15.6		7.8	14.2		12.8	15.8		14.4	10.5	
Green Ext Time (p_c), s	0.1	3.9		0.0	2.8		0.4	5.5		0.3	6.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				33.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Cumulative+PR AM wBypass without Metering





























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	442	5	2	967	98	103	110	3	145	36	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	150	1158	12	54	1072	912	136	208	5	163	36	176
Arrive On Green	0.09	0.64	0.64	0.03	0.58	0.58	0.08	0.12	0.12	0.09	0.13	0.13
Sat Flow, veh/h	1757	1822	19	1757	1845	1568	1757	1792	45	1757	275	1334
Grp Volume(v), veh/h	138	0	485	2	1051	107	112	0	123	158	0	228
Grp Sat Flow(s),veh/h/ln	1757	0	1841	1757	1845	1568	1757	0	1837	1757	0	1609
Q Serve(g_s), s	10.1	0.0	16.8	0.1	71.5	2.5	8.1	0.0	8.2	11.6	0.0	17.0
Cycle Q Clear(g_c), s	10.1	0.0	16.8	0.1	71.5	2.5	8.1	0.0	8.2	11.6	0.0	17.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.02	1.00		0.83
Lane Grp Cap(c), veh/h	150	0	1170	54	1072	912	136	0	214	163	0	212
V/C Ratio(X)	0.92	0.00	0.41	0.04	0.98	0.12	0.82	0.00	0.58	0.97	0.00	1.08
Avail Cap(c_a), veh/h	150	0	1170	54	1072	912	150	0	228	163	0	212
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.70	0.00	0.70	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.6	0.0	11.6	60.6	26.3	4.8	58.6	0.0	54.0	58.3	0.0	56.0
Incr Delay (d2), s/veh	40.5	0.0	0.8	0.0	4.8	0.0	27.4	0.0	3.1	60.4	0.0	83.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.2	0.0	7.3	0.1	32.4	1.4	4.7	0.0	4.1	8.1	0.0	12.0
Lane Grp Delay (d), s/veh	99.1	0.0	12.4	60.7	31.1	4.8	86.1	0.0	57.1	118.7	0.0	139.2
Lane Grp LOS	F		B	E	C	A	F		E	F		F
Approach Vol, veh/h		623			1160			235				386
Approach Delay, s/veh		31.6			28.7			70.9				130.8
Approach LOS		C			C			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	15.0	86.0		8.0	79.0		14.0	19.0		16.0		21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	11.0	82.0		4.0	75.0		11.0	16.0		12.0		17.0
Max Q Clear Time (g_c+I1), s	12.1	18.8		2.1	73.5		10.1	10.2		13.6		19.0
Green Ext Time (p_c), s	0.0	3.4		0.1	1.1		0.1	0.5		0.0		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				50.0								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

Cumulative+PR AM wBypass without Metering























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 					 		 
Volume (veh/h)	36	300	24	729	370	150	23	55	86	85	104	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	62	991	79	1561	2643	1123	189	198	168	189	168	25
Arrive On Green	0.04	0.29	0.29	0.46	0.72	0.72	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1757	3374	268	3408	3689	1568	1757	1845	1568	1757	1567	236
Grp Volume(v), veh/h	39	177	175	792	402	163	25	60	93	92	0	130
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1803
Q Serve(g_s), s	1.9	6.4	6.5	14.0	3.0	2.8	1.1	2.6	4.8	4.2	0.0	5.9
Cycle Q Clear(g_c), s	1.9	6.4	6.5	14.0	3.0	2.8	1.1	2.6	4.8	4.2	0.0	5.9
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	62	542	528	1561	2643	1123	189	198	168	189	0	194
V/C Ratio(X)	0.63	0.33	0.33	0.51	0.15	0.15	0.13	0.30	0.55	0.49	0.00	0.67
Avail Cap(c_a), veh/h	144	542	528	1721	2643	1123	371	390	331	371	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	23.5	23.5	16.3	3.8	3.8	34.4	35.1	36.1	35.8	0.0	36.6
Incr Delay (d2), s/veh	10.0	1.6	1.7	0.1	0.1	0.1	0.3	0.8	2.8	1.9	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	3.1	3.1	5.7	1.1	0.9	0.5	1.2	2.0	2.0	0.0	2.9
Lane Grp Delay (d), s/veh	50.5	25.1	25.2	16.4	3.9	4.0	34.7	35.9	38.9	37.7	0.0	40.5
Lane Grp LOS	D	C	C	B	A	A	C	D	D	D		D
Approach Vol, veh/h		391			1357			178			222	
Approach Delay, s/veh		27.7			11.2			37.3			39.4	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	7.0	29.0		43.0	65.0			13.1			13.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	7.0	25.0		43.0	61.0			18.0			18.0	
Max Q Clear Time (g_c+I1), s	3.9	8.5		16.0	5.0			6.8			7.9	
Green Ext Time (p_c), s	1.1	1.8		3.3	3.6			1.3			1.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd

Cumulative+PR AM wBypass without Metering




















3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	66	291	49	151	3	637	329	96	8	240	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	435	306	260	100	244	4	792	1711	490	65	1567	666
Arrive On Green	0.13	0.17	0.17	0.03	0.07	0.07	0.23	0.62	0.62	0.04	0.42	0.42
Sat Flow, veh/h	3408	1845	1568	3408	3612	66	3408	2759	790	1757	3689	1568
Grp Volume(v), veh/h	124	72	316	53	84	83	692	238	224	9	261	621
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1705	1757	1845	1568
Q Serve(g_s), s	3.6	3.7	18.0	1.7	4.8	4.8	21.2	6.1	6.2	0.5	4.7	40.9
Cycle Q Clear(g_c), s	3.6	3.7	18.0	1.7	4.8	4.8	21.2	6.1	6.2	0.5	4.7	40.9
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	435	306	260	100	125	124	792	1144	1058	65	1567	666
V/C Ratio(X)	0.29	0.24	1.21	0.53	0.67	0.67	0.87	0.21	0.21	0.14	0.17	0.93
Avail Cap(c_a), veh/h	435	306	260	126	272	270	912	1144	1058	259	1803	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	39.2	45.2	51.9	49.4	49.4	40.1	9.0	9.0	50.5	19.3	29.7
Incr Delay (d2), s/veh	0.4	0.4	126.2	4.3	6.1	6.2	8.5	0.1	0.1	1.0	0.0	16.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	1.8	16.3	0.8	2.5	2.5	10.2	2.7	2.5	0.3	2.2	18.9
Lane Grp Delay (d), s/veh	43.2	39.6	171.4	56.2	55.4	55.6	48.6	9.1	9.1	51.5	19.4	46.6
Lane Grp LOS	D	D	F	E	E	E	D	A	A	D	B	D
Approach Vol, veh/h	512				220			1154			891	
Approach Delay, s/veh	121.8				55.7			32.8			38.6	
Approach LOS	F				E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	17.8	22.0		7.2	11.3		29.2	71.2		8.0	50.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	18.0		4.0	16.0		29.0	66.0		16.0	53.0	
Max Q Clear Time (g_c+I1), s	5.6	20.0		3.7	6.8		23.2	8.2		2.5	42.9	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.5		2.0	6.5		0.0	3.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					52.9							
HCM 2010 LOS					D							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Cumulative+PR AM wBypass without Metering

3/19/2014

























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	455	0	407	0	0	0	0	743	201	141	520	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1111	0	511				0	1843	783	217	2214	0
Arrive On Green	0.33	0.00	0.33				0.00	0.50	0.50	0.06	0.60	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	495	0	442				0	808	218	153	565	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	12.4	0.0	28.7				0.0	15.2	8.8	4.8	7.8	0.0
Cycle Q Clear(g_c), s	12.4	0.0	28.7				0.0	15.2	8.8	4.8	7.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1111	0	511				0	1843	783	217	2214	0
V/C Ratio(X)	0.45	0.00	0.86				0.00	0.44	0.28	0.71	0.26	0.00
Avail Cap(c_a), veh/h	1479	0	680				0	1843	783	378	2214	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	28.8	0.0	34.3				0.0	17.4	15.8	49.7	10.2	0.0
Incr Delay (d2), s/veh	0.3	0.0	8.9				0.0	0.8	0.9	3.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	12.4				0.0	7.0	3.5	2.2	3.5	0.0
Lane Grp Delay (d), s/veh	29.1	0.0	43.1				0.0	18.1	16.6	53.5	10.5	0.0
Lane Grp LOS	C		D					B	B	D	B	
Approach Vol, veh/h		937						1026			718	
Approach Delay, s/veh		35.7						17.8			19.7	
Approach LOS		D						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		39.3						58.1		10.9	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						49.0		12.0	65.0	
Max Q Clear Time (g_c+I1), s		30.7						17.2		6.8	9.8	
Green Ext Time (p_c), s		4.7						13.3		0.2	15.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

Cumulative+PR AM wBypass without Metering













3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	199	257	180	189	739	197	256	621	139	198	383	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	304	1198	509	290	1184	503	326	1143	486	303	786	334
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.19	0.31	0.31	0.09	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	216	279	196	205	803	214	278	675	151	215	416	185
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.1	4.6	8.1	4.9	15.8	9.0	12.8	12.9	6.1	5.1	8.4	8.8
Cycle Q Clear(g_c), s	5.1	4.6	8.1	4.9	15.8	9.0	12.8	12.9	6.1	5.1	8.4	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1198	509	290	1184	503	326	1143	486	303	786	334
V/C Ratio(X)	0.71	0.23	0.38	0.71	0.68	0.43	0.85	0.59	0.31	0.71	0.53	0.55
Avail Cap(c_a), veh/h	531	1679	713	490	1634	695	631	1811	770	531	1060	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	20.6	21.8	37.2	24.6	22.3	32.9	24.4	22.0	37.0	29.1	29.3
Incr Delay (d2), s/veh	3.1	0.1	0.5	3.1	0.7	0.6	6.4	0.5	0.4	3.1	0.6	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	2.1	3.1	2.2	7.1	3.5	6.2	5.9	2.4	2.3	3.9	3.5
Lane Grp Delay (d), s/veh	40.1	20.7	22.2	40.3	25.3	22.9	39.3	24.8	22.4	40.1	29.7	30.7
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		691			1222			1104			816	
Approach Delay, s/veh		27.2			27.4			28.1			32.7	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.4	31.1		11.1	30.8		19.5	29.9		11.4	21.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	38.0		12.0	37.0		30.0	41.0		13.0	24.0	
Max Q Clear Time (g_c+I1), s	7.1	10.1		6.9	17.8		14.8	14.9		7.1	10.8	
Green Ext Time (p_c), s	0.3	10.7		0.3	9.0		0.7	10.0		0.3	7.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
12: Buchanan Rd & Loveridge Rd

Cumulative+PR AM wBypass without Metering























3/19/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	295	313	1168	536	203	208
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	284	1504	1149	977	216	193
Arrive On Green	0.16	0.82	1.00	1.00	0.12	0.12
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	321	340	1270	583	221	226
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	21.0	5.4	81.0	0.0	16.0	16.0
Cycle Q Clear(g_c), s	21.0	5.4	81.0	0.0	16.0	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	284	1504	1149	977	216	193
V/C Ratio(X)	1.13	0.23	1.10	0.60	1.02	1.17
Avail Cap(c_a), veh/h	284	1504	1149	977	216	193
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.14	0.14	1.00	1.00
Uniform Delay (d), s/veh	54.5	2.7	0.0	0.0	57.0	57.0
Incr Delay (d2), s/veh	89.6	0.3	49.4	0.4	67.0	118.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	16.4	1.8	15.8	0.1	11.4	19.4
Lane Grp Delay (d), s/veh	144.1	3.0	49.4	0.4	124.0	175.5
Lane Grp LOS	F	A	F	A	F	F
Approach Vol, veh/h		661	1853		447	
Approach Delay, s/veh		71.5	34.0		150.1	
Approach LOS		E	C		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.0	110.0	85.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	21.0	106.0	81.0			
Max Q Clear Time (g_c+I1), s	23.0	7.4	83.0			
Green Ext Time (p_c), s	0.0	3.2	0.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			59.9			
HCM 2010 LOS			E			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

Cumulative+PR AM wBypass without Metering






















3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	444	73	31	1297	12	156	118	59	15	11	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	15	1393	1184	43	1407	13	203	146	73	77	76	133
Arrive On Green	0.02	1.00	1.00	0.02	0.77	0.77	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1757	1845	1568	1757	1825	17	1357	1161	581	1175	603	1055
Grp Volume(v), veh/h	11	483	79	34	0	1423	170	0	192	16	0	33
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1842	1357	0	1742	1175	0	1658
Q Serve(g_s), s	0.8	0.0	0.0	2.4	0.0	98.0	13.7	0.0	13.8	1.7	0.0	2.3
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.4	0.0	98.0	16.0	0.0	13.8	15.5	0.0	2.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.33	1.00		0.64
Lane Grp Cap(c), veh/h	15	1393	1184	43	0	1420	203	0	219	77	0	209
V/C Ratio(X)	0.71	0.35	0.07	0.79	0.00	1.00	0.84	0.00	0.88	0.21	0.00	0.16
Avail Cap(c_a), veh/h	55	1393	1184	83	0	1420	203	0	219	77	0	209
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.09	0.00	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.3	0.0	0.0	61.7	0.0	14.6	57.6	0.0	54.6	62.2	0.0	49.6
Incr Delay (d2), s/veh	39.7	0.6	0.1	3.0	0.0	7.7	25.0	0.0	30.2	1.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.2	0.0	1.2	0.0	38.9	7.0	0.0	8.1	0.6	0.0	1.0
Lane Grp Delay (d), s/veh	101.9	0.6	0.1	64.7	0.0	22.2	82.6	0.0	84.8	63.5	0.0	49.9
Lane Grp LOS	F	A	A	E		F	F		F	E		D
Approach Vol, veh/h		573			1457			362				49
Approach Delay, s/veh		2.4			23.2			83.8				54.3
Approach LOS		A			C			F				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.1	100.0		7.1	102.0			20.0				20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	96.0		6.0	98.0			16.0				16.0
Max Q Clear Time (g_c+I1), s	2.8	2.0		4.4	100.0			18.0				17.5
Green Ext Time (p_c), s	0.3	3.6		0.0	0.0			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

Cumulative+PR AM wBypass without Metering

3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	532	19	36	1470	42	54	82	94	44	29	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	91	2062	75	52	2001	57	75	115	132	60	58	167
Arrive On Green	0.05	0.58	0.58	0.03	0.56	0.56	0.04	0.15	0.15	0.03	0.14	0.14
Sat Flow, veh/h	1757	3538	128	1757	3569	102	1757	786	900	1757	421	1210
Grp Volume(v), veh/h	71	301	298	39	824	820	59	0	191	48	0	124
Grp Sat Flow(s),veh/h/ln	1757	1845	1822	1757	1845	1827	1757	0	1686	1757	0	1631
Q Serve(g_s), s	3.1	6.3	6.3	1.7	27.4	27.6	2.6	0.0	8.4	2.1	0.0	5.5
Cycle Q Clear(g_c), s	3.1	6.3	6.3	1.7	27.4	27.6	2.6	0.0	8.4	2.1	0.0	5.5
Prop In Lane	1.00		0.07	1.00		0.06	1.00		0.53	1.00		0.74
Lane Grp Cap(c), veh/h	91	1075	1062	52	1034	1024	75	0	247	60	0	225
V/C Ratio(X)	0.78	0.28	0.28	0.76	0.80	0.80	0.79	0.00	0.77	0.80	0.00	0.55
Avail Cap(c_a), veh/h	137	1123	1110	137	1123	1112	114	0	350	114	0	338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.2	8.0	8.0	37.2	13.5	13.5	36.6	0.0	31.7	37.0	0.0	31.0
Incr Delay (d2), s/veh	15.3	0.1	0.1	19.8	3.8	4.0	18.5	0.0	6.8	21.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.7	2.6	2.6	1.0	12.1	12.1	1.5	0.0	4.0	1.3	0.0	2.3
Lane Grp Delay (d), s/veh	51.5	8.2	8.2	57.0	17.3	17.5	55.2	0.0	38.5	58.1	0.0	33.1
Lane Grp LOS	D	A	A	E	B	B	E		D	E		C
Approach Vol, veh/h		670			1683			250				172
Approach Delay, s/veh		12.8			18.3			42.4				40.1
Approach LOS		B			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	8.0	49.0		6.3	47.3		7.3	15.3		6.6		14.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	47.0		6.0	47.0		5.0	16.0		5.0		16.0
Max Q Clear Time (g_c+I1), s	5.1	8.3		3.7	29.6		4.6	10.4		4.1		7.5
Green Ext Time (p_c), s	0.0	24.6		0.0	13.7		0.0	0.9		0.0		1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.5								
HCM 2010 LOS				C								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 15: Tuscany Meadows Dr & Buchanan Rd

Cumulative+PR AM wBypass without Metering

3/19/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	549	12	36	961	34	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1174	998	58	1375	181	162
Arrive On Green	0.64	0.64	0.03	0.75	0.10	0.10
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	597	13	39	1045	37	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	9.2	0.2	1.2	17.6	1.0	3.8
Cycle Q Clear(g_c), s	9.2	0.2	1.2	17.6	1.0	3.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1174	998	58	1375	181	162
V/C Ratio(X)	0.51	0.01	0.67	0.76	0.20	0.72
Avail Cap(c_a), veh/h	3287	2794	233	3671	566	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.2	3.5	25.2	4.0	21.7	22.9
Incr Delay (d2), s/veh	0.3	0.0	12.7	0.9	0.5	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.8	0.0	0.7	3.5	0.4	1.6
Lane Grp Delay (d), s/veh	5.5	3.5	37.9	4.8	22.2	28.7
Lane Grp LOS	A	A	D	A	C	C
Approach Vol, veh/h	610			1084	153	
Approach Delay, s/veh	5.5			6.0	27.2	
Approach LOS	A			A	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	37.6		5.7	43.3		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	94.0		7.0	105.0		
Max Q Clear Time (g_c+I1), s	11.2		3.2	19.6		
Green Ext Time (p_c), s	19.7		0.0	19.8		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			7.6			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary Cumulative+PR AM wBypass without Metering  
 16: James Donlon Blvd & Tuscany Meadows Dr 3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	555	15	13	1355	4	30	23	40	11	15	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	59	2117	56	24	2102	6	48	90	155	21	22	189
Arrive On Green	0.03	0.59	0.59	0.01	0.57	0.57	0.03	0.15	0.15	0.01	0.13	0.13
Sat Flow, veh/h	1757	3578	95	1757	3678	10	1757	610	1049	1757	164	1428
Grp Volume(v), veh/h	45	311	308	14	739	738	33	0	68	12	0	155
Grp Sat Flow(s),veh/h/ln	1757	1845	1828	1757	1845	1843	1757	0	1659	1757	0	1593
Q Serve(g_s), s	1.7	5.6	5.6	0.5	19.5	19.5	1.3	0.0	2.5	0.5	0.0	6.4
Cycle Q Clear(g_c), s	1.7	5.6	5.6	0.5	19.5	19.5	1.3	0.0	2.5	0.5	0.0	6.4
Prop In Lane	1.00		0.05	1.00		0.01	1.00		0.63	1.00		0.90
Lane Grp Cap(c), veh/h	59	1091	1081	24	1054	1053	48	0	245	21	0	210
V/C Ratio(X)	0.76	0.28	0.29	0.58	0.70	0.70	0.69	0.00	0.28	0.57	0.00	0.74
Avail Cap(c_a), veh/h	129	1329	1317	103	1302	1301	129	0	415	103	0	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	6.8	6.8	33.3	10.4	10.4	32.8	0.0	25.8	33.4	0.0	28.4
Incr Delay (d2), s/veh	17.9	0.1	0.1	20.4	1.3	1.3	16.1	0.0	0.6	22.3	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	2.2	2.2	0.4	8.2	8.2	0.8	0.0	1.0	0.3	0.0	2.8
Lane Grp Delay (d), s/veh	50.5	7.0	7.0	53.8	11.7	11.7	48.9	0.0	26.4	55.7	0.0	33.3
Lane Grp LOS	D	A	A	D	B	B	D		C	E		C
Approach Vol, veh/h		664			1491			101				167
Approach Delay, s/veh		9.9			12.1			33.7				34.9
Approach LOS		A			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	6.3	44.2		4.9	42.9		5.9	14.0		4.8		13.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	5.0	49.0		4.0	48.0		5.0	17.0		4.0		16.0
Max Q Clear Time (g_c+I1), s	3.7	7.6		2.5	21.5		3.3	4.5		2.5		8.4
Green Ext Time (p_c), s	0.0	22.7		0.0	17.4		0.0	1.0		0.0		0.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				14.0								
HCM 2010 LOS				B								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 17: Proposed Apartments & Buchanan Rd

Cumulative+PR AM wBypass without Metering

3/19/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	640	16	22	1145	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	829	704	465	1436	161	144
Arrive On Green	0.45	0.45	0.26	0.78	0.09	0.09
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	696	17	24	1245	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	20.6	0.4	0.6	28.3	2.2	3.7
Cycle Q Clear(g_c), s	20.6	0.4	0.6	28.3	2.2	3.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	829	704	465	1436	161	144
V/C Ratio(X)	0.84	0.02	0.05	0.87	0.42	0.68
Avail Cap(c_a), veh/h	2873	2442	465	3172	456	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.0	9.5	16.9	4.6	26.4	27.1
Incr Delay (d2), s/veh	2.4	0.0	0.0	1.7	1.7	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.3	0.1	0.3	5.9	1.0	1.6
Lane Grp Delay (d), s/veh	17.4	9.5	16.9	6.4	28.2	32.5
Lane Grp LOS	B	A	B	A	C	C
Approach Vol, veh/h	713			1269	164	
Approach Delay, s/veh	17.2			6.6	30.8	
Approach LOS	B			A	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	31.7		20.3	52.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	96.0		6.0	106.0		
Max Q Clear Time (g_c+I1), s	22.6		2.6	30.3		
Green Ext Time (p_c), s	5.1		2.6	17.7		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			11.9			
HCM 2010 LOS			B			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary Cumulative+PR AM wBypass without Metering  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy 3/19/2014













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	34	46	225	83	32	228	522	162	26	568	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	410	222	189	410	152	59	594	2879	871	41	2045	869
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.06	0.23	0.23	0.02	0.55	0.55
Sat Flow, veh/h	3408	1845	1568	3408	1266	492	3408	4082	1234	1757	3689	1568
Grp Volume(v), veh/h	124	37	50	245	0	125	248	511	232	28	617	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1627	1757	1845	1568
Q Serve(g_s), s	2.6	1.4	2.3	5.4	0.0	5.3	5.6	8.8	9.1	1.3	7.1	8.8
Cycle Q Clear(g_c), s	2.6	1.4	2.3	5.4	0.0	5.3	5.6	8.8	9.1	1.3	7.1	8.8
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	410	222	189	410	0	211	594	2602	1147	41	2045	869
V/C Ratio(X)	0.30	0.17	0.27	0.60	0.00	0.59	0.42	0.20	0.20	0.69	0.30	0.36
Avail Cap(c_a), veh/h	773	418	355	944	0	487	859	2602	1147	177	2045	869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	31.3	31.7	33.1	0.0	33.1	33.5	12.4	12.5	38.5	9.5	9.8
Incr Delay (d2), s/veh	0.4	0.4	0.7	1.4	0.0	2.6	0.5	0.2	0.4	18.5	0.4	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.7	0.9	2.4	0.0	2.5	2.6	4.5	4.2	0.8	3.0	3.4
Lane Grp Delay (d), s/veh	32.3	31.7	32.5	34.5	0.0	35.7	34.0	12.5	12.9	57.0	9.9	11.0
Lane Grp LOS	C	C	C	C		D	C	B	B	E	A	B
Approach Vol, veh/h		211			370			991			957	
Approach Delay, s/veh		32.2			34.9			18.0			11.6	
Approach LOS		C			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.5			13.5		17.8	60.0		5.8		48.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			22.0		20.0	56.0		8.0		44.0
Max Q Clear Time (g_c+I1), s		4.6			7.4		7.6	11.1		3.3		10.8
Green Ext Time (p_c), s		2.1			2.1		4.7	7.1		0.0		7.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.2								
HCM 2010 LOS				B								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Cumulative+PR AM wBypass without Metering





















3/19/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	236	293	553	602	464	316
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	775	357	716	3882	2522	715
Arrive On Green	0.23	0.23	0.07	0.23	0.46	0.46
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	257	318	601	654	504	343
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	7.1	22.1	19.6	10.6	6.1	17.2
Cycle Q Clear(g_c), s	7.1	22.1	19.6	10.6	6.1	17.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	775	357	716	3882	2522	715
V/C Ratio(X)	0.33	0.89	0.84	0.17	0.20	0.48
Avail Cap(c_a), veh/h	999	459	1120	3882	2522	715
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.91	0.91
Uniform Delay (d), s/veh	36.3	42.2	50.5	17.0	18.3	21.3
Incr Delay (d2), s/veh	0.2	16.1	3.2	0.1	0.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.1	1.6	9.4	5.4	2.8	7.1
Lane Grp Delay (d), s/veh	36.6	58.3	53.8	17.1	18.5	23.4
Lane Grp LOS	D	E	D	B	B	C
Approach Vol, veh/h	575			1255	847	
Approach Delay, s/veh	48.6			34.7	20.5	
Approach LOS	D			C	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			27.7	83.0	55.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			37.0	79.0	38.0	
Max Q Clear Time (g_c+I1), s			21.6	12.6	19.2	
Green Ext Time (p_c), s			2.1	13.5	9.2	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			33.2			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Cumulative+PR AM wBypass without Metering
























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	228	0	290	0	0	0	0	863	495	148	646	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	439	238	404				0	3868	1096	223	4427	0
Arrive On Green	0.13	0.00	0.13				0.00	1.00	1.00	0.13	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	248	0	315				0	938	538	161	702	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.7	0.0	10.9				0.0	0.0	0.0	5.1	0.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	10.9				0.0	0.0	0.0	5.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	439	238	404				0	3868	1096	223	4427	0
V/C Ratio(X)	0.56	0.00	0.78				0.00	0.24	0.49	0.72	0.16	0.00
Avail Cap(c_a), veh/h	666	361	613				0	3868	1096	485	4427	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.79	0.79	0.94	0.94	0.00
Uniform Delay (d), s/veh	46.0	0.0	47.4				0.0	0.0	0.0	47.9	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	3.6				0.0	0.1	1.2	4.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	0.0	4.6				0.0	0.0	0.4	2.3	0.0	0.0
Lane Grp Delay (d), s/veh	47.2	0.0	51.1				0.0	0.1	1.2	52.0	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		563						1476			863	
Approach Delay, s/veh		49.3						0.5			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		18.5						82.6		11.4	94.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		22.0						70.0		16.0	90.0	
Max Q Clear Time (g_c+I1), s		12.9						2.0		7.1	2.0	
Green Ext Time (p_c), s		1.6						25.8		0.3	27.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.7									
HCM 2010 LOS			B									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

Cumulative+PR AM wBypass without Metering



























3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	288	126	7	47	345	452	97	568	19	150	405	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1533	776	45	790	830	705	292	1892	64	236	954	405
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.05	0.12	0.12	0.02	0.09	0.09
Sat Flow, veh/h	3408	1726	101	1757	1845	1568	1757	5322	180	3408	3689	1568
Grp Volume(v), veh/h	313	0	145	51	375	491	105	427	211	163	440	335
Grp Sat Flow(s),veh/h/ln	1704	0	1827	1757	1845	1568	1757	1845	1813	1704	1845	1568
Q Serve(g_s), s	5.3	0.0	4.5	1.6	13.4	24.0	5.5	10.2	10.2	4.5	10.9	20.1
Cycle Q Clear(g_c), s	5.3	0.0	4.5	1.6	13.4	24.0	5.5	10.2	10.2	4.5	10.9	20.1
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	1533	0	822	790	830	705	292	1312	645	236	954	405
V/C Ratio(X)	0.20	0.00	0.18	0.06	0.45	0.70	0.36	0.33	0.33	0.69	0.46	0.83
Avail Cap(c_a), veh/h	1533	0	822	790	830	705	292	1312	645	356	1157	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.75	0.75	0.99	0.99	0.99	0.98	0.98	0.98
Uniform Delay (d), s/veh	15.9	0.0	15.7	14.9	18.2	21.1	40.3	31.7	31.7	45.7	37.4	41.6
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	1.3	4.3	0.7	0.7	1.3	3.5	0.3	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	0.0	2.0	0.7	6.2	9.8	2.6	5.2	5.3	2.2	5.5	9.6
Lane Grp Delay (d), s/veh	16.0	0.0	15.8	15.0	19.5	25.3	41.0	32.3	33.0	49.2	37.7	50.9
Lane Grp LOS	B		B	B	B	C	D	C	C	D	D	D
Approach Vol, veh/h		458			917			743			938	
Approach Delay, s/veh		16.0			22.4			33.8			44.4	
Approach LOS		B			C			C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		47.0			47.0		19.9	38.0		10.6		28.7
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			43.0		14.0	34.0		10.0		30.0
Max Q Clear Time (g_c+I1), s		7.3			26.0		7.5	12.2		6.5		22.1
Green Ext Time (p_c), s		4.6			6.2		0.5	4.2		0.2		2.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
22: Somersville Rd & Buchanan Rd

Cumulative+PR AM wBypass without Metering













3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	425	244	37	27	449	433	611	699	58	43	197	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	374	1557	662	37	424	361	524	1299	108	60	452	192
Arrive On Green	0.21	0.42	0.00	0.02	0.23	0.00	0.30	0.39	0.39	0.03	0.12	0.12
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3362	279	1757	3689	1568
Grp Volume(v), veh/h	462	265	0	29	488	0	664	417	406	47	214	161
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1796	1757	1845	1568
Q Serve(g_s), s	25.0	5.3	0.0	1.9	27.0	0.0	35.0	21.0	21.0	3.1	6.3	11.8
Cycle Q Clear(g_c), s	25.0	5.3	0.0	1.9	27.0	0.0	35.0	21.0	21.0	3.1	6.3	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	374	1557	662	37	424	361	524	713	694	60	452	192
V/C Ratio(X)	1.23	0.17	0.00	0.79	1.15	0.00	1.27	0.58	0.59	0.78	0.47	0.84
Avail Cap(c_a), veh/h	374	1557	662	90	424	361	524	713	694	120	534	227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	21.1	0.0	57.2	45.2	0.0	41.2	28.5	28.6	56.2	48.0	50.4
Incr Delay (d2), s/veh	126.8	0.1	0.0	30.5	91.6	0.0	135.0	1.2	1.3	19.2	0.8	20.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	24.2	2.3	0.0	1.2	23.6	0.0	35.4	10.1	9.8	1.7	3.1	5.8
Lane Grp Delay (d), s/veh	173.0	21.2	0.0	87.7	136.8	0.0	176.2	29.8	29.8	75.5	48.7	70.8
Lane Grp LOS	F	C		F	F		F	C	C	E	D	E
Approach Vol, veh/h		727			517			1487			422	
Approach Delay, s/veh		117.6			134.0			95.2			60.1	
Approach LOS		F			F			F			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	29.0	53.6		6.4	31.0		39.0	49.4		8.0	18.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	25.0	46.0		6.0	27.0		35.0	44.0		8.0	17.0	
Max Q Clear Time (g_c+I1), s	27.0	7.3		3.9	29.0		37.0	23.0		5.1	13.8	
Green Ext Time (p_c), s	0.0	5.4		0.0	0.0		0.0	7.5		0.0	0.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			102.0									
HCM 2010 LOS			F									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 23: Sequoia Dr & Somersville Rd

Cumulative+PR AM wBypass without Metering

3/19/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	175	11	4	1660	314	59
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	239	213	804	2786	2786	1184
Arrive On Green	0.14	0.14	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1757	1568	967	3689	3689	1568
Grp Volume(v), veh/h	190	12	4	1804	341	64
Grp Sat Flow(s),veh/h/ln	1757	1568	967	1845	1845	1568
Q Serve(g_s), s	7.7	0.5	0.1	17.2	1.8	0.8
Cycle Q Clear(g_c), s	7.7	0.5	1.9	17.2	1.8	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	239	213	804	2786	2786	1184
V/C Ratio(X)	0.79	0.06	0.00	0.65	0.12	0.05
Avail Cap(c_a), veh/h	574	512	1232	4418	4418	1878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	27.6	2.7	4.3	2.4	2.3
Incr Delay (d2), s/veh	5.9	0.1	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	0.2	0.0	5.9	0.6	0.2
Lane Grp Delay (d), s/veh	36.7	27.7	2.7	4.6	2.4	2.3
Lane Grp LOS	D	C	A	A	A	A
Approach Vol, veh/h	202			1808	405	
Approach Delay, s/veh	36.1			4.6	2.4	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				59.5	59.5	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				88.0	88.0	
Max Q Clear Time (g_c+I1), s				19.2	3.8	
Green Ext Time (p_c), s				36.3	39.6	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			6.8			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

Cumulative+PR AM wBypass without Metering






















3/19/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	186	370	0	4	1284	660	0	1	2	289	9	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	243	2383	0	7	1888	802	2	23	46	404	383	651
Arrive On Green	0.14	0.65	0.00	0.00	0.51	0.00	0.00	0.04	0.04	0.12	0.21	0.21
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	202	402	0	4	1396	0	0	0	3	314	10	77
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	9.4	3.7	0.0	0.2	25.1	0.0	0.0	0.0	0.1	7.5	0.4	1.7
Cycle Q Clear(g_c), s	9.4	3.7	0.0	0.2	25.1	0.0	0.0	0.0	0.1	7.5	0.4	1.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	243	2383	0	7	1888	802	2	0	69	404	383	651
V/C Ratio(X)	0.83	0.17	0.00	0.54	0.74	0.00	0.00	0.00	0.04	0.78	0.03	0.12
Avail Cap(c_a), veh/h	396	3018	0	83	2362	1004	83	0	333	566	591	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	5.9	0.0	41.9	16.2	0.0	0.0	0.0	38.8	36.1	26.6	27.1
Incr Delay (d2), s/veh	7.7	0.0	0.0	48.9	1.0	0.0	0.0	0.0	0.3	4.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.7	1.4	0.0	0.2	11.1	0.0	0.0	0.0	0.1	3.5	0.2	0.6
Lane Grp Delay (d), s/veh	43.1	6.0	0.0	90.9	17.1	0.0	0.0	0.0	39.1	40.6	26.6	27.2
Lane Grp LOS	D	A		F	B				D	D	C	C
Approach Vol, veh/h		604			1400			3			401	
Approach Delay, s/veh		18.4			17.3			39.1			37.7	
Approach LOS		B			B			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	15.7	58.5		4.4	47.2		0.0	7.5		14.0	21.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	19.0	69.0		4.0	54.0		4.0	17.0		14.0	27.0	
Max Q Clear Time (g_c+I1), s	11.4	5.7		2.2	27.1		0.0	2.1		9.5	3.7	
Green Ext Time (p_c), s	0.3	23.9		0.0	16.1		0.0	0.2		0.5	0.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 25: Buchanan Rd & Delta Fair Blvd

Cumulative+PR AM wBypass without Metering





















3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	230	59	55	429	223	137	461	57	69	114	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	301	1118	280	478	901	465	653	748	93	315	857	728
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	730	2849	714	1051	2296	1184	1230	1610	199	836	1845	1568
Grp Volume(v), veh/h	53	160	154	60	374	334	149	0	563	75	124	17
Grp Sat Flow(s),veh/h/ln	730	1845	1719	1051	1845	1636	1230	0	1809	836	1845	1568
Q Serve(g_s), s	3.3	3.2	3.3	2.3	8.6	8.7	4.4	0.0	13.5	4.3	2.2	0.3
Cycle Q Clear(g_c), s	12.1	3.2	3.3	5.6	8.6	8.7	6.6	0.0	13.5	17.8	2.2	0.3
Prop In Lane	1.00		0.42	1.00		0.72	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	301	724	674	478	724	642	653	0	841	315	857	728
V/C Ratio(X)	0.18	0.22	0.23	0.13	0.52	0.52	0.23	0.00	0.67	0.24	0.14	0.02
Avail Cap(c_a), veh/h	577	1420	1323	875	1420	1259	1601	0	2235	959	2278	1936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	11.3	11.3	13.2	12.9	13.0	10.5	0.0	11.6	18.5	8.6	8.1
Incr Delay (d2), s/veh	0.3	0.2	0.2	0.1	0.6	0.7	0.2	0.0	0.9	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	1.3	1.3	0.5	3.5	3.2	1.2	0.0	5.4	0.9	0.8	0.1
Lane Grp Delay (d), s/veh	17.8	11.4	11.5	13.3	13.5	13.6	10.7	0.0	12.6	18.9	8.7	8.1
Lane Grp LOS	B	B	B	B	B	B	B		B	B	A	A
Approach Vol, veh/h		367			768			712				216
Approach Delay, s/veh		12.4			13.5			12.2				12.2
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs		4			8			2				6
Phs Duration (G+Y+Rc), s		25.9			25.9			30.0				30.0
Change Period (Y+Rc), s		4.0			4.0			4.0				4.0
Max Green Setting (Gmax), s		43.0			43.0			69.0				69.0
Max Q Clear Time (g_c+I1), s		14.1			10.7			15.5				19.8
Green Ext Time (p_c), s		7.9			8.1			6.2				6.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.7								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Cumulative+PR AM wBypass without Metering

3/19/2014
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	492	2	10	1563	235	7	10	13	226	14	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	236	2442	9	19	1795	172	86	111	108	211	27	275
Arrive On Green	0.13	0.66	0.66	0.01	0.54	0.54	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3673	14	1757	3316	317	187	586	570	1367	144	1446
Grp Volume(v), veh/h	217	269	268	11	934	930	33	0	0	246	0	166
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1789	1343	0	0	1367	0	1590
Q Serve(g_s), s	10.9	5.1	5.1	0.6	42.1	44.4	0.1	0.0	0.0	8.5	0.0	8.4
Cycle Q Clear(g_c), s	10.9	5.1	5.1	0.6	42.1	44.4	8.5	0.0	0.0	17.0	0.0	8.4
Prop In Lane	1.00		0.01	1.00		0.18	0.24		0.42	1.00		0.91
Lane Grp Cap(c), veh/h	236	1226	1225	19	998	968	305	0	0	211	0	302
V/C Ratio(X)	0.92	0.22	0.22	0.59	0.94	0.96	0.11	0.00	0.00	1.17	0.00	0.55
Avail Cap(c_a), veh/h	236	1226	1225	79	1011	981	305	0	0	211	0	302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	5.9	5.9	44.0	19.1	19.6	29.9	0.0	0.0	42.1	0.0	32.7
Incr Delay (d2), s/veh	37.6	0.1	0.1	25.7	15.2	19.7	0.2	0.0	0.0	115.0	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.3	2.0	2.0	0.4	21.9	23.4	0.6	0.0	0.0	11.5	0.0	3.5
Lane Grp Delay (d), s/veh	75.8	6.0	6.0	69.7	34.2	39.2	30.1	0.0	0.0	157.0	0.0	34.8
Lane Grp LOS	E	A	A	E	C	D	C			F		C
Approach Vol, veh/h		754			1875			33				412
Approach Delay, s/veh		26.1			36.9			30.1				107.8
Approach LOS		C			D			C				F
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	16.0	63.4		5.0	52.4			21.0				21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	12.0	57.0		4.0	49.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	12.9	7.1		2.6	46.4			10.5				19.0
Green Ext Time (p_c), s	0.0	32.9		0.0	2.0			1.1				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				43.7								
HCM 2010 LOS				D								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
27: Lone Tree Way & James Donlon Blvd

Cumulative+PR AM wBypass without Metering































3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	218	55	545	12	124	85	1006	1270	10	54	950	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	300	315	1674	28	286	267	1238	2407	1023	76	1527	264
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.36	0.65	0.65	0.04	0.33	0.33
Sat Flow, veh/h	1757	1845	3136	161	1675	1568	3408	3689	1568	1757	4598	795
Grp Volume(v), veh/h	237	60	592	148	0	92	1093	1380	11	59	828	384
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1837	0	1568	1704	1845	1568	1757	1845	1704
Q Serve(g_s), s	11.6	2.5	9.7	6.5	0.0	4.6	26.9	18.6	0.2	3.0	17.3	17.4
Cycle Q Clear(g_c), s	11.6	2.5	9.7	6.5	0.0	4.6	26.9	18.6	0.2	3.0	17.3	17.4
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	300	315	1674	313	0	267	1238	2407	1023	76	1225	566
V/C Ratio(X)	0.79	0.19	0.35	0.47	0.00	0.34	0.88	0.57	0.01	0.78	0.68	0.68
Avail Cap(c_a), veh/h	333	350	1734	328	0	280	1522	2595	1103	157	1277	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	31.9	12.0	33.5	0.0	32.7	26.7	8.6	5.4	42.5	25.8	25.8
Incr Delay (d2), s/veh	11.1	0.3	0.1	1.1	0.0	0.8	5.5	0.3	0.0	15.9	1.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.1	1.2	3.5	3.1	0.0	1.9	12.3	7.6	0.1	1.7	8.1	7.7
Lane Grp Delay (d), s/veh	46.7	32.1	12.1	34.6	0.0	33.5	32.3	8.9	5.5	58.3	27.1	28.7
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		889			240			2484			1271	
Approach Delay, s/veh		22.7			34.2			19.2			29.1	
Approach LOS		C			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		19.3			19.3		36.5	62.5		7.9		33.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			16.0		40.0	63.0		8.0		31.0
Max Q Clear Time (g_c+I1), s		13.6			8.5		28.9	20.6		5.0		19.4
Green Ext Time (p_c), s		1.7			3.0		3.6	30.7		0.0		10.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr

Cumulative+PR AM wBypass without Metering

3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	  
Volume (veh/h)	26	0	107	0	0	0	61	559	3	0	1786	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	176	0	157	495	184	157	84	2897	1231	3	3687	65
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.05	0.79	0.79	0.00	0.68	0.68
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5422	95
Grp Volume(v), veh/h	28	0	116	0	0	0	66	608	3	0	1320	655
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	3.0	0.0	0.0	12.4	12.5
Cycle Q Clear(g_c), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	3.0	0.0	0.0	12.4	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	176	0	157	495	184	157	84	2897	1231	3	2509	1243
V/C Ratio(X)	0.16	0.00	0.74	0.00	0.00	0.00	0.78	0.21	0.00	0.00	0.53	0.53
Avail Cap(c_a), veh/h	403	0	360	1136	423	360	252	3596	1528	101	3279	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	30.5	0.0	0.0	0.0	32.8	1.9	1.6	0.0	5.6	5.6
Incr Delay (d2), s/veh	0.4	0.0	6.7	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.0	2.2	0.0	0.0	0.0	1.5	0.8	0.0	0.0	4.5	4.5
Lane Grp Delay (d), s/veh	29.1	0.0	37.2	0.0	0.0	0.0	47.3	2.0	1.6	0.0	5.7	5.9
Lane Grp LOS	C		D				D	A	A		A	A
Approach Vol, veh/h		144			0			677			1975	
Approach Delay, s/veh		35.6			0.0			6.4			5.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2			1	6
Phs Duration (G+Y+Rc), s		11.0			11.0		7.3	58.8			0.0	51.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0			16.0		10.0	68.0			4.0	62.0
Max Q Clear Time (g_c+I1), s		7.0			0.0		4.6	5.0			0.0	14.5
Green Ext Time (p_c), s		0.4			0.0		0.0	39.6			0.0	33.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			7.5									
HCM 2010 LOS			A									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary Cumulative+PR AM wBypass without Metering  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd 3/19/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	75	136	412	421	98	73	456	86	55	1678	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	361	208	177	450	602	256	90	2052	376	77	1919	454
Arrive On Green	0.21	0.11	0.11	0.26	0.16	0.16	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4553	834	1757	4329	1024
Grp Volume(v), veh/h	78	82	148	448	458	107	79	400	189	60	1547	720
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1697	1757	1845	1664
Q Serve(g_s), s	4.3	4.8	10.8	29.8	13.9	6.2	5.2	7.8	8.1	4.0	47.1	49.7
Cycle Q Clear(g_c), s	4.3	4.8	10.8	29.8	13.9	6.2	5.2	7.8	8.1	4.0	47.1	49.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		0.62
Lane Grp Cap(c), veh/h	361	208	177	450	602	256	90	1663	765	77	1636	738
V/C Ratio(X)	0.22	0.39	0.84	1.00	0.76	0.42	0.88	0.24	0.25	0.78	0.95	0.98
Avail Cap(c_a), veh/h	361	252	214	450	1071	455	90	1663	765	135	1638	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	48.3	50.9	43.5	46.8	33.0	55.2	19.8	19.9	55.4	31.3	32.0
Incr Delay (d2), s/veh	0.3	1.2	21.0	41.2	2.0	1.1	57.0	0.1	0.2	15.4	11.8	27.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	2.4	5.4	18.6	6.8	2.5	3.8	3.6	3.5	2.1	24.4	26.1
Lane Grp Delay (d), s/veh	39.0	49.5	72.0	84.7	48.8	34.1	112.2	19.9	20.1	70.9	43.1	58.9
Lane Grp LOS	D	D	E	F	D	C	F	B	C	E	D	E
Approach Vol, veh/h		308			1013			668			2327	
Approach Delay, s/veh		57.6			63.2			30.9			48.7	
Approach LOS		E			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	28.1	17.2		34.0	23.1		10.0	56.8		9.1		55.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	16.0		30.0	34.0		6.0	49.0		9.0		52.0
Max Q Clear Time (g_c+I1), s	6.3	12.8		31.8	15.9		7.2	10.1		6.0		51.7
Green Ext Time (p_c), s	0.9	0.4		0.0	3.2		0.0	31.7		0.0		0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				50.0								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd

Cumulative+PR AM wBypass without Metering






















3/19/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	231	384	37	485	1277	150	165	346	183	300	1182	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	307	1262	0	605	1747	0	234	1887	535	393	2146	608
Arrive On Green	0.09	0.23	0.00	0.18	0.32	0.00	0.07	0.34	0.34	0.12	0.39	0.39
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	251	417	0	527	1388	0	179	376	199	326	1285	621
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Cycle Q Clear(g_c), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1262	0	605	1747	0	234	1887	535	393	2146	608
V/C Ratio(X)	0.82	0.33	0.00	0.87	0.79	0.00	0.77	0.20	0.37	0.83	0.60	1.02
Avail Cap(c_a), veh/h	323	1262	0	764	1907	0	235	1887	535	529	2146	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	37.4	0.0	46.4	36.3	0.0	53.1	27.0	28.9	50.2	28.3	35.5
Incr Delay (d2), s/veh	14.6	0.2	0.0	8.9	2.2	0.0	13.9	0.1	0.4	8.0	0.5	42.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.5	0.0	8.4	12.8	0.0	3.1	2.6	4.5	5.2	10.1	24.7
Lane Grp Delay (d), s/veh	66.4	37.5	0.0	55.3	38.5	0.0	67.0	27.1	29.3	58.2	28.8	77.6
Lane Grp LOS	E	D		E	D		E	C	C	E	C	F
Approach Vol, veh/h		668			1915			754			2232	
Approach Delay, s/veh		48.4			43.1			37.2			46.7	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	14.4	30.5		24.6	40.6		12.0	43.6		17.4	49.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	25.0		26.0	40.0		8.0	35.0		18.0	45.0	
Max Q Clear Time (g_c+I1), s	10.4	9.3		19.5	28.6		8.0	13.1		12.9	47.0	
Green Ext Time (p_c), s	0.1	10.9		1.2	8.1		0.0	16.0		0.5	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				44.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Cumulative+PR AM wBypass without Metering












3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	692	5	10	1259	12	7	0	31	8	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	18	2573	17	20	2568	24	202	0	67	175	0	67
Arrive On Green	0.01	0.70	0.70	0.01	0.70	0.70	0.04	0.00	0.04	0.04	0.00	0.04
Sat Flow, veh/h	1757	3661	24	1757	3649	35	1393	0	1568	1356	0	1568
Grp Volume(v), veh/h	10	379	378	11	691	690	8	0	34	9	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1839	1393	0	1568	1356	0	1568
Q Serve(g_s), s	0.3	3.8	3.8	0.3	8.8	8.8	0.3	0.0	1.0	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.3	3.8	3.8	0.3	8.8	8.8	0.4	0.0	1.0	1.4	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1296	1293	20	1298	1294	202	0	67	175	0	67
V/C Ratio(X)	0.55	0.29	0.29	0.55	0.53	0.53	0.04	0.00	0.51	0.05	0.00	0.06
Avail Cap(c_a), veh/h	213	3138	3130	213	3138	3127	650	0	571	611	0	571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.3	2.7	2.7	24.3	3.5	3.5	22.9	0.0	23.1	23.8	0.0	22.7
Incr Delay (d2), s/veh	23.2	0.1	0.1	21.7	0.3	0.3	0.1	0.0	5.8	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.8	0.8	0.2	1.9	1.8	0.1	0.0	0.5	0.1	0.0	0.1
Lane Grp Delay (d), s/veh	47.5	2.9	2.9	46.0	3.8	3.8	22.9	0.0	28.9	23.9	0.0	23.0
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		767			1392			42				13
Approach Delay, s/veh		3.5			4.1			27.7				23.6
Approach LOS		A			A			C				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.5	38.7		4.6	38.8			6.1				6.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	84.0		6.0	84.0			18.0				18.0
Max Q Clear Time (g_c+I1), s	2.3	5.8		2.3	10.8			3.0				3.4
Green Ext Time (p_c), s	0.0	24.3		0.0	24.0			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.5								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
32: Delta Fair Blvd & Century Blvd

Cumulative+PR AM wBypass without Metering

3/19/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	110	325	782	116	118	326
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	157	2170	1345	199	475	424
Arrive On Green	0.09	0.59	0.43	0.43	0.27	0.27
Sat Flow, veh/h	1757	3689	3141	466	1757	1568
Grp Volume(v), veh/h	120	353	499	477	128	354
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1762	1757	1568
Q Serve(g_s), s	3.8	2.5	12.0	12.0	3.2	12.0
Cycle Q Clear(g_c), s	3.8	2.5	12.0	12.0	3.2	12.0
Prop In Lane	1.00			0.26	1.00	1.00
Lane Grp Cap(c), veh/h	157	2170	790	755	475	424
V/C Ratio(X)	0.77	0.16	0.63	0.63	0.27	0.84
Avail Cap(c_a), veh/h	435	3789	1306	1248	747	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	5.3	12.7	12.7	16.2	19.4
Incr Delay (d2), s/veh	7.6	0.0	0.8	0.9	0.3	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.9	5.0	4.8	1.4	0.6
Lane Grp Delay (d), s/veh	32.8	5.3	13.5	13.5	16.5	24.8
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		473	976		482	
Approach Delay, s/veh		12.3	13.5		22.6	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	9.0	37.2	28.2			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	58.0	40.0			
Max Q Clear Time (g_c+I1), s	5.8	4.5	14.0			
Green Ext Time (p_c), s	0.2	12.4	10.2			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			15.5			
HCM 2010 LOS			B			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Cumulative+PR AM wBypass without Metering




















3/19/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	114	0	0	0	882	478	0	2	291	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	237	0	154	65	181	0	1001	2932	0	2	746	68
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.57	0.79	0.00	0.00	0.22	0.22
Sat Flow, veh/h	1757	0	1568	1250	1845	0	1757	3689	0	1757	3332	304
Grp Volume(v), veh/h	50	0	124	0	0	0	959	520	0	2	174	171
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1250	1845	0	1757	1845	0	1757	1845	1791
Q Serve(g_s), s	2.9	0.0	8.6	0.0	0.0	0.0	57.3	3.7	0.0	0.1	9.0	9.1
Cycle Q Clear(g_c), s	2.9	0.0	8.6	0.0	0.0	0.0	57.3	3.7	0.0	0.1	9.0	9.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.17
Lane Grp Cap(c), veh/h	237	0	154	65	181	0	1001	2932	0	2	413	401
V/C Ratio(X)	0.21	0.00	0.81	0.00	0.00	0.00	0.96	0.18	0.00	1.26	0.42	0.43
Avail Cap(c_a), veh/h	319	0	227	123	267	0	1190	2932	0	63	413	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.37	0.37	0.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	46.4	0.0	48.9	0.0	0.0	0.0	22.6	2.7	0.0	55.4	36.8	36.9
Incr Delay (d2), s/veh	0.4	0.0	12.3	0.0	0.0	0.0	7.5	0.0	0.0	390.0	2.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	4.0	0.0	0.0	0.0	26.1	1.3	0.0	0.2	4.5	4.4
Lane Grp Delay (d), s/veh	46.8	0.0	61.2	0.0	0.0	0.0	30.1	2.8	0.0	445.3	39.2	39.4
Lane Grp LOS	D		E				C	A		F	D	D
Approach Vol, veh/h		174			0			1479			347	
Approach Delay, s/veh		57.1			0.0			20.5			41.6	
Approach LOS		E						C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		14.9			14.9		67.1	92.0		3.9		28.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		75.0	88.0		4.0		17.0
Max Q Clear Time (g_c+I1), s		10.6			0.0		59.3	5.7		2.1		11.1
Green Ext Time (p_c), s		0.3			0.0		3.8	4.1		0.0		1.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					27.4							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

Cumulative+PR AM wBypass without Metering

3/19/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	376	174	24	500	8	681	7	32	9	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	22	493	225	39	779	13	903	9	959	190	38	24
Arrive On Green	0.01	0.21	0.21	0.02	0.22	0.22	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1757	2400	1096	1757	3619	60	1320	14	1568	176	62	40
Grp Volume(v), veh/h	13	313	285	26	277	275	748	0	35	14	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1651	1757	1845	1834	1334	0	1568	278	0	0
Q Serve(g_s), s	0.6	12.2	12.4	1.1	10.4	10.4	0.0	0.0	0.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.6	12.2	12.4	1.1	10.4	10.4	37.9	0.0	0.7	38.2	0.0	0.0
Prop In Lane	1.00		0.66	1.00		0.03	0.99		1.00	0.71		0.14
Lane Grp Cap(c), veh/h	22	379	339	39	397	395	912	0	959	253	0	0
V/C Ratio(X)	0.58	0.83	0.84	0.66	0.70	0.70	0.82	0.00	0.04	0.06	0.00	0.00
Avail Cap(c_a), veh/h	94	395	353	94	397	395	1140	0	1216	486	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.7	28.4	28.5	36.3	27.1	27.1	13.0	0.0	5.8	15.0	0.0	0.0
Incr Delay (d2), s/veh	22.0	13.1	15.8	17.5	5.3	5.3	4.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	6.9	6.6	0.7	5.3	5.3	11.8	0.0	0.2	0.2	0.0	0.0
Lane Grp Delay (d), s/veh	58.8	41.5	44.4	53.8	32.4	32.4	16.9	0.0	5.8	15.0	0.0	0.0
Lane Grp LOS	E	D	D	D	C	C	B		A	B		
Approach Vol, veh/h		611			578			783				14
Approach Delay, s/veh		43.2			33.4			16.4				15.0
Approach LOS		D			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.9	19.4		5.7	20.1			49.8				49.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0			58.0				58.0
Max Q Clear Time (g_c+I1), s	2.6	14.4		3.1	12.4			39.9				40.2
Green Ext Time (p_c), s	0.0	1.0		0.0	2.2			5.6				5.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					29.6							
HCM 2010 LOS					C							
<b>Notes</b>												

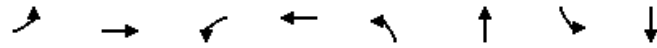


Queues

Existing AM Without Metering

36: Meadows Ave & Buchanan Rd

3/19/2014



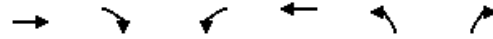
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	22	480	33	1095	36	32	20	18
v/c Ratio	0.11	0.32	0.14	0.70	0.13	0.12	0.07	0.04
Control Delay	49.5	4.8	47.7	9.1	43.1	20.0	43.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	4.8	47.7	9.1	43.1	20.0	43.7	0.2
Queue Length 50th (ft)	9	87	13	183	14	1	8	0
Queue Length 95th (ft)	47	150	62	627	63	34	41	0
Internal Link Dist (ft)		1192		1986		545		245
Turn Bay Length (ft)	150		200		100		100	
Base Capacity (vph)	199	1734	238	1754	638	594	638	703
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.28	0.14	0.62	0.06	0.05	0.03	0.03

Intersection Summary

Queues  
15: Tuscany Meadows Dr & Buchanan Rd

Existing +Project AM Without Metering

3/19/2014



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	597	27	39	1162	80	116
v/c Ratio	0.49	0.03	0.22	0.86	0.34	0.37
Control Delay	8.4	2.9	45.3	13.7	41.1	12.8
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0
Total Delay	8.4	2.9	45.3	13.9	41.1	12.8
Queue Length 50th (ft)	133	1	14	232	28	0
Queue Length 95th (ft)	239	9	71	557	116	57
Internal Link Dist (ft)	1986			1210	883	
Turn Bay Length (ft)		75	75		100	
Base Capacity (vph)	1746	1485	197	1778	452	490
Starvation Cap Reductn	0	0	0	123	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.02	0.20	0.70	0.18	0.24









Intersection Summary

## Queues

## Baseline AM Without Metering

## 36: Meadows Ave &amp; Buchanan Rd

3/19/2014

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	23	563	34	1172	37	34	20	18
v/c Ratio	0.17	0.40	0.18	0.79	0.20	0.14	0.11	0.05
Control Delay	54.3	5.6	50.7	12.0	47.2	19.9	47.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.3	5.6	50.7	12.0	47.2	19.9	47.2	0.2
Queue Length 50th (ft)	11	111	16	225	17	1	9	0
Queue Length 95th (ft)	#53	188	64	742	65	35	41	0
Internal Link Dist (ft)		1192		1986		545		245
Turn Bay Length (ft)	150		200		100		100	
Base Capacity (vph)	134	1709	201	1736	422	508	416	609
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.33	0.17	0.68	0.09	0.07	0.05	0.03

## Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
15: Tuscany Meadows Dr & Buchanan Rd

Baseline +Project AM Without Metering

3/19/2014



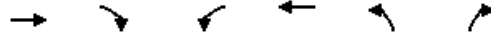
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	682	27	39	1235	80	116
v/c Ratio	0.54	0.03	0.24	0.89	0.36	0.38
Control Delay	8.7	3.1	48.9	15.9	44.5	13.4
Queue Delay	0.0	0.0	0.0	0.5	0.0	0.0
Total Delay	8.7	3.1	48.9	16.4	44.5	13.4
Queue Length 50th (ft)	166	2	16	288	33	0
Queue Length 95th (ft)	291	10	71	683	116	57
Internal Link Dist (ft)	1986			1210	883	
Turn Bay Length (ft)		75	75		100	
Base Capacity (vph)	1746	1485	180	1778	413	458
Starvation Cap Reductn	0	0	0	191	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.02	0.22	0.78	0.19	0.25

Intersection Summary

Queues  
15: Tuscany Meadows Dr & Buchanan Rd

Cumulative+PR AM Without Metering

3/19/2014



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	773	27	39	1567	80	116
v/c Ratio	0.54	0.02	0.42	1.00	0.52	0.48
Control Delay	7.9	2.8	72.0	34.6	66.4	15.9
Queue Delay	0.0	0.0	0.0	3.1	0.0	0.0
Total Delay	7.9	2.8	72.0	37.7	66.4	15.9
Queue Length 50th (ft)	222	2	31	-954	63	0
Queue Length 95th (ft)	359	11	71	#1683	116	57
Internal Link Dist (ft)	1986			1210	883	
Turn Bay Length (ft)		75	75		100	
Base Capacity (vph)	1435	1223	98	1564	224	301
Starvation Cap Reductn	0	0	0	18	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.02	0.40	1.01	0.36	0.39







Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.  
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Queues  
15: Tuscany Meadows Dr & Buchanan Rd



















Cumulative+PR AM wBypass without Metering

3/19/2014

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	597	13	39	1045	37	116
v/c Ratio	0.46	0.01	0.15	0.74	0.14	0.34
Control Delay	7.6	3.8	27.4	8.6	25.9	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	3.8	27.4	8.6	25.9	9.8
Queue Length 50th (ft)	53	0	10	145	9	0
Queue Length 95th (ft)	216	7	46	332	42	44
Internal Link Dist (ft)	1986			1210	883	
Turn Bay Length (ft)		75	75		100	
Base Capacity (vph)	1845	1568	288	1845	699	696
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.01	0.14	0.57	0.05	0.17
<b>Intersection Summary</b>						





















HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Existing AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	184	377	262	590	703	156	194	841	378
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				227	479	355	717	1299	289	244	1376	585
Arrive On Green				0.31	0.31	0.31	0.35	0.74	0.74	0.14	0.37	0.00
Sat Flow, veh/h				738	1556	1155	3408	2924	651	1757	3689	1568
Grp Volume(v), veh/h				490	0	405	641	482	452	211	914	0
Grp Sat Flow(s),veh/h/ln				1808	0	1641	1704	1845	1730	1757	1845	1568
Q Serve(g_s), s				28.3	0.0	24.9	19.6	13.2	13.2	12.9	22.7	0.0
Cycle Q Clear(g_c), s				28.3	0.0	24.9	19.6	13.2	13.2	12.9	22.7	0.0
Prop In Lane				0.41		0.70	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h				556	0	505	717	820	769	244	1376	585
V/C Ratio(X)				0.88	0.00	0.80	0.89	0.59	0.59	0.86	0.66	0.00
Avail Cap(c_a), veh/h				625	0	567	899	820	769	383	1376	585
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.55	0.55	0.55	1.00	1.00	0.00
Uniform Delay (d), s/veh				36.2	0.0	35.0	34.5	9.6	9.6	46.3	28.7	0.0
Incr Delay (d2), s/veh				12.8	0.0	7.4	5.7	1.7	1.8	11.6	2.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				15.0	0.0	11.4	8.3	4.2	4.0	6.6	10.9	0.0
Lane Grp Delay (d), s/veh				49.0	0.0	42.4	40.2	11.3	11.4	57.9	31.3	0.0
Lane Grp LOS				D		D	D	B	B	E	C	
Approach Vol, veh/h					895			1575			1125	
Approach Delay, s/veh					46.0			23.1			36.3	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					37.8		27.1	52.9		19.3	45.0	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					30.3		21.6	15.2		14.9	24.7	
Green Ext Time (p_c), s					3.5		1.6	16.7		0.4	11.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					32.9							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave
























Existing AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	382	0	424	0	0	0	0	969	279	296	763	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	470	494	840				0	1440	414	486	2438	0
Arrive On Green	0.27	0.00	0.27				0.00	0.35	0.35	0.55	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4135	1189	1757	3689	0
Grp Volume(v), veh/h	415	0	461				0	939	417	322	829	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1635	1757	1845	0
Q Serve(g_s), s	25.4	0.0	14.1				0.0	24.9	25.0	14.5	0.0	0.0
Cycle Q Clear(g_c), s	25.4	0.0	14.1				0.0	24.9	25.0	14.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.73	1.00		0.00
Lane Grp Cap(c), veh/h	470	494	840				0	1285	569	486	2438	0
V/C Ratio(X)	0.88	0.00	0.55				0.00	0.73	0.73	0.66	0.34	0.00
Avail Cap(c_a), veh/h	596	626	1064				0	1285	569	486	2438	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.67	0.67	0.00
Uniform Delay (d), s/veh	39.3	0.0	35.2				0.0	31.9	31.9	21.3	0.0	0.0
Incr Delay (d2), s/veh	12.2	0.0	0.6				0.0	3.7	8.1	2.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.9	0.0	5.6				0.0	12.1	11.5	5.3	0.1	0.0
Lane Grp Delay (d), s/veh	51.5	0.0	35.8				0.0	35.6	40.0	23.6	0.3	0.0
Lane Grp LOS	D		D					D	D	C	A	
Approach Vol, veh/h		876						1356			1151	
Approach Delay, s/veh		43.2						37.0			6.8	
Approach LOS		D						D			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		34.0						43.0		35.0	78.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		38.0						39.0		31.0	74.0	
Max Q Clear Time (g_c+I1), s		27.4						27.0		16.5	2.0	
Green Ext Time (p_c), s		2.6						7.1		6.0	8.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.3									
HCM 2010 LOS			C									
<b>Notes</b>												






























HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

Existing AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	290	413	81	150	480	260	108	737	90	165	453	244
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	354	911	177	197	790	336	147	1106	470	213	1247	530
Arrive On Green	0.20	0.30	0.30	0.11	0.21	0.21	0.08	0.30	0.30	0.12	0.34	0.34
Sat Flow, veh/h	1757	3002	584	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	315	275	262	163	522	283	117	801	98	179	492	265
Grp Sat Flow(s),veh/h/ln	1757	1845	1742	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	17.1	12.0	12.1	8.9	12.7	17.0	6.4	19.1	4.6	9.8	10.0	13.2
Cycle Q Clear(g_c), s	17.1	12.0	12.1	8.9	12.7	17.0	6.4	19.1	4.6	9.8	10.0	13.2
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	560	528	197	790	336	147	1106	470	213	1247	530
V/C Ratio(X)	0.89	0.49	0.50	0.83	0.66	0.84	0.80	0.72	0.21	0.84	0.39	0.50
Avail Cap(c_a), veh/h	518	601	567	340	826	351	268	1314	558	322	1426	606
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	28.0	28.1	42.7	35.4	37.0	44.2	30.8	25.7	42.2	24.9	25.9
Incr Delay (d2), s/veh	12.5	0.7	0.7	8.4	1.9	16.3	9.4	1.6	0.2	11.5	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.8	5.6	5.4	4.5	6.1	8.2	3.3	9.0	1.8	5.1	4.7	5.2
Lane Grp Delay (d), s/veh	50.7	28.7	28.8	51.1	37.2	53.3	53.7	32.4	25.9	53.7	25.1	26.7
Lane Grp LOS	D	C	C	D	D	D	D	C	C	D	C	C
Approach Vol, veh/h		852			968			1016			936	
Approach Delay, s/veh		36.8			44.3			34.2			31.0	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	23.8	33.8		15.0	25.0		12.2	33.5		15.9	37.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	29.0	32.0		19.0	22.0		15.0	35.0		18.0	38.0	
Max Q Clear Time (g_c+I1), s	19.1	14.1		10.9	19.0		8.4	21.1		11.8	15.2	
Green Ext Time (p_c), s	0.7	7.7		0.3	2.0		0.1	8.4		0.2	11.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				36.6								
HCM 2010 LOS				D								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Existing AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	84	91	26	875	51	81	7	300	360	71	463	65
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	653	686	583	1267	686	583	121	1350	574	99	1304	554
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.07	0.37	0.37	0.06	0.35	0.35
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	91	99	28	951	55	88	8	326	391	77	503	71
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.0	2.1	0.7	14.2	1.1	2.2	0.2	3.6	12.3	2.5	5.9	1.8
Cycle Q Clear(g_c), s	2.0	2.1	0.7	14.2	1.1	2.2	0.2	3.6	12.3	2.5	5.9	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	653	686	583	1267	686	583	121	1350	574	99	1304	554
V/C Ratio(X)	0.14	0.14	0.05	0.75	0.08	0.15	0.07	0.24	0.68	0.78	0.39	0.13
Avail Cap(c_a), veh/h	653	686	583	2983	1614	1372	482	2026	861	362	1773	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	12.1	11.7	15.9	11.8	12.2	25.4	12.8	15.6	27.1	14.1	12.8
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.9	0.0	0.1	0.2	0.1	1.4	12.4	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	0.8	0.2	5.2	0.4	0.8	0.1	1.5	4.5	1.4	2.5	0.6
Lane Grp Delay (d), s/veh	12.2	12.2	11.7	16.9	11.9	12.3	25.6	12.9	17.0	39.5	14.3	12.9
Lane Grp LOS	B	B	B	B	B	B	C	B	B	D	B	B
Approach Vol, veh/h		218			1094			725			651	
Approach Delay, s/veh		12.2			16.2			15.3			17.1	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		25.7			25.7		8.0	25.3		7.3		24.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0			51.0		16.0	32.0		12.0		28.0
Max Q Clear Time (g_c+I1), s		4.1			16.2		2.2	14.3		4.5		7.9
Green Ext Time (p_c), s		4.9			5.5		0.0	7.1		0.1		7.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				15.9								
HCM 2010 LOS				B								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Existing AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	136	517	108	102	428	178	178	586	215	222	280	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	189	895	380	143	799	340	242	986	419	294	786	264
Arrive On Green	0.11	0.24	0.24	0.08	0.22	0.22	0.14	0.27	0.27	0.17	0.30	0.30
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2646	887
Grp Volume(v), veh/h	148	562	117	111	465	193	193	637	234	241	210	198
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1688
Q Serve(g_s), s	5.5	9.0	4.1	4.1	7.5	7.3	7.1	10.2	8.5	8.8	6.0	6.2
Cycle Q Clear(g_c), s	5.5	9.0	4.1	4.1	7.5	7.3	7.1	10.2	8.5	8.8	6.0	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	189	895	380	143	799	340	242	986	419	294	548	502
V/C Ratio(X)	0.78	0.63	0.31	0.78	0.58	0.57	0.80	0.65	0.56	0.82	0.38	0.39
Avail Cap(c_a), veh/h	370	1111	472	291	945	401	476	1278	543	529	695	636
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	22.5	20.6	29.9	23.3	23.2	27.7	21.5	20.9	26.7	18.5	18.6
Incr Delay (d2), s/veh	6.9	0.8	0.5	8.6	0.7	1.5	6.0	0.7	1.2	5.6	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	4.1	1.5	2.1	3.4	2.9	3.5	4.5	3.3	4.2	2.7	2.5
Lane Grp Delay (d), s/veh	35.8	23.2	21.0	38.5	24.0	24.7	33.7	22.3	22.1	32.3	18.9	19.1
Lane Grp LOS	D	C	C	D	C	C	C	C	C	C	B	B
Approach Vol, veh/h		827			769			1064			649	
Approach Delay, s/veh		25.2			26.3			24.3			23.9	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.1	20.1		9.4	18.4		13.1	21.8		15.1	23.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	14.0	20.0		11.0	17.0		18.0	23.0		20.0	25.0	
Max Q Clear Time (g_c+I1), s	7.5	11.0		6.1	9.5		9.1	12.2		10.8	8.2	
Green Ext Time (p_c), s	0.2	5.1		0.1	4.4		0.3	5.6		0.5	7.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					24.9							
HCM 2010 LOS					C							
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Existing AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	113	397	5	2	820	71	92	99	3	123	32	155
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	147	1167	14	36	1066	906	124	216	6	159	39	188
Arrive On Green	0.08	0.64	0.64	0.02	0.58	0.58	0.07	0.12	0.12	0.09	0.14	0.14
Sat Flow, veh/h	1757	1820	21	1757	1845	1568	1757	1786	50	1757	278	1332
Grp Volume(v), veh/h	123	0	437	2	891	77	100	0	111	134	0	203
Grp Sat Flow(s),veh/h/ln	1757	0	1841	1757	1845	1568	1757	0	1836	1757	0	1610
Q Serve(g_s), s	8.7	0.0	14.1	0.1	49.8	1.7	7.1	0.0	7.1	9.5	0.0	15.7
Cycle Q Clear(g_c), s	8.7	0.0	14.1	0.1	49.8	1.7	7.1	0.0	7.1	9.5	0.0	15.7
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.03	1.00		0.83
Lane Grp Cap(c), veh/h	147	0	1181	36	1066	906	124	0	222	159	0	227
V/C Ratio(X)	0.83	0.00	0.37	0.06	0.84	0.08	0.81	0.00	0.50	0.84	0.00	0.89
Avail Cap(c_a), veh/h	167	0	1181	56	1066	906	139	0	233	181	0	242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.00	0.81	0.40	0.40	0.40	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.0	0.0	10.6	60.6	21.7	4.8	57.9	0.0	51.9	56.6	0.0	53.3
Incr Delay (d2), s/veh	22.4	0.0	0.7	0.3	3.3	0.1	26.4	0.0	1.7	26.3	0.0	30.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.8	0.0	6.1	0.1	22.5	1.0	4.2	0.0	3.5	5.5	0.0	8.5
Lane Grp Delay (d), s/veh	79.4	0.0	11.4	60.9	25.1	4.8	84.2	0.0	53.7	82.9	0.0	83.9
Lane Grp LOS	E		B	E	C	A	F		D	F		F
Approach Vol, veh/h		560			970			211				337
Approach Delay, s/veh		26.3			23.5			68.2				83.5
Approach LOS		C			C			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	14.6	85.0		6.6	77.0		12.9	19.3		15.4		21.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	81.0		4.0	73.0		10.0	16.0		13.0		19.0
Max Q Clear Time (g_c+I1), s	10.7	16.1		2.1	51.8		9.1	9.1		11.5		17.7
Green Ext Time (p_c), s	0.0	3.0		0.0	7.2		0.1	0.4		0.0		0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.5								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

Existing AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	267	21	595	330	134	20	49	77	76	93	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	56	1085	86	1458	2646	1124	180	189	160	180	159	25
Arrive On Green	0.03	0.32	0.32	0.43	0.72	0.72	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1757	3376	266	3408	3689	1568	1757	1845	1568	1757	1555	246
Grp Volume(v), veh/h	35	158	155	647	359	146	22	53	84	83	0	117
Grp Sat Flow(s),veh/h/ln	1757	1845	1798	1704	1845	1568	1757	1845	1568	1757	0	1801
Q Serve(g_s), s	1.6	5.1	5.2	10.8	2.5	2.3	0.9	2.1	4.1	3.6	0.0	5.0
Cycle Q Clear(g_c), s	1.6	5.1	5.2	10.8	2.5	2.3	0.9	2.1	4.1	3.6	0.0	5.0
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	56	593	578	1458	2646	1124	180	189	160	180	0	184
V/C Ratio(X)	0.62	0.27	0.27	0.44	0.14	0.13	0.12	0.28	0.52	0.46	0.00	0.63
Avail Cap(c_a), veh/h	174	593	578	1686	2646	1124	391	411	349	434	0	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.68	0.68	0.68	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	20.4	20.4	16.3	3.6	3.6	33.0	33.5	34.4	34.2	0.0	34.8
Incr Delay (d2), s/veh	10.6	1.1	1.1	0.1	0.1	0.2	0.3	0.8	2.6	1.8	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	2.5	2.4	4.4	0.9	0.7	0.4	1.0	1.7	1.7	0.0	2.5
Lane Grp Delay (d), s/veh	49.3	21.5	21.5	16.5	3.7	3.7	33.3	34.3	37.1	36.0	0.0	38.4
Lane Grp LOS	D	C	C	B	A	A	C	C	D	D		D
Approach Vol, veh/h		348			1152			159			200	
Approach Delay, s/veh		24.3			10.9			35.6			37.4	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.6	30.0		38.6	62.0			12.3				12.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	26.0		40.0	58.0			18.0				20.0
Max Q Clear Time (g_c+I1), s	3.6	7.2		12.8	4.5			6.1				7.0
Green Ext Time (p_c), s	1.2	1.7		2.6	3.1			1.2				1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.4								
HCM 2010 LOS				B								
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
 9: Lovridge Rd & California Ave/N Park Blvd

Existing AM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	101	59	258	42	129	3	517	294	78	7	214	509
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	180	379	322	110	665	14	783	1549	405	14	1209	514
Arrive On Green	0.05	0.21	0.21	0.03	0.18	0.18	0.23	0.55	0.55	0.01	0.33	0.33
Sat Flow, veh/h	3408	1845	1568	3408	3599	77	3408	2821	738	1757	3689	1568
Grp Volume(v), veh/h	110	64	280	46	72	71	562	207	198	8	233	553
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1831	1704	1845	1714	1757	1845	1568
Q Serve(g_s), s	2.5	2.2	13.5	1.0	2.6	2.6	11.9	4.5	4.6	0.4	3.5	19.7
Cycle Q Clear(g_c), s	2.5	2.2	13.5	1.0	2.6	2.6	11.9	4.5	4.6	0.4	3.5	19.7
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	180	379	322	110	341	339	783	1013	942	14	1209	514
V/C Ratio(X)	0.61	0.17	0.87	0.42	0.21	0.21	0.72	0.20	0.21	0.56	0.19	1.08
Avail Cap(c_a), veh/h	349	472	402	218	402	399	1222	1771	1646	90	2409	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	25.5	30.0	37.1	27.0	27.0	27.8	8.9	9.0	38.6	18.8	15.5
Incr Delay (d2), s/veh	3.3	0.2	15.4	2.5	0.3	0.3	1.3	0.1	0.1	29.8	0.1	44.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	1.1	6.5	0.5	1.2	1.2	5.1	1.9	1.8	0.3	1.6	13.4
Lane Grp Delay (d), s/veh	39.5	25.7	45.4	39.6	27.3	27.3	29.0	9.0	9.1	68.4	18.9	60.4
Lane Grp LOS	D	C	D	D	C	C	C	A	A	E	B	F
Approach Vol, veh/h		454			189			967			794	
Approach Delay, s/veh		41.2			30.3			20.7			48.3	
Approach LOS		D			C			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	8.1	20.0		6.5	18.4		21.9	46.9		4.6		29.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	8.0	20.0		5.0	17.0		28.0	75.0		4.0		51.0
Max Q Clear Time (g_c+I1), s	4.5	15.5		3.0	4.6		13.9	6.6		2.4		21.7
Green Ext Time (p_c), s	0.1	0.6		0.2	0.7		4.1	5.2		0.0		3.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				34.4								
HCM 2010 LOS				C								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Existing AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	404	0	348	0	0	0	0	606	179	126	460	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	978	0	450				0	1985	844	203	2347	0
Arrive On Green	0.29	0.00	0.29				0.00	0.54	0.54	0.06	0.64	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	439	0	378				0	659	195	137	500	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	10.9	0.0	23.5				0.0	10.4	6.8	4.1	5.9	0.0
Cycle Q Clear(g_c), s	10.9	0.0	23.5				0.0	10.4	6.8	4.1	5.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	978	0	450				0	1985	844	203	2347	0
V/C Ratio(X)	0.45	0.00	0.84				0.00	0.33	0.23	0.68	0.21	0.00
Avail Cap(c_a), veh/h	1511	0	695				0	1985	844	427	2347	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.93	0.93	0.00
Uniform Delay (d), s/veh	30.3	0.0	34.8				0.0	13.5	12.6	47.8	7.9	0.0
Incr Delay (d2), s/veh	0.3	0.0	5.6				0.0	0.4	0.6	3.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.7	0.0	9.9				0.0	4.6	2.6	1.9	2.5	0.0
Lane Grp Delay (d), s/veh	30.6	0.0	40.3				0.0	13.9	13.3	51.4	8.1	0.0
Lane Grp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		817						854			637	
Approach Delay, s/veh		35.1						13.8			17.5	
Approach LOS		D						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		33.8						59.8		10.2	70.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		46.0						49.0		13.0	66.0	
Max Q Clear Time (g_c+I1), s		25.5						12.4		6.1	7.9	
Green Ext Time (p_c), s		4.3						11.1		0.2	12.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			22.3									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd













Existing AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	227	144	168	658	176	181	498	120	177	325	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	293	1197	509	284	1187	504	248	1005	427	295	802	341
Arrive On Green	0.09	0.32	0.32	0.08	0.32	0.32	0.14	0.27	0.27	0.09	0.22	0.22
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	191	247	157	183	715	191	197	541	130	192	353	163
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	3.7	3.3	5.2	3.6	11.2	6.4	7.4	8.6	4.5	3.7	5.7	6.2
Cycle Q Clear(g_c), s	3.7	3.3	5.2	3.6	11.2	6.4	7.4	8.6	4.5	3.7	5.7	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	293	1197	509	284	1187	504	248	1005	427	295	802	341
V/C Ratio(X)	0.65	0.21	0.31	0.64	0.60	0.38	0.79	0.54	0.30	0.65	0.44	0.48
Avail Cap(c_a), veh/h	647	2100	892	647	2100	892	692	2100	892	647	1346	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	16.8	17.4	30.4	19.6	18.0	28.5	21.3	19.8	30.3	23.2	23.4
Incr Delay (d2), s/veh	2.4	0.1	0.3	2.4	0.5	0.5	5.7	0.5	0.4	2.4	0.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.7	1.5	1.9	1.6	4.9	2.4	3.6	3.8	1.7	1.7	2.5	2.4
Lane Grp Delay (d), s/veh	32.8	16.8	17.7	32.9	20.1	18.4	34.1	21.7	20.2	32.7	23.6	24.5
Lane Grp LOS	C	B	B	C	C	B	C	C	C	C	C	C
Approach Vol, veh/h		595			1089			868			708	
Approach Delay, s/veh		22.2			21.9			24.3			26.3	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	9.9	26.2		9.7	26.0		13.7	22.7		9.9	18.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	39.0		13.0	39.0		27.0	39.0		13.0	25.0	
Max Q Clear Time (g_c+I1), s	5.7	7.2		5.6	13.2		9.4	10.6		5.7	8.2	
Green Ext Time (p_c), s	0.3	9.5		0.3	8.9		0.5	8.1		0.3	6.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.5								
HCM 2010 LOS				C								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

Existing AM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	254	331	842	204	152	182
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	351	1504	1078	917	216	193
Arrive On Green	0.20	0.82	0.58	0.58	0.12	0.12
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	276	360	915	222	165	198
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	19.4	5.8	53.1	8.9	11.8	16.0
Cycle Q Clear(g_c), s	19.4	5.8	53.1	8.9	11.8	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	351	1504	1078	917	216	193
V/C Ratio(X)	0.79	0.24	0.85	0.24	0.76	1.03
Avail Cap(c_a), veh/h	351	1504	1078	917	216	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.66	0.66	1.00	1.00
Uniform Delay (d), s/veh	49.4	2.8	22.3	13.1	55.2	57.0
Incr Delay (d2), s/veh	9.6	0.3	5.7	0.4	14.8	71.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.5	1.9	24.3	3.3	6.3	16.9
Lane Grp Delay (d), s/veh	58.9	3.1	27.9	13.5	70.0	128.7
Lane Grp LOS	E	A	C	B	E	F
Approach Vol, veh/h		636	1137		363	
Approach Delay, s/veh		27.3	25.1		102.0	
Approach LOS		C	C		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	30.0	110.0	80.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	26.0	106.0	76.0			
Max Q Clear Time (g_c+I1), s	21.4	7.8	55.1			
Green Ext Time (p_c), s	1.3	3.2	7.9			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			38.8			
HCM 2010 LOS			D			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

Existing AM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	435	48	15	941	11	95	105	14	14	10	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	10	1415	1203	25	1411	17	195	179	24	119	71	116
Arrive On Green	0.01	0.77	0.77	0.01	0.78	0.78	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1757	1845	1568	1757	1820	21	1362	1597	210	1244	631	1032
Grp Volume(v), veh/h	10	473	52	16	0	1035	103	0	129	15	0	29
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1841	1362	0	1808	1244	0	1663
Q Serve(g_s), s	0.6	9.0	0.9	1.0	0.0	32.4	8.3	0.0	7.7	1.3	0.0	1.8
Cycle Q Clear(g_c), s	0.6	9.0	0.9	1.0	0.0	32.4	10.1	0.0	7.7	9.0	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.12	1.00		0.62
Lane Grp Cap(c), veh/h	10	1415	1203	25	0	1427	195	0	203	119	0	186
V/C Ratio(X)	1.02	0.33	0.04	0.65	0.00	0.73	0.53	0.00	0.64	0.13	0.00	0.16
Avail Cap(c_a), veh/h	63	1415	1203	78	0	1427	249	0	274	168	0	252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.70	0.00	0.70	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.8	4.1	3.2	55.0	0.0	6.5	49.6	0.0	47.6	51.9	0.0	45.0
Incr Delay (d2), s/veh	132.1	0.6	0.1	18.5	0.0	2.3	2.2	0.0	3.3	0.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	3.4	0.3	0.6	0.0	11.8	3.0	0.0	3.8	0.4	0.0	0.8
Lane Grp Delay (d), s/veh	187.9	4.7	3.2	73.6	0.0	8.8	51.8	0.0	50.9	52.4	0.0	45.4
Lane Grp LOS	F	A	A	E		A	D		D	D		D
Approach Vol, veh/h		535			1051			232				44
Approach Delay, s/veh		8.0			9.8			51.3				47.8
Approach LOS		A			A			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.6	90.1		5.6	91.0			16.6				16.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	86.0		5.0	87.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	2.6	11.0		3.0	34.4			12.1				11.0
Green Ext Time (p_c), s	0.0	3.5		0.0	11.7			0.5				0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				15.3								
HCM 2010 LOS				B								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy

Existing AM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	101	30	36	197	74	28	191	414	137	23	490	256
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	390	211	180	390	147	55	502	2805	892	38	2107	895
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.05	0.23	0.23	0.02	0.57	0.57
Sat Flow, veh/h	3408	1845	1568	3408	1280	480	3408	4027	1281	1757	3689	1568
Grp Volume(v), veh/h	110	33	39	214	0	110	208	411	188	25	533	278
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1760	1704	1845	1619	1757	1845	1568
Q Serve(g_s), s	2.1	1.2	1.6	4.3	0.0	4.2	4.3	6.4	6.7	1.0	5.2	6.6
Cycle Q Clear(g_c), s	2.1	1.2	1.6	4.3	0.0	4.2	4.3	6.4	6.7	1.0	5.2	6.6
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	390	211	180	390	0	201	502	2570	1127	38	2107	895
V/C Ratio(X)	0.28	0.16	0.22	0.55	0.00	0.55	0.41	0.16	0.17	0.65	0.25	0.31
Avail Cap(c_a), veh/h	950	514	437	1139	0	588	902	2570	1127	245	2107	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	28.7	28.9	30.0	0.0	30.0	31.1	10.9	11.0	34.8	7.7	8.0
Incr Delay (d2), s/veh	0.4	0.3	0.6	1.2	0.0	2.3	0.5	0.1	0.3	17.0	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	0.6	0.6	1.8	0.0	2.0	1.9	2.9	2.9	0.6	2.2	2.5
Lane Grp Delay (d), s/veh	29.5	29.0	29.5	31.2	0.0	32.3	31.7	11.0	11.3	51.8	8.0	8.9
Lane Grp LOS	C	C	C	C		C	C	B	B	D	A	A
Approach Vol, veh/h		182			324			807			836	
Approach Delay, s/veh		29.4			31.6			16.4			9.6	
Approach LOS		C			C			B			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		12.2			12.2		14.6	54.0		5.6		45.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		20.0			24.0		19.0	50.0		10.0		41.0
Max Q Clear Time (g_c+I1), s		4.1			6.3		6.3	8.7		3.0		8.6
Green Ext Time (p_c), s		1.9			2.0		3.9	5.4		0.0		6.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.1								
HCM 2010 LOS				B								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Existing AM  
 3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	211	230	495	465	389	282
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	632	291	628	4102	2881	816
Arrive On Green	0.19	0.19	0.31	1.00	0.52	0.52
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	229	250	538	505	423	307
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	6.4	16.9	16.2	0.0	4.3	12.8
Cycle Q Clear(g_c), s	6.4	16.9	16.2	0.0	4.3	12.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	632	291	628	4102	2881	816
V/C Ratio(X)	0.36	0.86	0.86	0.12	0.15	0.38
Avail Cap(c_a), veh/h	967	445	1154	4102	2881	816
HCM Platoon Ratio	1.00	1.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.96	0.96	0.94	0.94
Uniform Delay (d), s/veh	38.9	43.1	36.5	0.0	13.6	15.6
Incr Delay (d2), s/veh	0.3	10.2	3.4	0.1	0.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.8	0.8	6.8	0.0	1.9	5.1
Lane Grp Delay (d), s/veh	39.2	53.3	39.9	0.1	13.7	16.9
Lane Grp LOS	D	D	D	A	B	B
Approach Vol, veh/h	479			1043	730	
Approach Delay, s/veh	46.6			20.6	15.0	
Approach LOS	D			C	B	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			24.1	85.0	60.9	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			37.0	81.0	40.0	
Max Q Clear Time (g_c+I1), s			18.2	2.0	14.8	
Green Ext Time (p_c), s			1.9	9.9	8.4	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			24.3			
HCM 2010 LOS			C			
<b>Notes</b>						
























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Existing AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 		 					 		 	 	
Volume (veh/h)	203	0	228	0	0	0	0	797	343	132	520	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	377	204	347				0	3956	1121	208	4503	0
Arrive On Green	0.11	0.00	0.11				0.00	1.00	1.00	0.12	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	221	0	248				0	866	373	143	565	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	6.5	0.0	8.1				0.0	0.0	0.0	4.2	0.0	0.0
Cycle Q Clear(g_c), s	6.5	0.0	8.1				0.0	0.0	0.0	4.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	377	204	347				0	3956	1121	208	4503	0
V/C Ratio(X)	0.59	0.00	0.72				0.00	0.22	0.33	0.69	0.13	0.00
Avail Cap(c_a), veh/h	839	454	772				0	3956	1121	548	4503	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	0.84	0.84	0.96	0.96	0.00
Uniform Delay (d), s/veh	44.7	0.0	45.4				0.0	0.0	0.0	45.4	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.0	2.8				0.0	0.1	0.7	3.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	0.0	3.4				0.0	0.0	0.2	1.9	0.0	0.0
Lane Grp Delay (d), s/veh	46.2	0.0	48.2				0.0	0.1	0.7	49.3	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		469						1239			708	
Approach Delay, s/veh		47.2						0.3			10.0	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		15.7						79.6		10.4	90.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		26.0						65.0		17.0	86.0	
Max Q Clear Time (g_c+I1), s		10.1						2.0		6.2	2.0	
Green Ext Time (p_c), s		1.6						18.6		0.3	19.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.2									
HCM 2010 LOS			B									
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

Existing AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	257	112	3	38	307	403	78	531	9	134	272	275
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1156	608	15	596	625	532	111	2315	40	235	1596	678
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.02	0.14	0.14	0.11	0.72	0.72
Sat Flow, veh/h	3408	1793	44	1757	1845	1568	1757	5424	94	3408	3689	1568
Grp Volume(v), veh/h	279	0	125	41	334	438	85	392	195	146	296	299
Grp Sat Flow(s),veh/h/ln	1704	0	1837	1757	1845	1568	1757	1845	1828	1704	1845	1568
Q Serve(g_s), s	4.3	0.0	3.5	1.1	10.6	18.6	3.5	6.9	6.9	3.0	1.9	5.6
Cycle Q Clear(g_c), s	4.3	0.0	3.5	1.1	10.6	18.6	3.5	6.9	6.9	3.0	1.9	5.6
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	1156	0	623	596	625	532	111	1575	780	235	1596	678
V/C Ratio(X)	0.24	0.00	0.20	0.07	0.53	0.82	0.77	0.25	0.25	0.62	0.19	0.44
Avail Cap(c_a), veh/h	1156	0	623	1040	1092	928	339	1575	780	563	1596	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.79	0.79	0.79	0.99	0.99	0.99	0.99	0.99	0.99
Uniform Delay (d), s/veh	17.3	0.0	17.0	16.2	19.4	22.0	35.0	20.8	20.8	31.2	6.0	6.5
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.6	2.6	10.3	0.4	0.8	2.7	0.3	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.7	0.0	1.5	0.5	4.7	7.2	1.9	3.4	3.5	1.3	0.8	1.9
Lane Grp Delay (d), s/veh	17.4	0.0	17.2	16.3	19.9	24.6	45.3	21.2	21.6	33.9	6.2	8.6
Lane Grp LOS	B		B	B	B	C	D	C	C	C	A	A
Approach Vol, veh/h		404			813			672			741	
Approach Delay, s/veh		17.3			22.3			24.4			12.6	
Approach LOS		B			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		28.6			28.6		8.6	35.0		9.0		35.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			43.0		14.0	31.0		12.0		29.0
Max Q Clear Time (g_c+I1), s		6.3			20.6		5.5	8.9		5.0		7.6
Green Ext Time (p_c), s		4.5			4.0		0.1	3.8		0.4		3.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Existing AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	223	164	109	12	324	386	440	891	15	38	100	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Cap, veh/h	281	1388	590	22	422	358	525	1465	24	51	267	198
Arrive On Green	0.16	0.38	0.00	0.01	0.23	0.00	0.30	0.40	0.40	0.03	0.14	0.14
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3619	60	1757	1972	1460
Grp Volume(v), veh/h	242	178	0	13	352	0	478	493	491	41	101	96
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1834	1757	1845	1587
Q Serve(g_s), s	12.1	2.9	0.0	0.7	16.4	0.0	23.7	19.6	19.6	2.1	4.5	5.0
Cycle Q Clear(g_c), s	12.1	2.9	0.0	0.7	16.4	0.0	23.7	19.6	19.6	2.1	4.5	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		0.92
Lane Grp Cap(c), veh/h	281	1388	590	22	422	358	525	747	743	51	250	215
V/C Ratio(X)	0.86	0.13	0.00	0.60	0.83	0.00	0.91	0.66	0.66	0.80	0.41	0.45
Avail Cap(c_a), veh/h	409	1839	782	78	572	486	739	981	975	136	347	299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	18.4	0.0	44.4	33.2	0.0	30.5	21.8	21.8	43.6	35.7	35.9
Incr Delay (d2), s/veh	12.0	0.0	0.0	23.8	7.8	0.0	12.0	1.0	1.0	23.8	1.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.1	1.2	0.0	0.4	8.4	0.0	12.1	9.0	8.9	1.3	2.2	2.1
Lane Grp Delay (d), s/veh	48.9	18.5	0.0	68.2	40.9	0.0	42.5	22.9	22.9	67.4	36.8	37.4
Lane Grp LOS	D	B		E	D		D	C	C	E	D	D
Approach Vol, veh/h		420			365			1462			238	
Approach Delay, s/veh		36.0			41.9			29.3			42.3	
Approach LOS		D			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	18.5	38.0		5.1	24.6		31.0	40.6		6.6	16.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	21.0	45.0		4.0	28.0		38.0	48.0		7.0	17.0	
Max Q Clear Time (g_c+I1), s	14.1	4.9		2.7	18.4		25.7	21.6		4.1	7.0	
Green Ext Time (p_c), s	0.4	3.5		0.0	2.2		1.3	8.7		0.0	5.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					33.5							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

Existing AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	149	53	49	355	199	122	411	51	61	101	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	353	936	323	533	798	440	695	723	89	385	828	704
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	806	2624	905	1145	2237	1234	1256	1611	198	884	1845	1568
Grp Volume(v), veh/h	22	112	108	53	317	285	133	0	502	66	110	8
Grp Sat Flow(s),veh/h/ln	806	1845	1685	1145	1845	1627	1256	0	1810	884	1845	1568
Q Serve(g_s), s	0.9	1.7	1.8	1.4	5.5	5.6	2.9	0.0	8.7	2.5	1.4	0.1
Cycle Q Clear(g_c), s	6.5	1.7	1.8	3.2	5.5	5.6	4.3	0.0	8.7	11.2	1.4	0.1
Prop In Lane	1.00		0.54	1.00		0.76	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	353	658	601	533	658	581	695	0	812	385	828	704
V/C Ratio(X)	0.06	0.17	0.18	0.10	0.48	0.49	0.19	0.00	0.62	0.17	0.13	0.01
Avail Cap(c_a), veh/h	907	1927	1760	1320	1927	1699	2237	0	3033	1469	3091	2628
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	9.1	9.1	10.2	10.3	10.3	7.9	0.0	8.7	12.9	6.7	6.3
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.1	0.5	0.6	0.1	0.0	0.8	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.7	0.7	0.4	2.2	2.0	0.8	0.0	3.2	0.5	0.5	0.0
Lane Grp Delay (d), s/veh	12.9	9.2	9.2	10.3	10.8	11.0	8.0	0.0	9.4	13.2	6.7	6.3
Lane Grp LOS	B	A	A	B	B	B	A		A	B	A	A
Approach Vol, veh/h		242			655			635			184	
Approach Delay, s/veh		9.6			10.8			9.1			9.0	
Approach LOS		A			B			A			A	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		18.7			18.7			22.5			22.5	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		43.0			43.0			69.0			69.0	
Max Q Clear Time (g_c+I1), s		8.5			7.6			10.7			13.2	
Green Ext Time (p_c), s		6.2			6.2			5.2			5.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				9.8								
HCM 2010 LOS				A								
<b>Notes</b>												


























HCM 2010 Signalized Intersection Summary  
26: James Donlon Blvd & Contra Loma Blvd

Existing AM  
3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	170	391	2	9	939	210	6	9	12	202	13	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	231	2175	10	18	1378	307	114	150	151	386	34	311
Arrive On Green	0.13	0.59	0.59	0.01	0.47	0.47	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1757	3669	17	1757	2924	651	220	692	698	1369	155	1436
Grp Volume(v), veh/h	185	214	213	10	643	606	30	0	0	220	0	144
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1730	1611	0	0	1369	0	1591
Q Serve(g_s), s	6.8	3.6	3.6	0.4	18.8	19.0	0.0	0.0	0.0	10.2	0.0	5.2
Cycle Q Clear(g_c), s	6.8	3.6	3.6	0.4	18.8	19.0	0.9	0.0	0.0	11.1	0.0	5.2
Prop In Lane	1.00		0.01	1.00		0.38	0.23		0.43	1.00		0.90
Lane Grp Cap(c), veh/h	231	1094	1092	18	870	815	416	0	0	386	0	345
V/C Ratio(X)	0.80	0.20	0.20	0.56	0.74	0.74	0.07	0.00	0.00	0.57	0.00	0.42
Avail Cap(c_a), veh/h	396	1358	1356	106	1053	987	661	0	0	603	0	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.1	6.2	6.2	32.8	14.3	14.3	20.8	0.0	0.0	25.2	0.0	22.4
Incr Delay (d2), s/veh	6.3	0.1	0.1	24.8	2.2	2.5	0.1	0.0	0.0	1.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	1.4	1.4	0.3	8.4	8.0	0.4	0.0	0.0	3.5	0.0	2.1
Lane Grp Delay (d), s/veh	34.4	6.3	6.3	57.6	16.5	16.8	20.9	0.0	0.0	26.5	0.0	23.3
Lane Grp LOS	C	A	A	E	B	B	C			C		C
Approach Vol, veh/h		612			1259			30				364
Approach Delay, s/veh		14.8			17.0			20.9				25.2
Approach LOS		B			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	12.8	43.5		4.7	35.4			18.4				18.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	15.0	49.0		4.0	38.0			25.0				25.0
Max Q Clear Time (g_c+I1), s	8.8	5.6		2.4	21.0			2.9				13.1
Green Ext Time (p_c), s	0.2	16.8		0.0	10.4			1.7				1.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.8								
HCM 2010 LOS				B								
<b>Notes</b>												































HCM 2010 Signalized Intersection Summary  
27: Lone Tree Way & James Donlon Blvd

Existing AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	179	49	454	11	110	76	887	1132	9	48	847	141
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	286	301	1558	27	272	255	1138	2392	1016	66	1630	270
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.33	0.65	0.65	0.04	0.35	0.35
Sat Flow, veh/h	1757	1845	3136	167	1669	1568	3408	3689	1568	1757	4632	766
Grp Volume(v), veh/h	195	53	493	132	0	83	964	1230	10	52	733	341
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1836	0	1568	1704	1845	1568	1757	1845	1709
Q Serve(g_s), s	8.3	2.0	7.4	5.1	0.0	3.7	20.8	13.9	0.2	2.3	12.7	12.8
Cycle Q Clear(g_c), s	8.3	2.0	7.4	5.1	0.0	3.7	20.8	13.9	0.2	2.3	12.7	12.8
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	286	301	1558	299	0	255	1138	2392	1016	66	1298	601
V/C Ratio(X)	0.68	0.18	0.32	0.44	0.00	0.32	0.85	0.51	0.01	0.79	0.56	0.57
Avail Cap(c_a), veh/h	399	419	1759	371	0	316	1676	2838	1206	199	1442	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	28.6	11.9	29.9	0.0	29.3	24.5	7.4	4.9	37.9	20.8	20.8
Incr Delay (d2), s/veh	2.8	0.3	0.1	1.0	0.0	0.7	2.8	0.2	0.0	18.6	0.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.9	0.9	2.7	2.4	0.0	1.5	9.0	5.4	0.1	1.4	5.8	5.5
Lane Grp Delay (d), s/veh	34.1	28.9	12.0	31.0	0.0	30.1	27.3	7.5	4.9	56.4	21.2	21.7
Lane Grp LOS	C	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		741			215			2204			1126	
Approach Delay, s/veh		19.0			30.6			16.2			23.0	
Approach LOS		B			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		16.9			16.9		30.5	55.4		7.0		31.9
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		39.0	61.0		9.0		31.0
Max Q Clear Time (g_c+I1), s		10.3			7.1		22.8	15.9		4.3		14.8
Green Ext Time (p_c), s		2.6			2.9		3.7	27.8		0.0		13.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			19.2									
HCM 2010 LOS			B									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 28: Kirker Pass Rd & Myrtle Dr

Existing AM  
 3/14/2014

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations				  				 			 	  	
Volume (veh/h)	23	0	96	0	0	0	55	438	3	0	1411	27	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	
Lanes	1	1	0	3	1	1	1	2	1	1	3	0	
Cap, veh/h	165	0	147	466	173	147	78	2788	1185	3	3444	65	
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.04	0.76	0.76	0.00	0.64	0.64	
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5414	102	
Grp Volume(v), veh/h	25	0	104	0	0	0	60	476	3	0	1045	518	
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1827	
Q Serve(g_s), s	0.7	0.0	3.4	0.0	0.0	0.0	1.8	1.9	0.0	0.0	7.7	7.7	
Cycle Q Clear(g_c), s	0.7	0.0	3.4	0.0	0.0	0.0	1.8	1.9	0.0	0.0	7.7	7.7	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06	
Lane Grp Cap(c), veh/h	165	0	147	466	173	147	78	2788	1185	3	2347	1162	
V/C Ratio(X)	0.15	0.00	0.71	0.00	0.00	0.00	0.77	0.17	0.00	0.00	0.45	0.45	
Avail Cap(c_a), veh/h	594	0	530	1490	555	471	363	4576	1945	132	4091	2025	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	22.2	0.0	23.4	0.0	0.0	0.0	25.2	1.8	1.6	0.0	4.9	4.9	
Incr Delay (d2), s/veh	0.4	0.0	6.0	0.0	0.0	0.0	14.9	0.0	0.0	0.0	0.1	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q (50%), veh/ln	0.3	0.0	1.5	0.0	0.0	0.0	1.1	0.5	0.0	0.0	2.7	2.7	
Lane Grp Delay (d), s/veh	22.6	0.0	29.4	0.0	0.0	0.0	40.0	1.9	1.6	0.0	5.0	5.2	
Lane Grp LOS	C		C				D	A	A		A	A	
Approach Vol, veh/h		129			0			539			1563		
Approach Delay, s/veh		28.1			0.0			6.1			5.1		
Approach LOS		C						A			A		
<b>Timer</b>													
Assigned Phs		4			8		5	2			1	6	
Phs Duration (G+Y+Rc), s		9.0			9.0		6.4	44.2			0.0	37.9	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	4.0	
Max Green Setting (Gmax), s		18.0			16.0		11.0	66.0			4.0	59.0	
Max Q Clear Time (g_c+I1), s		5.4			0.0		3.8	3.9			0.0	9.7	
Green Ext Time (p_c), s		0.5			0.0		0.1	26.5			0.0	24.2	
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay				6.7									
HCM 2010 LOS				A									
<b>Notes</b>													

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Existing AM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	67	121	368	376	88	65	354	77	49	1336	342
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	78	219	186	435	1186	504	91	1973	416	68	1840	469
Arrive On Green	0.04	0.12	0.12	0.25	0.32	0.32	0.05	0.44	0.44	0.04	0.43	0.43
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4435	934	1757	4258	1085
Grp Volume(v), veh/h	61	73	132	400	409	96	71	318	151	53	1257	567
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1680	1757	1845	1653
Q Serve(g_s), s	3.7	3.9	8.6	23.6	9.0	4.7	4.3	5.6	5.8	3.2	31.3	31.6
Cycle Q Clear(g_c), s	3.7	3.9	8.6	23.6	9.0	4.7	4.3	5.6	5.8	3.2	31.3	31.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.56	1.00		0.66
Lane Grp Cap(c), veh/h	78	219	186	435	1186	504	91	1642	747	68	1594	714
V/C Ratio(X)	0.78	0.33	0.71	0.92	0.34	0.19	0.78	0.19	0.20	0.78	0.79	0.79
Avail Cap(c_a), veh/h	148	277	235	528	1350	574	115	1642	747	148	1697	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	43.1	45.2	39.1	27.6	26.1	49.9	18.0	18.0	50.8	26.1	26.2
Incr Delay (d2), s/veh	15.1	0.9	7.0	19.3	0.2	0.2	23.0	0.1	0.1	17.2	2.4	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	1.9	3.8	12.9	4.2	1.9	2.5	2.5	2.5	1.8	14.7	14.0
Lane Grp Delay (d), s/veh	65.5	44.0	52.2	58.3	27.8	26.3	73.0	18.0	18.2	68.0	28.5	31.7
Lane Grp LOS	E	D	D	E	C	C	E	B	B	E	C	C
Approach Vol, veh/h		266			905			540			1877	
Approach Delay, s/veh		53.0			41.1			25.3			30.6	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	8.8	16.6		30.4	38.3		9.5	51.4		8.1	50.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	9.0	16.0		32.0	39.0		7.0	47.0		9.0	49.0	
Max Q Clear Time (g_c+I1), s	5.7	10.6		25.6	11.0		6.3	7.8		5.2	33.6	
Green Ext Time (p_c), s	0.0	2.0		0.7	4.7		0.0	25.5		0.0	12.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					34.1							
HCM 2010 LOS					C							
<b>Notes</b>												

# HCM 2010 Signalized Intersection Summary

## 30: Ygnacio Valley Rd & Clayton Blvd

Existing AM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	195	342	33	432	1138	128	147	273	163	248	944	478
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	276	1257	0	555	1711	0	220	2000	567	340	2194	622
Arrive On Green	0.08	0.23	0.00	0.16	0.31	0.00	0.06	0.36	0.36	0.10	0.40	0.40
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	212	372	0	470	1237	0	160	297	177	270	1026	520
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	6.6	6.0	0.0	14.4	21.4	0.0	5.0	3.9	8.7	8.3	14.8	32.2
Cycle Q Clear(g_c), s	6.6	6.0	0.0	14.4	21.4	0.0	5.0	3.9	8.7	8.3	14.8	32.2
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	1257	0	555	1711	0	220	2000	567	340	2194	622
V/C Ratio(X)	0.77	0.30	0.00	0.85	0.72	0.00	0.73	0.15	0.31	0.79	0.47	0.84
Avail Cap(c_a), veh/h	349	1339	0	761	2008	0	254	2008	569	476	2368	671
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	34.4	0.0	43.7	33.0	0.0	49.3	23.2	24.7	47.3	24.0	29.3
Incr Delay (d2), s/veh	7.8	0.1	0.0	6.6	1.1	0.0	8.6	0.0	0.3	6.2	0.2	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.2	2.8	0.0	6.8	10.1	0.0	2.4	1.8	3.4	3.9	6.8	13.9
Lane Grp Delay (d), s/veh	56.2	34.5	0.0	50.2	34.1	0.0	57.9	23.2	25.0	53.5	24.2	37.9
Lane Grp LOS	E	C		D	C		E	C	C	D	C	D
Approach Vol, veh/h		584			1707			634			1816	
Approach Delay, s/veh		42.4			38.6			32.5			32.5	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	12.7	28.4		21.5	37.2		10.9	42.8		14.7	46.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	26.0		24.0	39.0		8.0	39.0		15.0	46.0	
Max Q Clear Time (g_c+I1), s	8.6	8.0		16.4	23.4		7.0	10.7		10.3	34.2	
Green Ext Time (p_c), s	0.2	10.9		1.1	9.9		0.0	15.1		0.4	8.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				35.9								
HCM 2010 LOS				D								
<b>Notes</b>												

**Intersection**

Intersection Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	455	5	9	925	6	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	495	5	10	1005	7	29

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	500
Stage 1	-	-	-
Stage 2	-	-	-
Follow-up Headway	-	-	2.23
Pot Capacity-1 Maneuver	-	-	1053
Stage 1	-	-	-
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	-	-	1053
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.9
HCM LOS			B












Minor Lane / Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	244	748	-	-	1053	-
HCM Lane V/C Ratio	0.027	0.039	-	-	0.009	-
HCM Control Delay (s)	20.2	10	-	-	8.451	-
HCM Lane LOS	C	B			A	
HCM 95th %tile Q(veh)	0.082	0.122	-	-	0.028	-

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd

Existing AM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	99	282	686	64	92	291
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	141	2096	1331	125	452	403
Arrive On Green	0.08	0.57	0.40	0.40	0.26	0.26
Sat Flow, veh/h	1757	3689	3323	312	1757	1568
Grp Volume(v), veh/h	108	307	414	402	100	316
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1790	1757	1568
Q Serve(g_s), s	2.8	1.8	7.9	8.0	2.1	8.6
Cycle Q Clear(g_c), s	2.8	1.8	7.9	8.0	2.1	8.6
Prop In Lane	1.00			0.17	1.00	1.00
Lane Grp Cap(c), veh/h	141	2096	739	717	452	403
V/C Ratio(X)	0.77	0.15	0.56	0.56	0.22	0.78
Avail Cap(c_a), veh/h	537	4511	1530	1485	997	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	4.7	10.6	10.6	13.4	15.8
Incr Delay (d2), s/veh	8.4	0.0	0.7	0.7	0.2	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	0.6	3.2	3.2	0.8	0.4
Lane Grp Delay (d), s/veh	29.1	4.7	11.3	11.3	13.6	19.2
Lane Grp LOS	C	A	B	B	B	B
Approach Vol, veh/h		415	816		416	
Approach Delay, s/veh		11.0	11.3		17.9	
Approach LOS		B	B		B	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	7.7	30.0	22.4			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	56.0	38.0			
Max Q Clear Time (g_c+I1), s	4.8	3.8	10.0			
Green Ext Time (p_c), s	0.2	9.4	8.4			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			12.9			
HCM 2010 LOS			B			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr





















Existing AM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	0	77	0	0	0	715	508	0	2	156	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	194	0	113	67	133	0	1158	3005	0	4	493	74
Arrive On Green	0.07	0.00	0.07	0.00	0.00	0.00	0.66	0.81	0.00	0.00	0.05	0.05
Sat Flow, veh/h	1757	0	1568	1296	1845	0	1757	3689	0	1757	3135	471
Grp Volume(v), veh/h	45	0	84	0	0	0	777	552	0	2	99	97
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1296	1845	0	1757	1845	0	1757	1845	1761
Q Serve(g_s), s	2.6	0.0	5.7	0.0	0.0	0.0	29.2	3.5	0.0	0.1	5.6	5.8
Cycle Q Clear(g_c), s	2.6	0.0	5.7	0.0	0.0	0.0	29.2	3.5	0.0	0.1	5.6	5.8
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.27
Lane Grp Cap(c), veh/h	194	0	113	67	133	0	1158	3005	0	4	290	277
V/C Ratio(X)	0.23	0.00	0.74	0.00	0.00	0.00	0.67	0.18	0.00	0.53	0.34	0.35
Avail Cap(c_a), veh/h	327	0	232	165	273	0	1220	3005	0	65	290	277
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.59	0.59	0.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	47.7	0.0	49.1	0.0	0.0	0.0	11.2	2.2	0.0	53.9	45.8	45.9
Incr Delay (d2), s/veh	0.6	0.0	9.1	0.0	0.0	0.0	0.8	0.1	0.0	81.9	3.1	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	0.0	2.6	0.0	0.0	0.0	11.7	1.3	0.0	0.1	3.0	3.0
Lane Grp Delay (d), s/veh	48.3	0.0	58.2	0.0	0.0	0.0	12.0	2.3	0.0	135.9	48.9	49.3
Lane Grp LOS	D		E				B	A		F	D	D
Approach Vol, veh/h		129			0			1329			198	
Approach Delay, s/veh		54.8			0.0			8.0			50.0	
Approach LOS		D						A			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		11.8			11.8		75.2	92.0		4.2		21.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		75.0	88.0		4.0		17.0
Max Q Clear Time (g_c+I1), s		7.7			0.0		31.2	5.5		2.1		7.8
Green Ext Time (p_c), s		0.3			0.0		8.3	8.5		0.0		0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.7								
HCM 2010 LOS				B								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
34: Fairview Dr & Delta Fair Blvd

Existing AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	336	131	21	446	7	535	6	28	8	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	21	593	227	38	878	14	812	8	828	237	53	33
Arrive On Green	0.01	0.23	0.23	0.02	0.24	0.24	0.53	0.53	0.53	0.53	0.53	0.53
Sat Flow, veh/h	1757	2543	974	1757	3619	60	1293	16	1568	239	100	62
Grp Volume(v), veh/h	12	263	244	23	247	246	589	0	30	13	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1673	1757	1845	1834	1309	0	1568	401	0	0
Q Serve(g_s), s	0.4	7.0	7.2	0.7	6.5	6.5	0.0	0.0	0.5	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.4	7.0	7.2	0.7	6.5	6.5	22.2	0.0	0.5	22.4	0.0	0.0
Prop In Lane	1.00		0.58	1.00		0.03	0.99		1.00	0.69		0.15
Lane Grp Cap(c), veh/h	21	430	390	38	447	445	821	0	828	322	0	0
V/C Ratio(X)	0.56	0.61	0.63	0.61	0.55	0.55	0.72	0.00	0.04	0.04	0.00	0.00
Avail Cap(c_a), veh/h	127	568	515	127	568	565	1525	0	1618	1049	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.1	18.9	19.0	26.8	18.3	18.3	11.4	0.0	6.3	10.3	0.0	0.0
Incr Delay (d2), s/veh	21.0	1.4	1.6	14.7	1.1	1.1	1.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	3.2	3.0	0.5	2.9	2.9	6.3	0.0	0.2	0.2	0.0	0.0
Lane Grp Delay (d), s/veh	48.1	20.4	20.7	41.5	19.4	19.4	12.6	0.0	6.3	10.4	0.0	0.0
Lane Grp LOS	D	C	C	D	B	B	B		A	B		
Approach Vol, veh/h		519			516			619				13
Approach Delay, s/veh		21.1			20.4			12.3				10.4
Approach LOS		C			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.7	16.9		5.2	17.4			33.2				33.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	17.0		4.0	17.0			57.0				57.0
Max Q Clear Time (g_c+I1), s	2.4	9.2		2.7	8.5			24.2				24.4
Green Ext Time (p_c), s	0.0	3.7		0.0	3.9			4.8				4.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.5								
HCM 2010 LOS				B								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	145	247	194	411	731	287	168	807	286
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				201	350	292	541	1259	493	222	1719	731
Arrive On Green				0.25	0.25	0.25	0.32	1.00	1.00	0.13	0.47	0.00
Sat Flow, veh/h				820	1427	1191	3408	2525	990	1757	3689	1568
Grp Volume(v), veh/h				347	0	290	447	581	526	183	877	0
Grp Sat Flow(s),veh/h/ln				1804	0	1635	1704	1845	1670	1757	1845	1568
Q Serve(g_s), s				16.6	0.0	15.0	11.2	0.2	0.2	9.4	15.4	0.0
Cycle Q Clear(g_c), s				16.6	0.0	15.0	11.2	0.2	0.2	9.4	15.4	0.0
Prop In Lane				0.45		0.73	1.00		0.59	1.00		1.00
Lane Grp Cap(c), veh/h				442	0	401	541	920	833	222	1719	731
V/C Ratio(X)				0.79	0.00	0.72	0.83	0.63	0.63	0.82	0.51	0.00
Avail Cap(c_a), veh/h				743	0	673	1071	920	833	457	1719	731
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.63	0.63	0.63	1.00	1.00	0.00
Uniform Delay (d), s/veh				32.6	0.0	32.0	30.3	0.1	0.1	39.3	17.3	0.0
Incr Delay (d2), s/veh				3.1	0.0	2.5	2.1	2.1	2.3	7.5	1.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				7.9	0.0	6.4	4.2	0.6	0.6	4.6	7.1	0.0
Lane Grp Delay (d), s/veh				35.7	0.0	34.4	32.4	2.2	2.4	46.8	18.3	0.0
Lane Grp LOS				D		C	C	A	A	D	B	
Approach Vol, veh/h					637			1554			1060	
Approach Delay, s/veh					35.1			10.9			23.3	
Approach LOS					D			B			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1		6
Phs Duration (G+Y+Rc), s					26.6		18.7	50.0		15.7		47.0
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0		41.0
Max Q Clear Time (g_c+I1), s					18.6		13.2	2.2		11.4		17.4
Green Ext Time (p_c), s					4.0		1.5	22.1		0.4		15.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay											19.7	
HCM 2010 LOS											B	
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	584	0	703	0	0	0	0	830	130	128	580	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	722	759	1290				0	1445	225	288	1887	0
Arrive On Green	0.41	0.00	0.41				0.00	0.31	0.31	0.33	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4678	728	1757	3689	0
Grp Volume(v), veh/h	635	0	764				0	711	332	139	630	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1716	1757	1845	0
Q Serve(g_s), s	34.5	0.0	19.6				0.0	17.1	17.2	6.5	0.0	0.0
Cycle Q Clear(g_c), s	34.5	0.0	19.6				0.0	17.1	17.2	6.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.42	1.00		0.00
Lane Grp Cap(c), veh/h	722	759	1290				0	1140	530	288	1887	0
V/C Ratio(X)	0.88	0.00	0.59				0.00	0.62	0.63	0.48	0.33	0.00
Avail Cap(c_a), veh/h	1000	1051	1786				0	1140	530	288	1887	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.85	0.85	0.00
Uniform Delay (d), s/veh	28.1	0.0	23.7				0.0	30.6	30.7	31.3	0.0	0.0
Incr Delay (d2), s/veh	6.9	0.0	0.4				0.0	2.6	5.5	1.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	16.2	0.0	7.6				0.0	8.3	8.2	2.7	0.1	0.0
Lane Grp Delay (d), s/veh	35.0	0.0	24.2				0.0	33.2	36.2	32.4	0.4	0.0
Lane Grp LOS	C		C					C	D	C	A	
Approach Vol, veh/h		1399						1043			769	
Approach Delay, s/veh		29.1						34.2			6.2	
Approach LOS		C						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		46.6						36.0		21.0	57.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		59.0						32.0		17.0	53.0	
Max Q Clear Time (g_c+I1), s		36.5						19.2		8.5	2.0	
Green Ext Time (p_c), s		6.1						5.7		3.0	5.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			25.3									
HCM 2010 LOS			C									
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

Existing PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	219	732	141	123	321	187	137	603	200	441	718	259
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	270	847	163	153	793	337	178	758	322	504	1442	613
Arrive On Green	0.15	0.28	0.28	0.09	0.21	0.21	0.10	0.21	0.21	0.29	0.39	0.39
Sat Flow, veh/h	1757	3009	578	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	238	488	461	134	349	203	149	655	217	479	780	282
Grp Sat Flow(s),veh/h/ln	1757	1845	1743	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	15.2	29.7	29.7	8.7	9.4	13.4	9.6	19.7	14.7	30.7	18.8	15.4
Cycle Q Clear(g_c), s	15.2	29.7	29.7	8.7	9.4	13.4	9.6	19.7	14.7	30.7	18.8	15.4
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	270	519	491	153	793	337	178	758	322	504	1442	613
V/C Ratio(X)	0.88	0.94	0.94	0.88	0.44	0.60	0.84	0.86	0.67	0.95	0.54	0.46
Avail Cap(c_a), veh/h	382	530	500	153	793	337	275	867	368	520	1442	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	40.3	40.3	51.9	39.1	40.7	50.7	44.1	42.1	40.2	27.0	26.0
Incr Delay (d2), s/veh	15.8	24.8	25.7	39.5	0.4	3.0	12.4	8.2	4.0	27.1	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.1	17.5	16.7	5.6	4.5	5.7	5.0	10.2	6.2	17.5	8.9	6.0
Lane Grp Delay (d), s/veh	63.4	65.1	66.1	91.4	39.5	43.7	63.1	52.4	46.1	67.3	27.5	26.5
Lane Grp LOS	E	E	E	F	D	D	E	D	D	E	C	C
Approach Vol, veh/h		1187			686			1021			1541	
Approach Delay, s/veh		65.1			50.9			52.6			39.7	
Approach LOS		E			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	21.7	36.4		14.0	28.7		15.7	27.6		37.0	48.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	25.0	33.0		10.0	18.0		18.0	27.0		34.0	43.0	
Max Q Clear Time (g_c+I1), s	17.2	31.7		10.7	15.4		11.6	21.7		32.7	20.8	
Green Ext Time (p_c), s	0.4	0.7		0.0	1.9		0.2	1.9		0.3	12.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				51.2								
HCM 2010 LOS				D								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Existing PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	56	49	3	331	104	99	34	583	873	88	380	113
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	322	338	287	625	338	287	125	1966	836	124	1964	835
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.07	0.53	0.53	0.07	0.53	0.53
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	61	53	3	360	113	108	37	634	949	96	413	123
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	1.7	1.4	0.1	5.4	3.0	3.4	1.1	5.5	30.0	3.0	3.3	2.2
Cycle Q Clear(g_c), s	1.7	1.4	0.1	5.4	3.0	3.4	1.1	5.5	30.0	3.0	3.3	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	322	338	287	625	338	287	125	1966	836	124	1964	835
V/C Ratio(X)	0.19	0.16	0.01	0.58	0.33	0.38	0.30	0.32	1.14	0.77	0.21	0.15
Avail Cap(c_a), veh/h	562	590	501	3330	1802	1532	499	1966	836	343	1964	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	19.3	18.8	21.0	20.0	20.2	24.8	7.4	13.1	25.7	6.9	6.7
Incr Delay (d2), s/veh	0.3	0.2	0.0	0.8	0.6	0.8	1.3	0.1	75.6	9.8	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	0.6	0.0	2.1	1.3	1.3	0.5	2.1	27.3	1.6	1.3	0.7
Lane Grp Delay (d), s/veh	19.7	19.5	18.8	21.8	20.6	21.0	26.1	7.5	88.8	35.5	7.0	6.8
Lane Grp LOS	B	B	B	C	C	C	C	A	F	D	A	A
Approach Vol, veh/h		117			581			1620			632	
Approach Delay, s/veh		19.6			21.4			55.5			11.3	
Approach LOS		B			C			E			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		14.3			14.3		8.0	34.0		8.0		34.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			55.0		16.0	30.0		11.0		25.0
Max Q Clear Time (g_c+I1), s		3.7			7.4		3.1	32.0		5.0		5.3
Green Ext Time (p_c), s		2.4			2.9		0.0	0.0		0.1		12.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				37.9								
HCM 2010 LOS				D								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Existing PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	89	977	149	171	233	108	69	247	265	234	409	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	124	1228	522	221	1433	609	96	692	294	291	830	231
Arrive On Green	0.07	0.33	0.33	0.13	0.39	0.39	0.05	0.19	0.19	0.17	0.30	0.30
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2779	774
Grp Volume(v), veh/h	97	1062	162	186	253	117	75	268	288	254	294	276
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1708
Q Serve(g_s), s	4.6	23.0	6.6	8.8	3.8	4.2	3.6	5.4	15.6	12.0	11.4	11.5
Cycle Q Clear(g_c), s	4.6	23.0	6.6	8.8	3.8	4.2	3.6	5.4	15.6	12.0	11.4	11.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	124	1228	522	221	1433	609	96	692	294	291	551	510
V/C Ratio(X)	0.78	0.86	0.31	0.84	0.18	0.19	0.78	0.39	0.98	0.87	0.53	0.54
Avail Cap(c_a), veh/h	206	1298	551	247	1433	609	185	692	294	330	551	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	26.6	21.2	36.4	17.1	17.2	39.8	30.4	34.5	34.7	25.0	25.0
Incr Delay (d2), s/veh	10.2	6.1	0.3	20.3	0.1	0.2	12.6	0.4	46.6	20.0	1.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	11.4	2.5	5.2	1.7	1.6	1.9	2.5	9.9	6.9	5.3	5.0
Lane Grp Delay (d), s/veh	49.2	32.7	21.5	56.8	17.2	17.4	52.4	30.7	81.1	54.7	26.0	26.2
Lane Grp LOS	D	C	C	E	B	B	D	C	F	D	C	C
Approach Vol, veh/h		1321			556			631			824	
Approach Delay, s/veh		32.6			30.5			56.3			34.9	
Approach LOS		C			C			E			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.0	32.4		14.8	37.1		8.7	20.0		18.1	29.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	30.0		12.0	32.0		9.0	16.0		16.0	23.0	
Max Q Clear Time (g_c+I1), s	6.6	25.0		10.8	6.2		5.6	17.6		14.0	13.5	
Green Ext Time (p_c), s	0.1	3.4		0.1	12.2		0.0	0.0		0.2	4.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				37.3								
HCM 2010 LOS				D								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Existing PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	860	27	21	466	77	16	38	8	112	74	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	153	1256	39	32	1175	999	26	79	17	148	97	112
Arrive On Green	0.09	0.71	0.71	0.02	0.64	0.64	0.01	0.05	0.05	0.08	0.12	0.12
Sat Flow, veh/h	1757	1780	55	1757	1845	1568	1757	1466	322	1757	784	902
Grp Volume(v), veh/h	76	0	964	23	507	84	17	0	50	122	0	172
Grp Sat Flow(s),veh/h/ln	1757	0	1835	1757	1845	1568	1757	0	1788	1757	0	1686
Q Serve(g_s), s	4.8	0.0	37.8	1.5	16.0	1.4	1.1	0.0	3.2	7.9	0.0	11.6
Cycle Q Clear(g_c), s	4.8	0.0	37.8	1.5	16.0	1.4	1.1	0.0	3.2	7.9	0.0	11.6
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	153	0	1295	32	1175	999	26	0	96	148	0	209
V/C Ratio(X)	0.50	0.00	0.74	0.73	0.43	0.08	0.67	0.00	0.52	0.82	0.00	0.82
Avail Cap(c_a), veh/h	181	0	1295	60	1175	999	76	0	246	181	0	334
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.00	0.57	0.70	0.70	0.70	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	10.6	56.7	10.6	2.7	57.0	0.0	53.5	52.3	0.0	49.7
Incr Delay (d2), s/veh	1.4	0.0	2.3	19.5	0.8	0.1	25.9	0.0	4.3	21.7	0.0	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	0.0	15.3	0.9	6.7	0.8	0.7	0.0	1.6	4.5	0.0	5.5
Lane Grp Delay (d), s/veh	52.0	0.0	12.8	76.3	11.4	2.8	82.8	0.0	57.7	74.0	0.0	58.4
Lane Grp LOS	D		B	E	B	A	F		E	E		E
Approach Vol, veh/h		1040			614			67				294
Approach Delay, s/veh		15.7			12.6			64.1				64.9
Approach LOS		B			B			E				E
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	14.1	86.0		6.1	78.0		5.7	10.3		13.8		18.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	82.0		4.0	74.0		5.0	16.0		12.0		23.0
Max Q Clear Time (g_c+I1), s	6.8	39.8		3.5	18.0		3.1	5.2		9.9		13.6
Green Ext Time (p_c), s	0.1	9.7		0.0	3.8		0.0	0.9		0.1		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave























Existing PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	643	22	552	254	80	39	23	224	69	58	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	43	1457	50	981	2487	1057	307	322	274	307	272	43
Arrive On Green	0.02	0.41	0.41	0.29	0.67	0.67	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1757	3546	122	3408	3689	1568	1757	1845	1568	1757	1554	247
Grp Volume(v), veh/h	30	363	360	600	276	87	42	25	243	75	0	73
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1801
Q Serve(g_s), s	1.6	13.7	13.7	14.4	2.5	1.8	1.9	1.1	14.4	3.5	0.0	3.3
Cycle Q Clear(g_c), s	1.6	13.7	13.7	14.4	2.5	1.8	1.9	1.1	14.4	3.5	0.0	3.3
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	43	758	749	981	2487	1057	307	322	274	307	0	315
V/C Ratio(X)	0.69	0.48	0.48	0.61	0.11	0.08	0.14	0.08	0.89	0.24	0.00	0.23
Avail Cap(c_a), veh/h	111	758	749	1113	2487	1057	333	350	297	307	0	315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.9	20.5	20.5	29.2	5.4	5.3	33.1	32.8	38.2	33.8	0.0	33.7
Incr Delay (d2), s/veh	18.1	2.2	2.2	0.7	0.1	0.1	0.2	0.1	24.7	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	6.6	6.5	6.3	1.0	0.6	0.9	0.5	7.6	1.6	0.0	1.6
Lane Grp Delay (d), s/veh	64.1	22.7	22.7	29.9	5.5	5.5	33.3	32.9	62.9	34.2	0.0	34.1
Lane Grp LOS	E	C	C	C	A	A	C	C	E	C		C
Approach Vol, veh/h		753			963			310				148
Approach Delay, s/veh		24.3			20.7			56.5				34.1
Approach LOS		C			C			E				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.3	43.0		31.3	68.0			20.6				20.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	39.0		31.0	64.0			18.0				16.0
Max Q Clear Time (g_c+I1), s	3.6	15.7		16.4	4.5			16.4				5.5
Green Ext Time (p_c), s	0.7	4.7		2.1	2.3			0.2				1.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.0								
HCM 2010 LOS				C								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 9: Lovridge Rd & California Ave/N Park Blvd

Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	297	281	329	78	144	17	413	550	180	17	175	256
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	458	530	450	166	655	74	827	1089	356	30	675	287
Arrive On Green	0.13	0.29	0.29	0.05	0.20	0.20	0.24	0.41	0.41	0.02	0.18	0.18
Sat Flow, veh/h	3408	1845	1568	3408	3256	368	3408	2664	871	1757	3689	1568
Grp Volume(v), veh/h	323	305	358	85	88	87	449	414	380	18	190	278
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1780	1704	1845	1691	1757	1845	1568
Q Serve(g_s), s	6.1	9.5	14.2	1.6	2.7	2.8	7.7	11.5	11.5	0.7	3.0	8.1
Cycle Q Clear(g_c), s	6.1	9.5	14.2	1.6	2.7	2.8	7.7	11.5	11.5	0.7	3.0	8.1
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.52	1.00		1.00
Lane Grp Cap(c), veh/h	458	530	450	166	371	358	827	754	691	30	675	287
V/C Ratio(X)	0.71	0.58	0.80	0.51	0.24	0.24	0.54	0.55	0.55	0.60	0.28	0.97
Avail Cap(c_a), veh/h	1118	1017	865	406	632	610	1372	1430	1311	183	1760	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	20.4	22.1	31.1	22.5	22.5	22.2	15.1	15.1	32.7	23.6	12.9
Incr Delay (d2), s/veh	2.0	1.0	3.2	2.4	0.3	0.3	0.6	0.6	0.7	18.0	0.2	18.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	4.3	5.7	0.7	1.2	1.2	3.2	5.0	4.6	0.4	1.3	4.3
Lane Grp Delay (d), s/veh	29.8	21.4	25.3	33.6	22.8	22.8	22.7	15.7	15.8	50.7	23.8	31.1
Lane Grp LOS	C	C	C	C	C	C	C	B	B	D	C	C
Approach Vol, veh/h		986			260			1243			486	
Approach Delay, s/veh		25.6			26.3			18.3			29.0	
Approach LOS		C			C			B			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.0	23.3		7.3	17.5		20.3	31.4		5.1	16.3	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	22.0	37.0		8.0	23.0		27.0	52.0		7.0	32.0	
Max Q Clear Time (g_c+I1), s	8.1	16.2		3.6	4.8		9.7	13.5		2.7	10.1	
Green Ext Time (p_c), s	1.0	3.1		0.5	1.1		6.6	8.4		0.0	2.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.2								
HCM 2010 LOS				C								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	742	0	417	0	0	0	0	611	355	124	459	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1184	0	545				0	1605	682	355	2128	0
Arrive On Green	0.35	0.00	0.35				0.00	0.44	0.44	0.10	0.58	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	807	0	453				0	664	386	135	499	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	21.4	0.0	28.0				0.0	13.1	19.5	3.9	7.0	0.0
Cycle Q Clear(g_c), s	21.4	0.0	28.0				0.0	13.1	19.5	3.9	7.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1184	0	545				0	1605	682	355	2128	0
V/C Ratio(X)	0.68	0.00	0.83				0.00	0.41	0.57	0.38	0.23	0.00
Avail Cap(c_a), veh/h	1644	0	756				0	1605	682	355	2128	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	29.5	0.0	31.7				0.0	20.6	22.4	44.2	10.9	0.0
Incr Delay (d2), s/veh	0.7	0.0	5.6				0.0	0.8	3.4	0.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.2	0.0	11.8				0.0	6.1	8.1	1.7	3.0	0.0
Lane Grp Delay (d), s/veh	30.2	0.0	37.3				0.0	21.4	25.8	44.8	11.2	0.0
Lane Grp LOS	C		D					C	C	D	B	
Approach Vol, veh/h		1260						1050			634	
Approach Delay, s/veh		32.7						23.0			18.3	
Approach LOS		C						C			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		40.7						50.0		15.0	65.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		51.0						46.0		11.0	61.0	
Max Q Clear Time (g_c+I1), s		30.0						21.5		5.9	9.0	
Green Ext Time (p_c), s		6.7						6.5		1.7	4.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			26.2									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	503	1039	168	195	379	132	165	406	139	232	326	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	665	1609	684	293	1207	513	218	729	310	338	636	270
Arrive On Green	0.20	0.44	0.44	0.09	0.33	0.33	0.12	0.20	0.20	0.10	0.17	0.17
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	547	1129	183	212	412	143	179	441	151	252	354	124
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	13.6	21.9	6.6	5.4	7.5	6.0	8.8	9.6	7.5	6.3	7.8	6.3
Cycle Q Clear(g_c), s	13.6	21.9	6.6	5.4	7.5	6.0	8.8	9.6	7.5	6.3	7.8	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	665	1609	684	293	1207	513	218	729	310	338	636	270
V/C Ratio(X)	0.82	0.70	0.27	0.72	0.34	0.28	0.82	0.61	0.49	0.75	0.56	0.46
Avail Cap(c_a), veh/h	1043	2090	888	463	1463	622	418	1170	497	541	878	373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	20.2	15.9	39.3	22.5	22.0	37.7	32.3	31.4	38.7	33.4	32.8
Incr Delay (d2), s/veh	3.1	0.7	0.2	3.4	0.2	0.3	7.4	0.8	1.2	3.3	0.8	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.1	9.7	2.5	2.4	3.4	2.3	4.4	4.5	3.0	2.9	3.7	2.5
Lane Grp Delay (d), s/veh	37.1	20.9	16.1	42.7	22.7	22.3	45.1	33.1	32.6	42.0	34.2	34.0
Lane Grp LOS	D	C	B	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1859			767			771			730	
Approach Delay, s/veh		25.2			28.1			35.8			36.9	
Approach LOS		C			C			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	21.2	42.5		11.6	32.9		15.0	21.4		12.7	19.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	27.0	50.0		12.0	35.0		21.0	28.0		14.0	21.0	
Max Q Clear Time (g_c+I1), s	15.6	23.9		7.4	9.5		10.8	11.6		8.3	9.8	
Green Ext Time (p_c), s	1.6	14.6		0.3	14.4		0.3	5.8		0.4	4.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			29.8									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

Existing PM  
 3/15/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	129	783	353	174	286	249
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	168	1343	1103	938	357	319
Arrive On Green	0.10	0.73	0.60	0.60	0.20	0.20
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	140	851	384	189	311	271
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	9.1	27.2	12.3	6.4	20.0	19.4
Cycle Q Clear(g_c), s	9.1	27.2	12.3	6.4	20.0	19.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	168	1343	1103	938	357	319
V/C Ratio(X)	0.83	0.63	0.35	0.20	0.87	0.85
Avail Cap(c_a), veh/h	271	1343	1103	938	557	497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.93	0.93	1.00	1.00
Uniform Delay (d), s/veh	51.8	8.0	11.9	10.7	45.0	44.8
Incr Delay (d2), s/veh	7.4	1.5	0.8	0.4	9.0	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.4	10.5	5.3	2.4	9.9	0.7
Lane Grp Delay (d), s/veh	59.2	9.5	12.7	11.2	54.0	53.0
Lane Grp LOS	E	A	B	B	D	D
Approach Vol, veh/h		991	573		582	
Approach Delay, s/veh		16.5	12.2		53.5	
Approach LOS		B	B		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	15.2	89.0	73.8			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	18.0	85.0	63.0			
Max Q Clear Time (g_c+I1), s	11.1	29.2	14.3			
Green Ext Time (p_c), s	0.2	13.1	12.8			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			25.4			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

Existing PM  
 3/15/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	1001	90	12	477	11	70	20	40	178	93	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	21	1289	1095	21	1254	29	225	105	205	265	289	49
Arrive On Green	0.01	0.70	0.70	0.01	0.70	0.70	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	1845	1568	1757	1796	42	1256	559	1093	1318	1540	259
Grp Volume(v), veh/h	7	1088	98	13	0	530	76	0	65	193	0	118
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1837	1256	0	1652	1318	0	1799
Q Serve(g_s), s	0.5	50.9	2.4	0.9	0.0	14.3	6.6	0.0	3.9	17.0	0.0	6.7
Cycle Q Clear(g_c), s	0.5	50.9	2.4	0.9	0.0	14.3	13.3	0.0	3.9	20.9	0.0	6.7
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.66	1.00		0.14
Lane Grp Cap(c), veh/h	21	1289	1095	21	0	1284	225	0	310	265	0	337
V/C Ratio(X)	0.34	0.84	0.09	0.63	0.00	0.41	0.34	0.00	0.21	0.73	0.00	0.35
Avail Cap(c_a), veh/h	60	1289	1095	60	0	1284	225	0	310	265	0	337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	0.95	0.00	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.5	13.0	5.7	57.7	0.0	7.5	47.2	0.0	40.3	49.2	0.0	41.5
Incr Delay (d2), s/veh	6.3	4.7	0.1	26.2	0.0	0.9	0.9	0.0	0.3	9.8	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	21.3	0.8	0.5	0.0	5.8	2.2	0.0	1.7	6.5	0.0	3.2
Lane Grp Delay (d), s/veh	63.8	17.7	5.8	84.0	0.0	8.4	48.1	0.0	40.7	59.0	0.0	42.1
Lane Grp LOS	E	B	A	F		A	D		D	E		D
Approach Vol, veh/h		1193			543			141			311	
Approach Delay, s/veh		17.0			10.2			44.7			52.6	
Approach LOS		B			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.4	86.0		5.4	86.0			26.0				26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	82.0		4.0	82.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	2.5	52.9		2.9	16.3			15.3				22.9
Green Ext Time (p_c), s	0.0	11.5		0.0	3.8			1.1				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.2								
HCM 2010 LOS				C								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy

Existing PM  
 3/15/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	339	125	227	190	63	22	396	483	115	24	715	166
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	692	375	318	692	265	93	839	2785	646	37	1812	416
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.41	1.00	1.00	0.02	0.42	0.42
Sat Flow, veh/h	3408	1845	1568	3408	1303	460	3408	4347	1009	1757	4358	1000
Grp Volume(v), veh/h	368	136	247	207	0	92	430	444	206	26	657	300
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1763	1704	1845	1667	1757	1845	1668
Q Serve(g_s), s	8.6	5.6	13.3	4.6	0.0	3.9	8.4	0.0	0.0	1.3	11.3	11.4
Cycle Q Clear(g_c), s	8.6	5.6	13.3	4.6	0.0	3.9	8.4	0.0	0.0	1.3	11.3	11.4
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.61	1.00		0.60
Lane Grp Cap(c), veh/h	692	375	318	692	0	358	839	2364	1068	37	1534	694
V/C Ratio(X)	0.53	0.36	0.78	0.30	0.00	0.26	0.51	0.19	0.19	0.69	0.43	0.43
Avail Cap(c_a), veh/h	881	477	405	692	0	358	996	2364	1068	118	1534	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	30.5	33.5	30.1	0.0	29.8	22.2	0.0	0.0	43.2	18.5	18.5
Incr Delay (d2), s/veh	0.6	0.6	7.1	0.2	0.0	0.4	0.5	0.2	0.4	20.5	0.9	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	2.7	5.8	2.0	0.0	1.7	3.2	0.1	0.1	0.8	5.1	4.9
Lane Grp Delay (d), s/veh	32.3	31.1	40.6	30.3	0.0	30.2	22.7	0.2	0.4	63.8	19.3	20.5
Lane Grp LOS	C	C	D	C		C	C	A	A	E	B	C
Approach Vol, veh/h		751			299			1080			983	
Approach Delay, s/veh		34.8			30.3			9.2			20.9	
Approach LOS		C			C			A			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		22.1			22.1		25.9	61.0		5.9		41.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		23.0			18.0		26.0	57.0		6.0		37.0
Max Q Clear Time (g_c+I1), s		15.3			6.6		10.4	2.0		3.3		13.4
Green Ext Time (p_c), s		2.8			3.5		5.4	7.1		0.0		7.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.1								
HCM 2010 LOS				C								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Existing PM  
 3/15/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	340	342	248	562	851	278
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	919	423	702	3628	2280	646
Arrive On Green	0.27	0.27	0.41	1.00	0.41	0.41
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	370	372	270	611	925	302
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	9.5	24.3	5.9	0.0	12.6	15.0
Cycle Q Clear(g_c), s	9.5	24.3	5.9	0.0	12.6	15.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	919	423	702	3628	2280	646
V/C Ratio(X)	0.40	0.88	0.38	0.17	0.41	0.47
Avail Cap(c_a), veh/h	1341	617	702	3628	2280	646
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.96	0.96	0.84	0.84
Uniform Delay (d), s/veh	32.0	37.4	26.7	0.0	22.2	22.9
Incr Delay (d2), s/veh	0.3	10.0	0.3	0.1	0.5	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.1	1.2	2.3	0.0	5.8	6.2
Lane Grp Delay (d), s/veh	32.2	47.3	27.0	0.1	22.6	24.9
Lane Grp LOS	C	D	C	A	C	C
Approach Vol, veh/h	742			881	1227	
Approach Delay, s/veh	39.8			8.3	23.2	
Approach LOS	D			A	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			26.0	74.0	48.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			22.0	70.0	44.0	
Max Q Clear Time (g_c+I1), s			7.9	2.0	17.0	
Green Ext Time (p_c), s			4.5	6.2	8.7	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			22.9			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps



























Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	245	385	365	0	0	0	0	681	583	428	848	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	876	474	806				0	2703	766	518	3734	0
Arrive On Green	0.26	0.26	0.26				0.00	0.98	0.98	0.30	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	266	418	397				0	740	634	465	922	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.4	25.5	12.6				0.0	0.5	5.7	15.3	0.0	0.0
Cycle Q Clear(g_c), s	7.4	25.5	12.6				0.0	0.5	5.7	15.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	876	474	806				0	2703	766	518	3734	0
V/C Ratio(X)	0.30	0.88	0.49				0.00	0.27	0.83	0.90	0.25	0.00
Avail Cap(c_a), veh/h	961	520	884				0	2703	766	582	3734	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.79	0.79	0.91	0.91	0.00
Uniform Delay (d), s/veh	35.1	41.8	37.0				0.0	0.7	0.8	39.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	15.3	0.5				0.0	0.2	8.1	14.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.2	14.1	5.1				0.0	0.2	2.1	7.0	0.0	0.0
Lane Grp Delay (d), s/veh	35.3	57.0	37.5				0.0	0.9	8.9	54.3	0.1	0.0
Lane Grp LOS	D	E	D					A	A	D	A	
Approach Vol, veh/h		1081						1374			1387	
Approach Delay, s/veh		44.5						4.6			18.3	
Approach LOS		D						A			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		34.1						61.2		21.8	83.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		33.0						55.0		20.0	79.0	
Max Q Clear Time (g_c+I1), s		27.5						7.7		17.3	2.0	
Green Ext Time (p_c), s		2.6						24.2		0.5	29.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			20.8									
HCM 2010 LOS			C									
<b>Notes</b>												



























HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							 		 	 	
Volume (veh/h)	480	420	28	41	128	366	48	552	21	382	484	263
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1210	608	40	624	655	557	78	1591	61	616	1612	685
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.01	0.10	0.10	0.30	0.73	0.73
Sat Flow, veh/h	3408	1712	112	1757	1845	1568	1757	5296	202	3408	3689	1568
Grp Volume(v), veh/h	522	0	487	45	139	398	52	417	206	415	526	286
Grp Sat Flow(s),veh/h/ln	1704	0	1825	1757	1845	1568	1757	1845	1809	1704	1845	1568
Q Serve(g_s), s	8.5	0.0	17.2	1.2	3.8	16.1	2.2	7.7	7.8	7.8	3.7	5.2
Cycle Q Clear(g_c), s	8.5	0.0	17.2	1.2	3.8	16.1	2.2	7.7	7.8	7.8	3.7	5.2
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	1210	0	648	624	655	557	78	1108	543	616	1612	685
V/C Ratio(X)	0.43	0.00	0.75	0.07	0.21	0.71	0.67	0.38	0.38	0.67	0.33	0.42
Avail Cap(c_a), veh/h	1815	0	972	624	655	557	216	1108	543	884	1612	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.96	0.96	0.96	0.98	0.98	0.98	0.96	0.96	0.96
Uniform Delay (d), s/veh	18.0	0.0	20.8	15.6	16.5	20.4	35.6	26.6	26.6	23.7	6.1	6.3
Incr Delay (d2), s/veh	0.2	0.0	1.8	0.0	0.2	4.2	9.4	1.0	2.0	1.2	0.5	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.5	0.0	7.8	0.5	1.7	6.5	1.2	4.0	4.1	3.0	1.4	1.8
Lane Grp Delay (d), s/veh	18.2	0.0	22.6	15.7	16.6	24.6	44.9	27.5	28.5	24.9	6.6	8.1
Lane Grp LOS	B		C	B	B	C	D	C	C	C	A	A
Approach Vol, veh/h		1009			582			675			1227	
Approach Delay, s/veh		20.3			22.0			29.2			13.1	
Approach LOS		C			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		30.0			30.0		7.2	26.0		17.2		36.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		39.0			24.0		9.0	22.0		19.0		32.0
Max Q Clear Time (g_c+I1), s		19.2			18.1		4.2	9.8		9.8		7.2
Green Ext Time (p_c), s		6.8			3.7		0.8	3.2		1.2		4.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.8								
HCM 2010 LOS				B								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
22: Somersville Rd & Buchanan Rd

Existing PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	270	417	572	25	175	115	189	240	18	235	526	206
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Cap, veh/h	342	1198	509	40	282	240	249	946	72	304	785	307
Arrive On Green	0.19	0.32	0.00	0.02	0.15	0.00	0.14	0.28	0.28	0.17	0.31	0.31
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3386	258	1757	2528	988
Grp Volume(v), veh/h	293	453	0	27	190	0	205	141	140	255	417	379
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1799	1757	1845	1670
Q Serve(g_s), s	12.9	7.5	0.0	1.2	7.8	0.0	9.1	4.8	4.8	11.2	16.1	16.2
Cycle Q Clear(g_c), s	12.9	7.5	0.0	1.2	7.8	0.0	9.1	4.8	4.8	11.2	16.1	16.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.59
Lane Grp Cap(c), veh/h	342	1198	509	40	282	240	249	515	503	304	573	519
V/C Ratio(X)	0.86	0.38	0.00	0.68	0.67	0.00	0.82	0.27	0.28	0.84	0.73	0.73
Avail Cap(c_a), veh/h	638	1894	805	132	416	353	462	670	653	616	831	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	20.8	0.0	38.7	32.0	0.0	33.3	22.5	22.5	32.0	24.5	24.6
Incr Delay (d2), s/veh	6.2	0.2	0.0	18.5	2.8	0.0	6.7	0.3	0.3	6.2	1.8	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.0	3.2	0.0	0.7	3.8	0.0	4.4	2.2	2.2	5.5	7.6	6.9
Lane Grp Delay (d), s/veh	37.3	20.9	0.0	57.3	34.8	0.0	40.0	22.7	22.8	38.1	26.4	26.6
Lane Grp LOS	D	C		E	C		D	C	C	D	C	C
Approach Vol, veh/h		746			217			486			1051	
Approach Delay, s/veh		27.4			37.6			30.0			29.3	
Approach LOS		C			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	19.5	29.9		5.8	16.2		15.3	26.3		17.8	28.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	29.0	41.0		6.0	18.0		21.0	29.0		28.0	36.0	
Max Q Clear Time (g_c+I1), s	14.9	9.5		3.2	9.8		11.1	6.8		13.2	18.2	
Green Ext Time (p_c), s	0.7	4.2		0.0	2.4		0.4	7.3		0.6	6.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.6								
HCM 2010 LOS				C								
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
 25: Buchanan Rd & Delta Fair Blvd

Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	373	145	89	195	71	80	245	24	247	404	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	477	956	368	348	982	346	417	785	77	535	876	744
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1075	2538	978	836	2609	918	910	1654	162	1072	1845	1568
Grp Volume(v), veh/h	58	293	270	97	148	141	87	0	292	268	439	32
Grp Sat Flow(s),veh/h/ln	1075	1845	1672	836	1845	1683	910	0	1816	1072	1845	1568
Q Serve(g_s), s	2.1	6.3	6.5	5.3	2.9	3.1	3.9	0.0	5.4	11.2	8.8	0.6
Cycle Q Clear(g_c), s	5.2	6.3	6.5	11.7	2.9	3.1	12.7	0.0	5.4	16.6	8.8	0.6
Prop In Lane	1.00		0.59	1.00		0.55	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	477	694	629	348	694	633	417	0	862	535	876	744
V/C Ratio(X)	0.12	0.42	0.43	0.28	0.21	0.22	0.21	0.00	0.34	0.50	0.50	0.04
Avail Cap(c_a), veh/h	972	1543	1399	733	1543	1408	1118	0	2262	1362	2298	1953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	12.4	12.5	16.8	11.4	11.4	14.1	0.0	8.8	14.0	9.7	7.6
Incr Delay (d2), s/veh	0.1	0.4	0.5	0.4	0.2	0.2	0.2	0.0	0.2	0.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	2.7	2.5	1.0	1.2	1.2	0.9	0.0	2.2	2.7	3.5	0.2
Lane Grp Delay (d), s/veh	13.3	12.8	12.9	17.3	11.5	11.6	14.4	0.0	9.1	14.8	10.2	7.6
Lane Grp LOS	B	B	B	B	B	B	B		A	B	B	A
Approach Vol, veh/h		621			386			379			739	
Approach Delay, s/veh		12.9			13.0			10.3			11.7	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		24.2			24.2			29.5			29.5	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		45.0			45.0			67.0			67.0	
Max Q Clear Time (g_c+I1), s		8.5			13.7			14.7			18.6	
Green Ext Time (p_c), s		6.7			6.5			6.9			6.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.0								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	99	1018	7	24	538	110	4	17	7	219	19	112
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	140	1884	14	42	1365	279	96	284	111	444	57	332
Arrive On Green	0.08	0.52	0.52	0.02	0.46	0.46	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1757	3658	26	1757	2974	608	88	1172	459	1366	235	1368
Grp Volume(v), veh/h	108	558	557	26	362	343	30	0	0	238	0	143
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1737	1719	0	0	1366	0	1603
Q Serve(g_s), s	3.3	11.6	11.6	0.8	7.3	7.3	0.0	0.0	0.0	8.9	0.0	4.1
Cycle Q Clear(g_c), s	3.3	11.6	11.6	0.8	7.3	7.3	0.7	0.0	0.0	9.7	0.0	4.1
Prop In Lane	1.00		0.01	1.00		0.35	0.13		0.27	1.00		0.85
Lane Grp Cap(c), veh/h	140	950	948	42	847	798	491	0	0	444	0	389
V/C Ratio(X)	0.77	0.59	0.59	0.62	0.43	0.43	0.06	0.00	0.00	0.54	0.00	0.37
Avail Cap(c_a), veh/h	384	1377	1374	160	1142	1076	1055	0	0	909	0	934
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	9.3	9.3	26.6	10.0	10.0	16.0	0.0	0.0	19.7	0.0	17.3
Incr Delay (d2), s/veh	8.6	0.6	0.6	14.0	0.3	0.4	0.1	0.0	0.0	1.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.7	4.5	4.5	0.5	2.9	2.7	0.3	0.0	0.0	3.0	0.0	1.6
Lane Grp Delay (d), s/veh	33.3	9.8	9.8	40.6	10.3	10.4	16.1	0.0	0.0	20.7	0.0	17.9
Lane Grp LOS	C	A	A	D	B	B	B			C		B
Approach Vol, veh/h		1223			731			30				381
Approach Delay, s/veh		11.9			11.4			16.1				19.7
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	8.4	32.3		5.3	29.2			17.3				17.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	12.0	41.0		5.0	34.0			32.0				32.0
Max Q Clear Time (g_c+I1), s	5.3	13.6		2.8	9.3			2.7				11.7
Green Ext Time (p_c), s	0.1	14.7		0.0	13.9			1.8				1.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				13.1								
HCM 2010 LOS				B								
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	136	120	1018	12	59	68	686	751	9	71	1136	219
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	324	340	1386	57	280	289	878	2290	973	99	1893	365
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.26	0.62	0.62	0.06	0.42	0.42
Sat Flow, veh/h	1757	1845	3136	309	1520	1568	3408	3689	1568	1757	4511	869
Grp Volume(v), veh/h	148	130	1107	77	0	74	746	816	10	77	1010	463
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1829	0	1568	1704	1845	1568	1757	1845	1691
Q Serve(g_s), s	6.5	5.4	16.0	3.1	0.0	3.5	18.0	9.3	0.2	3.8	19.0	19.0
Cycle Q Clear(g_c), s	6.5	5.4	16.0	3.1	0.0	3.5	18.0	9.3	0.2	3.8	19.0	19.0
Prop In Lane	1.00		1.00	0.17		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	324	340	1386	337	0	289	878	2290	973	99	1548	710
V/C Ratio(X)	0.46	0.38	0.80	0.23	0.00	0.26	0.85	0.36	0.01	0.77	0.65	0.65
Avail Cap(c_a), veh/h	324	340	1386	337	0	289	1218	2551	1084	243	1743	799
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	31.0	20.9	30.1	0.0	30.3	30.6	8.0	6.3	40.4	20.1	20.1
Incr Delay (d2), s/veh	1.0	0.7	3.4	0.3	0.0	0.5	4.3	0.1	0.0	12.0	0.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	2.5	10.4	1.4	0.0	1.4	8.2	3.8	0.1	2.0	8.6	8.0
Lane Grp Delay (d), s/veh	32.5	31.8	24.3	30.5	0.0	30.8	34.9	8.1	6.3	52.4	20.9	21.7
Lane Grp LOS	C	C	C	C		C	C	A	A	D	C	C
Approach Vol, veh/h	1385			151			1572			1550		
Approach Delay, s/veh	25.8			30.6			20.8			22.7		
Approach LOS	C			C			C			C		
<b>Timer</b>												
Assigned Phs	4			8			5			2		
Phs Duration (G+Y+Rc), s	20.0			20.0			26.4			57.9		
Change Period (Y+Rc), s	4.0			4.0			4.0			4.0		
Max Green Setting (Gmax), s	16.0			16.0			31.0			60.0		
Max Q Clear Time (g_c+I1), s	18.0			5.5			20.0			11.3		
Green Ext Time (p_c), s	0.0			5.3			2.3			28.5		
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	23.2											
HCM 2010 LOS	C											
<b>Notes</b>												





























HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr

Existing PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	50	0	42	2	0	1	49	1754	3	0	566	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	96	0	86	271	101	86	67	3021	1284	3	3897	63
Arrive On Green	0.05	0.00	0.05	0.05	0.00	0.05	0.04	0.82	0.82	0.00	0.72	0.72
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5430	88
Grp Volume(v), veh/h	54	0	46	2	0	1	53	1907	3	0	417	208
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1829
Q Serve(g_s), s	1.9	0.0	1.8	0.0	0.0	0.0	1.9	12.3	0.0	0.0	2.3	2.3
Cycle Q Clear(g_c), s	1.9	0.0	1.8	0.0	0.0	0.0	1.9	12.3	0.0	0.0	2.3	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	96	0	86	271	101	86	67	3021	1284	3	2647	1313
V/C Ratio(X)	0.56	0.00	0.54	0.01	0.00	0.01	0.79	0.63	0.00	0.00	0.16	0.16
Avail Cap(c_a), veh/h	443	0	396	1251	466	396	249	3958	1682	111	3667	1818
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	0.0	29.2	28.3	0.0	28.3	30.2	2.1	1.0	0.0	2.9	2.9
Incr Delay (d2), s/veh	5.0	0.0	5.1	0.0	0.0	0.1	18.1	0.2	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	0.0	0.8	0.0	0.0	0.0	1.1	2.7	0.0	0.0	0.7	0.7
Lane Grp Delay (d), s/veh	34.2	0.0	34.3	28.3	0.0	28.4	48.3	2.4	1.0	0.0	2.9	2.9
Lane Grp LOS	C		C	C		C	D	A	A		A	A
Approach Vol, veh/h		100			3			1963			625	
Approach Delay, s/veh		34.3			28.4			3.6			2.9	
Approach LOS		C			C			A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		7.5			7.5		6.4	55.9		0.0		49.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		9.0	68.0		4.0		63.0
Max Q Clear Time (g_c+I1), s		3.9			2.0		3.9	14.3		0.0		4.3
Green Ext Time (p_c), s		0.3			0.3		0.0	37.6		0.0		40.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.6								
HCM 2010 LOS				A								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Existing PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		  	  	
Volume (veh/h)	264	292	158	198	128	41	142	1177	354	57	389	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	329	420	223	254	524	223	189	1857	558	80	1904	225
Arrive On Green	0.19	0.18	0.18	0.14	0.14	0.14	0.11	0.45	0.45	0.05	0.39	0.39
Sat Flow, veh/h	1757	2272	1204	1757	3689	1568	1757	4089	1228	1757	4858	575
Grp Volume(v), veh/h	287	256	233	215	139	45	154	1154	510	62	319	155
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1628	1757	1845	1743
Q Serve(g_s), s	14.9	12.3	12.7	11.2	3.1	2.4	8.0	23.2	23.3	3.3	5.4	5.5
Cycle Q Clear(g_c), s	14.9	12.3	12.7	11.2	3.1	2.4	8.0	23.2	23.3	3.3	5.4	5.5
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.75	1.00		0.33
Lane Grp Cap(c), veh/h	329	341	302	254	524	223	189	1676	739	80	1446	683
V/C Ratio(X)	0.87	0.75	0.77	0.85	0.27	0.20	0.81	0.69	0.69	0.78	0.22	0.23
Avail Cap(c_a), veh/h	563	453	401	432	631	268	338	1971	870	150	1577	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	36.1	36.3	39.0	35.8	35.5	40.9	20.3	20.3	44.2	18.9	19.0
Incr Delay (d2), s/veh	7.6	4.8	6.5	7.6	0.3	0.4	8.2	0.8	1.9	15.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.3	6.2	5.8	5.6	1.5	1.0	4.0	10.6	9.6	1.8	2.4	2.4
Lane Grp Delay (d), s/veh	44.5	40.9	42.8	46.6	36.1	35.9	49.1	21.1	22.2	59.3	19.0	19.2
Lane Grp LOS	D	D	D	D	D	D	D	C	C	E	B	B
Approach Vol, veh/h		776			399			1818			536	
Approach Delay, s/veh		42.8			41.7			23.8			23.7	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	21.5	21.3		17.5	17.3		14.1	46.5		8.2	40.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	30.0	23.0		23.0	16.0		18.0	50.0		8.0	40.0	
Max Q Clear Time (g_c+I1), s	16.9	14.7		13.2	5.1		10.0	25.3		5.3	7.5	
Green Ext Time (p_c), s	0.7	2.6		0.4	3.1		0.2	17.2		0.0	20.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
30: Ygnacio Valley Rd & Clayton Blvd

Existing PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	560	844	26	223	395	125	130	1381	530	238	356	191
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	698	1346	0	310	715	0	201	2344	664	324	2543	721
Arrive On Green	0.20	0.24	0.00	0.09	0.13	0.00	0.06	0.42	0.42	0.10	0.46	0.46
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	609	917	0	242	429	0	141	1501	576	259	387	208
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	18.8	16.3	0.0	7.5	7.9	0.0	4.4	23.3	36.4	8.1	4.4	9.0
Cycle Q Clear(g_c), s	18.8	16.3	0.0	7.5	7.9	0.0	4.4	23.3	36.4	8.1	4.4	9.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	698	1346	0	310	715	0	201	2344	664	324	2543	721
V/C Ratio(X)	0.87	0.68	0.00	0.78	0.60	0.00	0.70	0.64	0.87	0.80	0.15	0.29
Avail Cap(c_a), veh/h	878	1528	0	439	815	0	282	2394	678	408	2598	736
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	37.3	0.0	48.3	44.6	0.0	50.2	24.8	28.5	48.1	17.1	18.3
Incr Delay (d2), s/veh	8.0	1.1	0.0	5.8	1.0	0.0	4.4	0.6	11.4	8.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.0	7.9	0.0	3.6	3.8	0.0	2.1	10.7	16.1	3.9	2.0	3.4
Lane Grp Delay (d), s/veh	49.8	38.3	0.0	54.2	45.6	0.0	54.6	25.3	39.9	56.8	17.1	18.5
Lane Grp LOS	D	D		D	D		D	C	D	E	B	B
Approach Vol, veh/h		1526			671			2218			854	
Approach Delay, s/veh		42.9			48.7			31.0			29.5	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	26.3	30.4		13.9	18.0		10.4	50.0		14.3	53.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	30.0		14.0	16.0		9.0	47.0		13.0	51.0	
Max Q Clear Time (g_c+I1), s	20.8	18.3		9.5	9.9		6.4	38.4		10.1	11.0	
Green Ext Time (p_c), s	1.5	6.8		0.3	4.1		0.1	7.6		0.3	26.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				36.5								
HCM 2010 LOS				D								
<b>Notes</b>												



**Intersection**

Intersection Delay, s/veh 0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1209	13	28	535	18	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1314	14	30	582	20	29

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1328
Stage 1	-	-	-
Stage 2	-	-	-
Follow-up Headway	-	-	2.23
Pot Capacity-1 Maneuver	-	-	510
Stage 1	-	-	-
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	-	-	510
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	21.3
HCM LOS			C












Minor Lane / Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	157	402	-	-	510	-
HCM Lane V/C Ratio	0.125	0.073	-	-	0.06	-
HCM Control Delay (s)	31.2	14.7	-	-	12.506	-
HCM Lane LOS	D	B			B	
HCM 95th %tile Q(veh)	0.417	0.235	-	-	0.19	-

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined























HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd

Existing PM  
 3/15/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	372	1168	426	140	144	258
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	470	2452	895	292	373	333
Arrive On Green	0.27	0.66	0.34	0.34	0.21	0.21
Sat Flow, veh/h	1757	3689	2667	869	1757	1568
Grp Volume(v), veh/h	404	1270	319	296	157	280
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1691	1757	1568
Q Serve(g_s), s	14.2	11.5	9.0	9.2	5.0	11.1
Cycle Q Clear(g_c), s	14.2	11.5	9.0	9.2	5.0	11.1
Prop In Lane	1.00			0.51	1.00	1.00
Lane Grp Cap(c), veh/h	470	2452	619	568	373	333
V/C Ratio(X)	0.86	0.52	0.52	0.52	0.42	0.84
Avail Cap(c_a), veh/h	918	3627	737	676	486	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	5.6	17.4	17.4	22.2	24.6
Incr Delay (d2), s/veh	4.7	0.2	0.7	0.7	0.8	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.6	3.9	4.0	3.7	2.2	1.0
Lane Grp Delay (d), s/veh	27.4	5.8	18.0	18.2	22.9	35.5
Lane Grp LOS	C	A	B	B	C	D
Approach Vol, veh/h		1674	615		437	
Approach Delay, s/veh		11.0	18.1		31.0	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	21.4	47.3	25.8			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	34.0	64.0	26.0			
Max Q Clear Time (g_c+I1), s	16.2	13.5	11.2			
Green Ext Time (p_c), s	1.2	22.4	10.7			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			15.8			
HCM 2010 LOS			B			
<b>Notes</b>						





















HCM 2010 Signalized Intersection Summary  
33: Somersville Rd & Fairview Dr

Existing PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	115	8	475	17	1	2	205	362	13	19	387	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	592	10	584	124	208	416	259	1782	63	13	1176	139
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.15	0.50	0.50	0.01	0.73	0.73
Sat Flow, veh/h	1394	27	1545	866	550	1100	1757	3541	126	1757	3239	383
Grp Volume(v), veh/h	125	0	525	18	0	3	223	204	203	21	239	232
Grp Sat Flow(s),veh/h/ln	1394	0	1572	866	0	1650	1757	1845	1822	1757	1845	1777
Q Serve(g_s), s	6.6	0.0	33.5	2.1	0.0	0.1	13.3	6.6	6.7	0.8	5.1	5.2
Cycle Q Clear(g_c), s	6.7	0.0	33.5	35.6	0.0	0.1	13.3	6.6	6.7	0.8	5.1	5.2
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.07	1.00		0.22
Lane Grp Cap(c), veh/h	592	0	594	124	0	623	259	928	917	13	670	645
V/C Ratio(X)	0.21	0.00	0.88	0.15	0.00	0.00	0.86	0.22	0.22	1.62	0.36	0.36
Avail Cap(c_a), veh/h	676	0	688	176	0	723	491	928	917	115	670	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.85	0.85	0.85	0.93	0.93	0.93
Uniform Delay (d), s/veh	22.9	0.0	31.2	47.8	0.0	20.8	44.7	14.9	14.9	52.9	10.1	10.1
Incr Delay (d2), s/veh	0.2	0.0	11.8	0.5	0.0	0.0	7.1	0.5	0.5	339.2	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	0.0	15.1	0.5	0.0	0.1	6.5	3.1	3.0	1.6	2.1	2.1
Lane Grp Delay (d), s/veh	23.1	0.0	43.0	48.4	0.0	20.8	51.8	15.4	15.4	392.0	11.4	11.5
Lane Grp LOS	C		D	D		C	D	B	B	F	B	B
Approach Vol, veh/h		650			21			630			492	
Approach Delay, s/veh		39.2			44.4			28.3			27.7	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		44.5			44.5		19.8	58.0		4.8	43.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0			47.0		30.0	54.0		7.0	31.0	
Max Q Clear Time (g_c+I1), s		35.5			37.6		15.3	8.7		2.8	7.2	
Green Ext Time (p_c), s		3.3			2.9		0.5	2.6		0.0	2.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				32.3								
HCM 2010 LOS				C								
<b>Notes</b>												



















HCM 2010 Signalized Intersection Summary  
34: Fairview Dr & Delta Fair Blvd

Existing PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	827	492	114	342	9	155	18	30	14	10	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	28	1130	657	157	2108	57	295	25	373	94	62	24
Arrive On Green	0.02	0.52	0.52	0.09	0.59	0.59	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1757	2191	1274	1757	3576	96	864	105	1568	106	262	99
Grp Volume(v), veh/h	17	754	680	124	192	190	188	0	33	33	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1620	1757	1845	1828	970	0	1568	467	0	0
Q Serve(g_s), s	0.7	25.6	26.8	5.3	3.6	3.7	0.0	0.0	1.3	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.7	25.6	26.8	5.3	3.6	3.7	15.4	0.0	1.3	15.7	0.0	0.0
Prop In Lane	1.00		0.79	1.00		0.05	0.89		1.00	0.45		0.21
Lane Grp Cap(c), veh/h	28	951	835	157	1087	1077	320	0	373	180	0	0
V/C Ratio(X)	0.61	0.79	0.81	0.79	0.18	0.18	0.59	0.00	0.09	0.18	0.00	0.00
Avail Cap(c_a), veh/h	92	1061	932	253	1230	1218	408	0	471	275	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	37.4	15.2	15.5	34.1	7.2	7.2	28.1	0.0	22.7	23.8	0.0	0.0
Incr Delay (d2), s/veh	19.7	3.8	5.1	8.4	0.1	0.1	1.7	0.0	0.1	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	11.9	11.2	2.7	1.5	1.5	3.5	0.0	0.5	0.5	0.0	0.0
Lane Grp Delay (d), s/veh	57.1	19.0	20.6	42.6	7.3	7.3	29.8	0.0	22.8	24.3	0.0	0.0
Lane Grp LOS	E	B	C	D	A	A	C		C	C		
Approach Vol, veh/h		1451			506			221				33
Approach Delay, s/veh		20.2			15.9			28.7				24.3
Approach LOS		C			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.2	43.4		10.9	49.1			22.2				22.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	44.0		11.0	51.0			23.0				23.0
Max Q Clear Time (g_c+I1), s	2.7	28.8		7.3	5.7			17.4				17.7
Green Ext Time (p_c), s	0.0	10.6		0.1	20.5			0.6				0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.1								
HCM 2010 LOS				C								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Existing +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	184	377	262	632	721	156	194	847	378
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				225	475	353	756	1320	286	244	1349	573
Arrive On Green				0.31	0.31	0.31	0.37	0.75	0.75	0.14	0.37	0.00
Sat Flow, veh/h				738	1556	1155	3408	2939	637	1757	3689	1568
Grp Volume(v), veh/h				490	0	405	687	492	462	211	921	0
Grp Sat Flow(s),veh/h/ln				1808	0	1641	1704	1845	1732	1757	1845	1568
Q Serve(g_s), s				29.0	0.0	25.5	21.4	13.5	13.5	13.2	23.7	0.0
Cycle Q Clear(g_c), s				29.0	0.0	25.5	21.4	13.5	13.5	13.2	23.7	0.0
Prop In Lane				0.41		0.70	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h				552	0	501	756	828	778	244	1349	573
V/C Ratio(X)				0.89	0.00	0.81	0.91	0.59	0.59	0.87	0.68	0.00
Avail Cap(c_a), veh/h				613	0	556	882	828	778	376	1349	573
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.53	0.53	0.53	1.00	1.00	0.00
Uniform Delay (d), s/veh				37.1	0.0	35.9	34.2	9.4	9.4	47.3	30.1	0.0
Incr Delay (d2), s/veh				13.8	0.0	7.9	7.0	1.7	1.8	12.4	2.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				15.3	0.0	11.7	9.3	4.2	4.0	6.8	11.5	0.0
Lane Grp Delay (d), s/veh				50.9	0.0	43.8	41.3	11.1	11.2	59.7	32.9	0.0
Lane Grp LOS				D		D	D	B	B	E	C	
Approach Vol, veh/h					895			1641			1132	
Approach Delay, s/veh					47.7			23.8			37.9	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					38.2		28.9	54.3		19.5	45.0	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					31.0		23.4	15.5		15.2	25.7	
Green Ext Time (p_c), s					3.3		1.4	16.9		0.4	10.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					34.0							
HCM 2010 LOS					C							
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Existing +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	382	0	437	0	0	0	0	1029	279	296	769	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	468	492	836				0	1520	412	466	2445	0
Arrive On Green	0.27	0.00	0.27				0.00	0.36	0.36	0.53	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4196	1137	1757	3689	0
Grp Volume(v), veh/h	415	0	475				0	983	438	322	836	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1644	1757	1845	0
Q Serve(g_s), s	25.7	0.0	14.8				0.0	26.2	26.2	15.4	0.0	0.0
Cycle Q Clear(g_c), s	25.7	0.0	14.8				0.0	26.2	26.2	15.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.69	1.00		0.00
Lane Grp Cap(c), veh/h	468	492	836				0	1337	596	466	2445	0
V/C Ratio(X)	0.89	0.00	0.57				0.00	0.74	0.74	0.69	0.34	0.00
Avail Cap(c_a), veh/h	574	603	1025				0	1337	596	466	2445	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.64	0.64	0.00
Uniform Delay (d), s/veh	39.8	0.0	35.9				0.0	31.4	31.4	23.2	0.0	0.0
Incr Delay (d2), s/veh	13.4	0.0	0.6				0.0	3.6	7.9	2.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	13.2	0.0	5.9				0.0	12.8	12.1	5.9	0.1	0.0
Lane Grp Delay (d), s/veh	53.2	0.0	36.5				0.0	35.0	39.3	26.0	0.2	0.0
Lane Grp LOS	D		D					D	D	C	A	
Approach Vol, veh/h		890						1421			1158	
Approach Delay, s/veh		44.3						36.3			7.4	
Approach LOS		D						D			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		34.2						45.0		34.0	79.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		37.0						41.0		30.0	75.0	
Max Q Clear Time (g_c+I1), s		27.7						28.2		17.4	2.0	
Green Ext Time (p_c), s		2.5						7.7		5.6	8.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.7									
HCM 2010 LOS			C									
<b>Notes</b>												



























HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd

Existing +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	290	423	85	150	510	302	120	755	90	178	459	244
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	351	947	188	196	842	358	160	1071	455	225	1209	514
Arrive On Green	0.20	0.32	0.32	0.11	0.23	0.23	0.09	0.29	0.29	0.13	0.33	0.33
Sat Flow, veh/h	1757	2990	594	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	315	283	269	163	554	328	130	821	98	193	499	265
Grp Sat Flow(s),veh/h/ln	1757	1845	1740	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	18.2	12.9	13.1	9.5	14.2	21.3	7.6	21.2	4.9	11.2	11.0	14.3
Cycle Q Clear(g_c), s	18.2	12.9	13.1	9.5	14.2	21.3	7.6	21.2	4.9	11.2	11.0	14.3
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	584	551	196	842	358	160	1071	455	225	1209	514
V/C Ratio(X)	0.90	0.48	0.49	0.83	0.66	0.92	0.81	0.77	0.22	0.86	0.41	0.52
Avail Cap(c_a), veh/h	471	584	551	320	849	361	269	1202	511	303	1273	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	28.8	28.8	45.4	36.6	39.3	46.5	33.8	28.0	44.5	27.3	28.4
Incr Delay (d2), s/veh	16.0	0.6	0.7	9.4	1.9	27.4	9.4	2.7	0.2	16.3	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.7	6.1	5.8	4.8	6.9	11.2	3.9	10.3	2.0	6.1	5.2	5.6
Lane Grp Delay (d), s/veh	56.7	29.4	29.5	54.8	38.4	66.7	56.0	36.5	28.3	60.8	27.5	29.2
Lane Grp LOS	E	C	C	D	D	E	E	D	C	E	C	C
Approach Vol, veh/h		867			1045			1049			957	
Approach Delay, s/veh		39.4			49.9			38.1			34.7	
Approach LOS		D			D			D			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	24.8	37.0		15.6	27.8		13.5	34.3		17.4	38.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	33.0		19.0	24.0		16.0	34.0		18.0	36.0	
Max Q Clear Time (g_c+I1), s	20.2	15.1		11.5	23.3		9.6	23.2		13.2	16.3	
Green Ext Time (p_c), s	0.6	8.2		0.2	0.5		0.2	7.1		0.2	10.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				40.7								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd





























Existing +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 							 	
Volume (veh/h)	84	91	26	984	51	111	7	300	394	81	463	65
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	695	730	621	1349	730	621	106	1323	562	114	1340	570
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.06	0.36	0.36	0.06	0.36	0.36
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	91	99	28	1070	55	121	8	326	428	88	503	71
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.2	2.3	0.7	18.4	1.2	3.4	0.3	4.1	16.0	3.3	6.7	2.0
Cycle Q Clear(g_c), s	2.2	2.3	0.7	18.4	1.2	3.4	0.3	4.1	16.0	3.3	6.7	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	695	730	621	1349	730	621	106	1323	562	114	1340	570
V/C Ratio(X)	0.13	0.14	0.05	0.79	0.08	0.19	0.08	0.25	0.76	0.77	0.38	0.12
Avail Cap(c_a), veh/h	695	730	621	2668	1444	1227	423	1666	708	344	1500	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.8	12.8	12.3	17.7	12.5	13.1	29.5	15.0	18.8	30.6	15.6	14.1
Incr Delay (d2), s/veh	0.1	0.1	0.0	1.1	0.0	0.2	0.3	0.1	3.7	10.4	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	0.9	0.3	7.0	0.5	1.2	0.1	1.8	6.4	1.7	2.9	0.7
Lane Grp Delay (d), s/veh	12.9	12.9	12.4	18.8	12.5	13.3	29.8	15.1	22.5	41.0	15.8	14.2
Lane Grp LOS	B	B	B	B	B	B	C	B	C	D	B	B
Approach Vol, veh/h		218			1246			762			662	
Approach Delay, s/veh		12.8			18.0			19.4			18.9	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		30.3			30.3		8.0	27.8		8.3		28.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0			52.0		16.0	30.0		13.0		27.0
Max Q Clear Time (g_c+I1), s		4.3			20.4		2.3	18.0		5.3		8.7
Green Ext Time (p_c), s		5.5			5.9		0.0	5.8		0.1		7.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.2								
HCM 2010 LOS				B								
<b>Notes</b>												


























HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Existing +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	136	534	114	102	482	178	196	586	215	222	280	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	188	925	393	143	829	353	263	987	420	292	752	252
Arrive On Green	0.11	0.25	0.25	0.08	0.22	0.22	0.15	0.27	0.27	0.17	0.28	0.28
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2646	887
Grp Volume(v), veh/h	148	580	124	111	524	193	213	637	234	241	210	198
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1688
Q Serve(g_s), s	5.6	9.5	4.4	4.2	8.8	7.4	8.0	10.4	8.8	9.1	6.3	6.5
Cycle Q Clear(g_c), s	5.6	9.5	4.4	4.2	8.8	7.4	8.0	10.4	8.8	9.1	6.3	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	188	925	393	143	829	353	263	987	420	292	524	480
V/C Ratio(X)	0.79	0.63	0.32	0.78	0.63	0.55	0.81	0.65	0.56	0.82	0.40	0.41
Avail Cap(c_a), veh/h	334	1134	482	257	972	413	489	1296	551	489	648	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	22.8	20.8	30.8	23.9	23.4	28.1	22.1	21.5	27.5	19.7	19.8
Incr Delay (d2), s/veh	7.1	0.8	0.5	8.8	1.0	1.3	5.9	0.7	1.2	5.8	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.8	4.4	1.7	2.2	4.0	2.9	3.9	4.8	3.4	4.3	2.8	2.7
Lane Grp Delay (d), s/veh	36.9	23.5	21.3	39.6	24.9	24.7	34.0	22.9	22.7	33.3	20.2	20.4
Lane Grp LOS	D	C	C	D	C	C	C	C	C	C	C	C
Approach Vol, veh/h		852			828			1084			649	
Approach Delay, s/veh		25.5			26.9			25.0			25.1	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.3	21.1		9.5	19.4		14.2	22.3		15.4		23.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	13.0	21.0		10.0	18.0		19.0	24.0		19.0		24.0
Max Q Clear Time (g_c+I1), s	7.6	11.5		6.2	10.8		10.0	12.4		11.1		8.5
Green Ext Time (p_c), s	0.2	5.6		0.1	4.5		0.4	5.8		0.4		7.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.6								
HCM 2010 LOS				C								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 7: Buchanan Rd & Harbor St

Existing +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	113	441	5	2	959	89	92	99	3	129	32	155
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	136	1172	12	54	1101	936	123	208	6	150	37	175
Arrive On Green	0.08	0.64	0.64	0.03	0.60	0.60	0.07	0.12	0.12	0.09	0.13	0.13
Sat Flow, veh/h	1757	1822	19	1757	1845	1568	1757	1786	50	1757	278	1332
Grp Volume(v), veh/h	123	0	484	2	1042	97	100	0	111	140	0	203
Grp Sat Flow(s),veh/h/ln	1757	0	1841	1757	1845	1568	1757	0	1836	1757	0	1610
Q Serve(g_s), s	9.0	0.0	16.4	0.1	67.6	2.2	7.2	0.0	7.3	10.2	0.0	16.2
Cycle Q Clear(g_c), s	9.0	0.0	16.4	0.1	67.6	2.2	7.2	0.0	7.3	10.2	0.0	16.2
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.03	1.00		0.83
Lane Grp Cap(c), veh/h	136	0	1184	54	1101	936	123	0	214	150	0	212
V/C Ratio(X)	0.90	0.00	0.41	0.04	0.95	0.10	0.81	0.00	0.52	0.93	0.00	0.96
Avail Cap(c_a), veh/h	136	0	1184	54	1101	936	136	0	228	150	0	212
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.00	0.77	0.40	0.40	0.40	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.0	0.0	11.1	60.7	24.1	4.5	59.2	0.0	53.6	58.7	0.0	55.7
Incr Delay (d2), s/veh	41.5	0.0	0.8	0.1	8.6	0.1	27.7	0.0	1.9	54.3	0.0	49.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.6	0.0	7.1	0.1	31.9	1.3	4.3	0.0	3.6	7.0	0.0	9.7
Lane Grp Delay (d), s/veh	100.6	0.0	12.0	60.8	32.8	4.6	86.9	0.0	55.5	113.0	0.0	105.3
Lane Grp LOS	F		B	E	C	A	F		E	F		F
Approach Vol, veh/h		607			1141			211				343
Approach Delay, s/veh		29.9			30.4			70.4				108.4
Approach LOS		C			C			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	14.0	87.0		8.0	81.0		13.0	19.0		15.0		21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	10.0	83.0		4.0	77.0		10.0	16.0		11.0		17.0
Max Q Clear Time (g_c+I1), s	11.0	18.4		2.1	69.6		9.2	9.3		12.2		18.2
Green Ext Time (p_c), s	0.0	3.4		0.0	4.6		0.1	0.4		0.0		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				45.6								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

Existing +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	267	21	650	330	134	20	49	77	76	93	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	58	1001	79	1544	2643	1123	180	189	160	180	159	25
Arrive On Green	0.03	0.30	0.30	0.45	0.72	0.72	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1757	3376	266	3408	3689	1568	1757	1845	1568	1757	1555	246
Grp Volume(v), veh/h	35	158	155	707	359	146	22	53	84	83	0	117
Grp Sat Flow(s),veh/h/ln	1757	1845	1798	1704	1845	1568	1757	1845	1568	1757	0	1801
Q Serve(g_s), s	1.6	5.3	5.4	11.6	2.5	2.4	0.9	2.1	4.1	3.6	0.0	5.0
Cycle Q Clear(g_c), s	1.6	5.3	5.4	11.6	2.5	2.4	0.9	2.1	4.1	3.6	0.0	5.0
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	58	547	533	1544	2643	1123	180	189	160	180	0	184
V/C Ratio(X)	0.61	0.29	0.29	0.46	0.14	0.13	0.12	0.28	0.52	0.46	0.00	0.63
Avail Cap(c_a), veh/h	174	547	533	1768	2643	1123	391	410	349	434	0	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.66	0.66	0.66	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.6	21.9	21.9	15.3	3.6	3.6	33.0	33.6	34.5	34.2	0.0	34.9
Incr Delay (d2), s/veh	9.8	1.3	1.4	0.1	0.1	0.2	0.3	0.8	2.6	1.8	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	2.6	2.5	4.6	0.9	0.7	0.4	1.0	1.7	1.7	0.0	2.5
Lane Grp Delay (d), s/veh	48.4	23.2	23.3	15.4	3.7	3.7	33.3	34.4	37.1	36.1	0.0	38.5
Lane Grp LOS	D	C	C	B	A	A	C	C	D	D		D
Approach Vol, veh/h		348			1212			159			200	
Approach Delay, s/veh		25.8			10.5			35.7			37.5	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8			4	
Phs Duration (G+Y+Rc), s	6.7	28.0		40.7	62.0			12.3			12.3	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	8.0	24.0		42.0	58.0			18.0			20.0	
Max Q Clear Time (g_c+I1), s	3.6	7.4		13.6	4.5			6.1			7.0	
Green Ext Time (p_c), s	1.3	1.6		2.9	3.1			1.2			1.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.2								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 9: Loveridge Rd & California Ave/N Park Blvd




















Existing +Project AM

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	101	59	258	42	147	3	554	294	84	7	214	509
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	179	377	320	109	663	12	823	1547	433	14	1195	508
Arrive On Green	0.05	0.20	0.20	0.03	0.18	0.18	0.24	0.56	0.56	0.01	0.32	0.32
Sat Flow, veh/h	3408	1845	1568	3408	3610	68	3408	2776	776	1757	3689	1568
Grp Volume(v), veh/h	110	64	280	46	82	81	602	211	200	8	233	553
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1708	1757	1845	1568
Q Serve(g_s), s	2.5	2.3	13.9	1.1	3.0	3.1	13.1	4.6	4.7	0.4	3.7	20.3
Cycle Q Clear(g_c), s	2.5	2.3	13.9	1.1	3.0	3.1	13.1	4.6	4.7	0.4	3.7	20.3
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.45	1.00		1.00
Lane Grp Cap(c), veh/h	179	377	320	109	339	336	823	1028	952	14	1195	508
V/C Ratio(X)	0.61	0.17	0.87	0.42	0.24	0.24	0.73	0.21	0.21	0.56	0.19	1.09
Avail Cap(c_a), veh/h	338	458	389	211	389	387	1269	1716	1589	87	2243	953
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	26.4	31.1	38.3	28.1	28.1	28.2	8.9	8.9	39.8	19.7	16.4
Incr Delay (d2), s/veh	3.4	0.2	16.9	2.6	0.4	0.4	1.3	0.1	0.1	30.0	0.1	51.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	1.1	6.9	0.5	1.4	1.4	5.7	1.9	1.8	0.3	1.7	14.5
Lane Grp Delay (d), s/veh	40.8	26.7	48.0	40.9	28.5	28.5	29.4	9.0	9.1	69.8	19.7	67.8
Lane Grp LOS	D	C	D	D	C	C	C	A	A	E	B	F
Approach Vol, veh/h		454			209			1013			794	
Approach Delay, s/veh		43.2			31.2			21.2			53.7	
Approach LOS		D			C			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	8.2	20.5		6.6	18.8		23.5	48.9		4.7		30.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	8.0	20.0		5.0	17.0		30.0	75.0		4.0		49.0
Max Q Clear Time (g_c+I1), s	4.5	15.9		3.1	5.1		15.1	6.7		2.4		22.3
Green Ext Time (p_c), s	0.1	0.5		0.2	0.7		4.3	5.5		0.0		3.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					36.5							
HCM 2010 LOS					D							
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Existing +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	410	0	359	0	0	0	0	643	179	126	460	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1006	0	463				0	1953	830	203	2315	0
Arrive On Green	0.30	0.00	0.30				0.00	0.53	0.53	0.06	0.63	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	446	0	390				0	699	195	137	500	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	11.0	0.0	24.2				0.0	11.4	6.9	4.1	6.0	0.0
Cycle Q Clear(g_c), s	11.0	0.0	24.2				0.0	11.4	6.9	4.1	6.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1006	0	463				0	1953	830	203	2315	0
V/C Ratio(X)	0.44	0.00	0.84				0.00	0.36	0.23	0.68	0.22	0.00
Avail Cap(c_a), veh/h	1547	0	712				0	1953	830	428	2315	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.93	0.93	0.00
Uniform Delay (d), s/veh	29.6	0.0	34.2				0.0	14.1	13.1	47.7	8.3	0.0
Incr Delay (d2), s/veh	0.3	0.0	5.6				0.0	0.5	0.7	3.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.7	0.0	10.1				0.0	5.1	2.7	1.9	2.6	0.0
Lane Grp Delay (d), s/veh	29.9	0.0	39.9				0.0	14.7	13.8	51.3	8.5	0.0
Lane Grp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		836						894			637	
Approach Delay, s/veh		34.6						14.5			17.7	
Approach LOS		C						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		34.6						58.8		10.2	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						48.0		13.0	65.0	
Max Q Clear Time (g_c+I1), s		26.2						13.4		6.1	8.0	
Green Ext Time (p_c), s		4.4						11.4		0.2	12.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			22.4									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
11: Loveridge Rd & Leland Rd

Existing +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	227	161	168	658	176	235	535	120	177	336	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	287	1155	491	277	1145	487	309	1113	473	288	776	330
Arrive On Green	0.08	0.31	0.31	0.08	0.31	0.31	0.18	0.30	0.30	0.08	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	191	247	175	183	715	191	255	582	130	192	365	163
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	4.0	3.6	6.3	3.8	12.1	7.0	10.2	9.5	4.6	4.0	6.3	6.7
Cycle Q Clear(g_c), s	4.0	3.6	6.3	3.8	12.1	7.0	10.2	9.5	4.6	4.0	6.3	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	287	1155	491	277	1145	487	309	1113	473	288	776	330
V/C Ratio(X)	0.67	0.21	0.36	0.66	0.62	0.39	0.83	0.52	0.27	0.67	0.47	0.49
Avail Cap(c_a), veh/h	561	1872	795	561	1872	795	747	2175	924	561	1214	516
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	18.4	19.4	32.5	21.5	19.7	29.0	21.1	19.4	32.4	25.2	25.4
Incr Delay (d2), s/veh	2.7	0.1	0.4	2.7	0.6	0.5	5.6	0.4	0.3	2.7	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.8	1.6	2.4	1.7	5.5	2.7	4.9	4.3	1.7	1.8	2.9	2.6
Lane Grp Delay (d), s/veh	35.1	18.5	19.8	35.2	22.1	20.3	34.5	21.5	19.7	35.1	25.7	26.5
Lane Grp LOS	D	B	B	D	C	C	C	C	B	D	C	C
Approach Vol, veh/h		613			1089			967			720	
Approach Delay, s/veh		24.0			24.0			24.7			28.4	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.1	26.8		9.9	26.6		16.8	26.0		10.2	19.3	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	37.0		12.0	37.0		31.0	43.0		12.0	24.0	
Max Q Clear Time (g_c+I1), s	6.0	8.3		5.8	14.1		12.2	11.5		6.0	8.7	
Green Ext Time (p_c), s	0.3	9.3		0.3	8.6		0.7	8.9		0.3	6.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					25.1							
HCM 2010 LOS					C							
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

Existing +Project AM  
 3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	254	381	999	295	180	182
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	284	1504	1149	977	216	193
Arrive On Green	0.16	0.82	0.62	0.62	0.12	0.12
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	276	414	1086	321	196	198
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	20.3	6.9	70.1	12.6	14.3	16.0
Cycle Q Clear(g_c), s	20.3	6.9	70.1	12.6	14.3	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	284	1504	1149	977	216	193
V/C Ratio(X)	0.97	0.28	0.94	0.33	0.91	1.03
Avail Cap(c_a), veh/h	284	1504	1149	977	216	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.39	0.39	1.00	1.00
Uniform Delay (d), s/veh	54.2	2.9	22.5	11.6	56.3	57.0
Incr Delay (d2), s/veh	41.6	0.4	7.9	0.4	36.8	71.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.3	2.3	31.8	4.6	8.7	16.9
Lane Grp Delay (d), s/veh	95.8	3.2	30.4	12.0	93.0	128.7
Lane Grp LOS	F	A	C	B	F	F
Approach Vol, veh/h		690	1407		394	
Approach Delay, s/veh		40.3	26.2		111.0	
Approach LOS		D	C		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.0	110.0	85.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	21.0	106.0	81.0			
Max Q Clear Time (g_c+I1), s	22.3	8.9	72.1			
Green Ext Time (p_c), s	0.0	3.6	5.9			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			43.5			
HCM 2010 LOS			D			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

Existing +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	513	48	15	1189	11	95	105	14	14	10	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	9	1418	1205	25	1419	13	194	178	23	117	70	115
Arrive On Green	0.01	0.77	0.77	0.01	0.78	0.78	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1757	1845	1568	1757	1825	17	1362	1597	210	1244	631	1032
Grp Volume(v), veh/h	10	558	52	16	0	1304	103	0	129	15	0	29
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1842	1362	0	1808	1244	0	1663
Q Serve(g_s), s	0.6	11.3	0.9	1.0	0.0	61.0	8.4	0.0	7.7	1.3	0.0	1.8
Cycle Q Clear(g_c), s	0.6	11.3	0.9	1.0	0.0	61.0	10.2	0.0	7.7	9.1	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.12	1.00		0.62
Lane Grp Cap(c), veh/h	9	1418	1205	25	0	1432	194	0	201	117	0	185
V/C Ratio(X)	1.10	0.39	0.04	0.65	0.00	0.91	0.53	0.00	0.64	0.13	0.00	0.16
Avail Cap(c_a), veh/h	62	1418	1205	78	0	1432	235	0	256	155	0	235
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.43	0.00	0.43	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	4.3	3.1	55.5	0.0	9.6	50.1	0.0	48.1	52.5	0.0	45.5
Incr Delay (d2), s/veh	158.3	0.7	0.1	11.9	0.0	4.9	2.3	0.0	3.5	0.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	4.2	0.3	0.5	0.0	23.0	3.1	0.0	3.8	0.4	0.0	0.8
Lane Grp Delay (d), s/veh	214.6	5.1	3.2	67.4	0.0	14.5	52.4	0.0	51.7	53.0	0.0	45.9
Lane Grp LOS	F	A	A	E		B	D		D	D		D
Approach Vol, veh/h		620			1320			232				44
Approach Delay, s/veh		8.3			15.1			52.0				48.3
Approach LOS		A			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.6	91.0		5.6	92.0			16.6				16.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	87.0		5.0	88.0			16.0				16.0
Max Q Clear Time (g_c+I1), s	2.6	13.3		3.0	63.0			12.2				11.1
Green Ext Time (p_c), s	0.1	4.3		0.0	14.5			0.4				0.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					17.7							
HCM 2010 LOS					B							
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 15: Tuscany Meadows Dr & Buchanan Rd

Existing +Project AM  
 3/16/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	549	25	36	1019	74	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	998	848	50	1107	595	531
Arrive On Green	0.54	0.54	0.03	0.60	0.34	0.34
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	597	27	39	1108	80	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	28.6	1.0	2.9	78.0	4.1	6.9
Cycle Q Clear(g_c), s	28.6	1.0	2.9	78.0	4.1	6.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	998	848	50	1107	595	531
V/C Ratio(X)	0.60	0.03	0.78	1.00	0.13	0.22
Avail Cap(c_a), veh/h	998	848	95	1107	595	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	13.9	62.8	26.0	29.8	30.7
Incr Delay (d2), s/veh	1.0	0.0	22.9	27.3	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.7	0.4	1.6	41.3	1.9	2.9
Lane Grp Delay (d), s/veh	21.2	14.0	85.7	53.3	30.3	31.7
Lane Grp LOS	C	B	F	F	C	C
Approach Vol, veh/h	624			1147	196	
Approach Delay, s/veh	20.9			54.4	31.1	
Approach LOS	C			D	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	74.3		7.7	82.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	67.0		7.0	78.0		
Max Q Clear Time (g_c+I1), s	30.6		4.9	80.0		
Green Ext Time (p_c), s	17.5		0.0	0.0		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			41.5			
HCM 2010 LOS			D			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 17: Proposed Apartments & Buchanan Rd

Existing +Project AM  
 3/16/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	640	16	22	993	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	781	664	311	1186	480	428
Arrive On Green	0.42	0.42	0.18	0.64	0.27	0.27
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	696	17	24	1079	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	33.2	0.6	1.1	47.9	2.7	4.6
Cycle Q Clear(g_c), s	33.2	0.6	1.1	47.9	2.7	4.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	781	664	311	1186	480	428
V/C Ratio(X)	0.89	0.03	0.08	0.91	0.14	0.23
Avail Cap(c_a), veh/h	1570	1335	311	1861	480	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	16.0	32.7	14.6	26.1	26.8
Incr Delay (d2), s/veh	3.8	0.0	0.1	4.7	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	14.9	0.2	0.5	19.5	1.3	1.9
Lane Grp Delay (d), s/veh	29.2	16.0	32.8	19.3	26.7	28.0
Lane Grp LOS	C	B	C	B	C	C
Approach Vol, veh/h	713			1103	164	
Approach Delay, s/veh	28.9			19.6	27.5	
Approach LOS	C			B	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	44.3		20.9	65.2		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	81.0		11.0	96.0		
Max Q Clear Time (g_c+I1), s	35.2		3.1	49.9		
Green Ext Time (p_c), s	5.1		4.6	11.2		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			23.6			
HCM 2010 LOS			C			
<b>Notes</b>						













HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy

Existing +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	101	30	38	199	74	28	197	445	143	23	499	256
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	393	212	181	393	147	55	501	2824	873	38	2105	895
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.05	0.23	0.23	0.02	0.57	0.57
Sat Flow, veh/h	3408	1845	1568	3408	1280	480	3408	4058	1255	1757	3689	1568
Grp Volume(v), veh/h	110	33	41	216	0	110	214	438	201	25	542	278
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1760	1704	1845	1623	1757	1845	1568
Q Serve(g_s), s	2.1	1.2	1.7	4.3	0.0	4.2	4.4	6.8	7.1	1.0	5.3	6.6
Cycle Q Clear(g_c), s	2.1	1.2	1.7	4.3	0.0	4.2	4.4	6.8	7.1	1.0	5.3	6.6
Prop In Lane	1.00		1.00	1.00		0.27	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	393	212	181	393	0	203	501	2568	1130	38	2105	895
V/C Ratio(X)	0.28	0.16	0.23	0.55	0.00	0.54	0.43	0.17	0.18	0.65	0.26	0.31
Avail Cap(c_a), veh/h	949	514	436	1139	0	588	901	2568	1130	245	2105	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	28.6	28.9	30.0	0.0	30.0	31.2	11.1	11.2	34.9	7.8	8.0
Incr Delay (d2), s/veh	0.4	0.3	0.6	1.2	0.0	2.3	0.6	0.1	0.3	17.0	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	0.6	0.7	1.9	0.0	2.0	2.0	3.3	3.1	0.6	2.2	2.5
Lane Grp Delay (d), s/veh	29.4	29.0	29.5	31.2	0.0	32.3	31.8	11.2	11.5	51.9	8.1	9.0
Lane Grp LOS	C	C	C	C		C	C	B	B	D	A	A
Approach Vol, veh/h		184			326			853			845	
Approach Delay, s/veh		29.4			31.6			16.4			9.6	
Approach LOS		C			C			B			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		12.3			12.3		14.6	54.0		5.6		45.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		20.0			24.0		19.0	50.0		10.0		41.0
Max Q Clear Time (g_c+I1), s		4.1			6.3		6.4	9.1		3.0		8.6
Green Ext Time (p_c), s		1.9			2.0		4.1	5.8		0.0		6.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.2								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Existing +Project AM  
 3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	211	247	568	508	402	282
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	666	306	730	4057	2674	758
Arrive On Green	0.20	0.20	0.14	0.49	0.48	0.48
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	229	268	617	552	437	307
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	6.5	18.6	19.7	6.1	5.0	14.1
Cycle Q Clear(g_c), s	6.5	18.6	19.7	6.1	5.0	14.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	666	306	730	4057	2674	758
V/C Ratio(X)	0.34	0.88	0.85	0.14	0.16	0.41
Avail Cap(c_a), veh/h	914	421	1219	4057	2674	758
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.94	0.94
Uniform Delay (d), s/veh	38.8	43.7	46.1	9.1	16.2	18.6
Incr Delay (d2), s/veh	0.3	14.2	2.8	0.1	0.1	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.8	1.2	9.1	2.8	2.3	5.7
Lane Grp Delay (d), s/veh	39.1	57.9	48.9	9.2	16.3	20.1
Lane Grp LOS	D	E	D	A	B	C
Approach Vol, veh/h	497			1169	744	
Approach Delay, s/veh	49.2			30.1	17.9	
Approach LOS	D			C	B	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			28.0	86.0	58.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			40.0	82.0	38.0	
Max Q Clear Time (g_c+I1), s			21.7	8.1	16.1	
Green Ext Time (p_c), s			2.2	10.7	8.4	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			30.3			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Existing +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	203	0	251	0	0	0	0	913	398	132	550	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	399	216	367				0	3941	1117	206	4479	0
Arrive On Green	0.12	0.00	0.12				0.00	0.95	0.95	0.12	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	221	0	273				0	992	433	143	598	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	6.7	0.0	9.2				0.0	1.4	2.5	4.4	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	9.2				0.0	1.4	2.5	4.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	399	216	367				0	3941	1117	206	4479	0
V/C Ratio(X)	0.55	0.00	0.74				0.00	0.25	0.39	0.69	0.13	0.00
Avail Cap(c_a), veh/h	752	407	692				0	3941	1117	502	4479	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.82	0.82	0.95	0.95	0.00
Uniform Delay (d), s/veh	45.3	0.0	46.4				0.0	0.9	0.9	46.8	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	3.0				0.0	0.1	0.8	4.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.0	0.0	3.8				0.0	0.5	0.8	2.0	0.0	0.0
Lane Grp Delay (d), s/veh	46.5	0.0	49.4				0.0	1.0	1.7	50.8	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		494						1425			741	
Approach Delay, s/veh		48.1						1.2			9.9	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		16.7						81.4		10.6	92.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		24.0						68.0		16.0	88.0	
Max Q Clear Time (g_c+I1), s		11.2						4.5		6.4	2.0	
Green Ext Time (p_c), s		1.6						22.7		0.3	24.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.3									
HCM 2010 LOS			B									
<b>Notes</b>												


























HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

Existing +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	257	112	5	40	307	403	84	702	15	134	325	275
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1147	592	24	591	621	528	213	2358	49	233	1415	602
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.04	0.14	0.14	0.11	0.64	0.64
Sat Flow, veh/h	3408	1760	72	1757	1845	1568	1757	5401	113	3408	3689	1568
Grp Volume(v), veh/h	279	0	127	43	334	438	91	521	258	146	353	299
Grp Sat Flow(s),veh/h/ln	1704	0	1832	1757	1845	1568	1757	1845	1825	1704	1845	1568
Q Serve(g_s), s	4.5	0.0	3.7	1.3	11.1	19.4	3.8	9.6	9.6	3.1	3.1	7.6
Cycle Q Clear(g_c), s	4.5	0.0	3.7	1.3	11.1	19.4	3.8	9.6	9.6	3.1	3.1	7.6
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	1147	0	616	591	621	528	213	1611	797	233	1415	602
V/C Ratio(X)	0.24	0.00	0.21	0.07	0.54	0.83	0.43	0.32	0.32	0.63	0.25	0.50
Avail Cap(c_a), veh/h	1147	0	616	999	1049	892	325	1611	797	451	1415	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.80	0.80	0.80	0.97	0.97	0.97	0.99	0.99	0.99
Uniform Delay (d), s/veh	18.1	0.0	17.9	17.1	20.3	23.1	33.7	22.3	22.3	32.6	8.9	9.7
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.6	2.8	1.3	0.5	1.1	2.7	0.4	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.8	0.0	1.7	0.5	5.0	7.6	1.8	4.9	5.0	1.4	1.3	2.7
Lane Grp Delay (d), s/veh	18.2	0.0	18.0	17.1	20.9	25.9	35.0	22.8	23.4	35.3	9.3	12.6
Lane Grp LOS	B		B	B	C	C	D	C	C	D	A	B
Approach Vol, veh/h		406			815			870			798	
Approach Delay, s/veh		18.2			23.4			24.3			15.3	
Approach LOS		B			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		29.4			29.4		13.2	37.0		9.2	33.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		18.0			43.0		14.0	33.0		10.0	29.0	
Max Q Clear Time (g_c+I1), s		6.5			21.4		5.8	11.6		5.1	9.6	
Green Ext Time (p_c), s		4.5			4.0		0.5	5.2		0.3	3.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.7								
HCM 2010 LOS				C								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Existing +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	366	204	159	23	335	386	556	1009	48	38	139	124
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Cap, veh/h	386	1425	606	33	343	291	578	1503	71	52	244	202
Arrive On Green	0.22	0.39	0.00	0.02	0.19	0.00	0.33	0.43	0.43	0.03	0.13	0.13
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3494	166	1757	1868	1548
Grp Volume(v), veh/h	398	222	0	25	364	0	604	579	570	41	149	137
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1815	1757	1845	1571
Q Serve(g_s), s	26.0	4.7	0.0	1.7	22.0	0.0	39.0	30.9	30.9	2.7	9.0	9.8
Cycle Q Clear(g_c), s	26.0	4.7	0.0	1.7	22.0	0.0	39.0	30.9	30.9	2.7	9.0	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		0.99
Lane Grp Cap(c), veh/h	386	1425	606	33	343	291	578	793	781	52	241	205
V/C Ratio(X)	1.03	0.16	0.00	0.75	1.06	0.00	1.04	0.73	0.73	0.79	0.62	0.67
Avail Cap(c_a), veh/h	386	1425	606	89	343	291	578	794	781	74	265	225
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	23.7	0.0	57.8	48.2	0.0	39.7	28.0	28.0	57.1	48.7	49.0
Incr Delay (d2), s/veh	54.4	0.1	0.0	28.2	66.2	0.0	49.5	3.4	3.5	29.2	3.7	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	17.3	2.1	0.0	1.0	16.8	0.0	25.3	14.9	14.7	1.7	4.6	4.4
Lane Grp Delay (d), s/veh	100.7	23.8	0.0	86.1	114.4	0.0	89.3	31.5	31.5	86.3	52.4	55.5
Lane Grp LOS	F	C		F	F		F	C	C	F	D	E
Approach Vol, veh/h		620			389			1753			327	
Approach Delay, s/veh		73.1			112.6			51.4			58.0	
Approach LOS		E			F			D			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	30.0	49.8		6.2	26.0		43.0	55.0		7.5	19.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	26.0	42.0		6.0	22.0		39.0	51.0		5.0	17.0	
Max Q Clear Time (g_c+I1), s	28.0	6.7		3.7	24.0		41.0	32.9		4.7	11.8	
Green Ext Time (p_c), s	0.0	3.9		0.0	0.0		0.0	9.3		0.0	3.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				64.2								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 23: Sequoia Dr & Somersville Rd






















Existing +Project AM  
 3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	263	11	4	1350	234	87
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	356	318	770	2435	2435	1035
Arrive On Green	0.20	0.20	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1757	1568	1018	3689	3689	1568
Grp Volume(v), veh/h	286	12	4	1467	254	95
Grp Sat Flow(s),veh/h/ln	1757	1568	1018	1845	1845	1568
Q Serve(g_s), s	9.0	0.4	0.1	13.1	1.5	1.3
Cycle Q Clear(g_c), s	9.0	0.4	1.6	13.1	1.5	1.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	356	318	770	2435	2435	1035
V/C Ratio(X)	0.80	0.04	0.01	0.60	0.10	0.09
Avail Cap(c_a), veh/h	1114	994	1406	4741	4741	2015
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	18.7	3.9	5.6	3.6	3.6
Incr Delay (d2), s/veh	4.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.2	0.1	0.0	4.4	0.5	0.4
Lane Grp Delay (d), s/veh	26.4	18.7	3.9	5.8	3.6	3.6
Lane Grp LOS	C	B	A	A	A	A
Approach Vol, veh/h	298			1471	349	
Approach Delay, s/veh	26.1			5.8	3.6	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				42.5	42.5	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				75.0	75.0	
Max Q Clear Time (g_c+I1), s				15.1	3.5	
Green Ext Time (p_c), s				23.4	24.6	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			8.3			
HCM 2010 LOS			A			
<b>Notes</b>						























HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

Existing +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	38	204	53	49	372	199	122	411	51	61	101	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	355	1074	274	514	861	455	670	710	87	363	813	691
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	793	2837	724	1084	2276	1202	1251	1611	198	884	1845	1568
Grp Volume(v), veh/h	41	143	137	53	327	293	133	0	502	66	110	13
Grp Sat Flow(s),veh/h/ln	793	1845	1717	1084	1845	1633	1251	0	1810	884	1845	1568
Q Serve(g_s), s	1.8	2.3	2.4	1.5	5.9	6.0	3.1	0.0	9.5	2.8	1.6	0.2
Cycle Q Clear(g_c), s	7.9	2.3	2.4	3.9	5.9	6.0	4.7	0.0	9.5	12.3	1.6	0.2
Prop In Lane	1.00		0.42	1.00		0.74	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	355	698	650	514	698	618	670	0	798	363	813	691
V/C Ratio(X)	0.12	0.20	0.21	0.10	0.47	0.47	0.20	0.00	0.63	0.18	0.14	0.02
Avail Cap(c_a), veh/h	842	1833	1706	1181	1833	1623	2039	0	2780	1331	2833	2408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	9.3	9.3	10.6	10.4	10.4	8.8	0.0	9.6	14.3	7.4	7.0
Incr Delay (d2), s/veh	0.1	0.1	0.2	0.1	0.5	0.6	0.1	0.0	0.8	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	0.9	0.9	0.4	2.4	2.1	0.8	0.0	3.5	0.6	0.6	0.1
Lane Grp Delay (d), s/veh	13.5	9.4	9.5	10.7	10.9	11.0	8.9	0.0	10.4	14.6	7.4	7.0
Lane Grp LOS	B	A	A	B	B	B	A		B	B	A	A
Approach Vol, veh/h		321			673			635			189	
Approach Delay, s/veh		10.0			10.9			10.1			9.9	
Approach LOS		A			B			B			A	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		20.8			20.8			23.5			23.5	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		44.0			44.0			68.0			68.0	
Max Q Clear Time (g_c+I1), s		9.9			8.0			11.5			14.3	
Green Ext Time (p_c), s		6.9			7.0			5.3			5.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.4								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Existing +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	409	2	9	945	210	6	9	12	202	13	122
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	238	2198	10	18	1387	307	113	148	150	380	32	309
Arrive On Green	0.14	0.60	0.60	0.01	0.47	0.47	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1757	3670	16	1757	2927	648	221	691	697	1369	151	1439
Grp Volume(v), veh/h	191	224	223	10	646	609	30	0	0	220	0	147
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1730	1609	0	0	1369	0	1591
Q Serve(g_s), s	7.2	3.8	3.8	0.4	19.3	19.4	0.0	0.0	0.0	10.4	0.0	5.4
Cycle Q Clear(g_c), s	7.2	3.8	3.8	0.4	19.3	19.4	1.0	0.0	0.0	11.4	0.0	5.4
Prop In Lane	1.00		0.01	1.00		0.37	0.23		0.43	1.00		0.90
Lane Grp Cap(c), veh/h	238	1105	1103	18	874	820	410	0	0	380	0	341
V/C Ratio(X)	0.80	0.20	0.20	0.56	0.74	0.74	0.07	0.00	0.00	0.58	0.00	0.43
Avail Cap(c_a), veh/h	414	1384	1382	103	1058	993	602	0	0	550	0	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	6.2	6.2	33.5	14.5	14.5	21.3	0.0	0.0	25.9	0.0	23.1
Incr Delay (d2), s/veh	6.3	0.1	0.1	24.9	2.2	2.4	0.1	0.0	0.0	1.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.5	1.5	1.5	0.3	8.4	8.0	0.4	0.0	0.0	3.6	0.0	2.2
Lane Grp Delay (d), s/veh	34.8	6.3	6.3	58.4	16.7	17.0	21.4	0.0	0.0	27.3	0.0	24.0
Lane Grp LOS	C	A	A	E	B	B	C			C		C
Approach Vol, veh/h		638			1265			30				367
Approach Delay, s/veh		14.8			17.2			21.4				26.0
Approach LOS		B			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	13.2	44.7		4.7	36.2			18.6				18.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	16.0	51.0		4.0	39.0			23.0				23.0
Max Q Clear Time (g_c+I1), s	9.2	5.8		2.4	21.4			3.0				13.4
Green Ext Time (p_c), s	0.3	17.4		0.0	10.8			1.7				1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.0								
HCM 2010 LOS				B								
<b>Notes</b>												





























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

Existing +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	185	49	466	11	110	76	891	1132	9	48	847	143
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	296	311	1580	28	282	264	1143	2370	1007	66	1592	267
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.34	0.64	0.64	0.04	0.34	0.34
Sat Flow, veh/h	1757	1845	3136	167	1669	1568	3408	3689	1568	1757	4622	775
Grp Volume(v), veh/h	201	53	507	132	0	83	968	1230	10	52	734	342
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1836	0	1568	1704	1845	1568	1757	1845	1708
Q Serve(g_s), s	8.5	1.9	7.6	5.1	0.0	3.7	20.9	14.2	0.2	2.3	12.9	13.0
Cycle Q Clear(g_c), s	8.5	1.9	7.6	5.1	0.0	3.7	20.9	14.2	0.2	2.3	12.9	13.0
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	296	311	1580	310	0	264	1143	2370	1007	66	1271	588
V/C Ratio(X)	0.68	0.17	0.32	0.43	0.00	0.31	0.85	0.52	0.01	0.79	0.58	0.58
Avail Cap(c_a), veh/h	422	443	1804	371	0	317	1679	2797	1189	200	1398	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	28.2	11.6	29.5	0.0	28.9	24.4	7.6	5.1	37.8	21.2	21.3
Incr Delay (d2), s/veh	2.7	0.3	0.1	0.9	0.0	0.7	2.8	0.2	0.0	18.6	0.5	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.9	0.9	2.7	2.4	0.0	1.5	9.1	5.7	0.1	1.4	5.8	5.5
Lane Grp Delay (d), s/veh	33.6	28.4	11.7	30.4	0.0	29.6	27.2	7.8	5.1	56.4	21.7	22.4
Lane Grp LOS	C	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		761			215			2208			1128	
Approach Delay, s/veh		18.7			30.1			16.3			23.5	
Approach LOS		B			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		17.4			17.4		30.5	54.8		7.0		31.3
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0			16.0		39.0	60.0		9.0		30.0
Max Q Clear Time (g_c+I1), s		10.5			7.1		22.9	16.2		4.3		15.0
Green Ext Time (p_c), s		2.8			2.9		3.7	27.4		0.0		12.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr

Existing +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			 	 
Volume (veh/h)	23	0	96	0	0	0	55	472	3	0	1520	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	164	0	146	462	172	146	75	2829	1202	3	3546	62
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.04	0.77	0.77	0.00	0.65	0.65
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5422	95
Grp Volume(v), veh/h	25	0	104	0	0	0	60	513	3	0	1124	557
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	0.7	0.0	3.7	0.0	0.0	0.0	1.9	2.2	0.0	0.0	8.7	8.7
Cycle Q Clear(g_c), s	0.7	0.0	3.7	0.0	0.0	0.0	1.9	2.2	0.0	0.0	8.7	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	164	0	146	462	172	146	75	2829	1202	3	2413	1195
V/C Ratio(X)	0.15	0.00	0.71	0.00	0.00	0.00	0.79	0.18	0.00	0.00	0.47	0.47
Avail Cap(c_a), veh/h	553	0	493	1385	516	438	338	4255	1808	123	3803	1884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	0.0	25.2	0.0	0.0	0.0	27.1	1.8	1.6	0.0	4.9	4.9
Incr Delay (d2), s/veh	0.4	0.0	6.2	0.0	0.0	0.0	16.9	0.0	0.0	0.0	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	0.0	1.6	0.0	0.0	0.0	1.2	0.6	0.0	0.0	2.9	2.9
Lane Grp Delay (d), s/veh	24.3	0.0	31.4	0.0	0.0	0.0	44.0	1.8	1.6	0.0	5.1	5.2
Lane Grp LOS	C		C				D	A	A		A	A
Approach Vol, veh/h		129			0			576			1681	
Approach Delay, s/veh		30.0			0.0			6.2			5.1	
Approach LOS		C						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		9.3			9.3		6.5	47.9		0.0		41.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		11.0	66.0		4.0		59.0
Max Q Clear Time (g_c+I1), s		5.7			0.0		3.9	4.2		0.0		10.7
Green Ext Time (p_c), s		0.4			0.0		0.1	30.1		0.0		26.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			6.7									
HCM 2010 LOS			A									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Existing +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	67	121	368	376	88	65	384	77	49	1433	354
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	84	216	184	433	1167	496	90	2028	396	68	1882	461
Arrive On Green	0.05	0.12	0.12	0.25	0.32	0.32	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4499	879	1757	4297	1052
Grp Volume(v), veh/h	65	73	132	400	409	96	71	340	161	53	1336	607
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1689	1757	1845	1659
Q Serve(g_s), s	4.0	4.0	8.9	24.2	9.3	4.9	4.4	6.1	6.3	3.3	34.8	35.4
Cycle Q Clear(g_c), s	4.0	4.0	8.9	24.2	9.3	4.9	4.4	6.1	6.3	3.3	34.8	35.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		0.63
Lane Grp Cap(c), veh/h	84	216	184	433	1167	496	90	1663	761	68	1616	727
V/C Ratio(X)	0.78	0.34	0.72	0.92	0.35	0.19	0.78	0.20	0.21	0.78	0.83	0.84
Avail Cap(c_a), veh/h	161	270	230	515	1285	546	97	1663	761	145	1690	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.4	44.3	46.4	40.1	28.7	27.2	51.2	18.1	18.2	52.0	27.0	27.2
Incr Delay (d2), s/veh	14.3	0.9	7.8	20.4	0.2	0.2	31.9	0.1	0.1	17.2	3.4	7.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.1	1.9	4.0	13.3	4.3	1.9	2.8	2.7	2.6	1.8	16.7	16.1
Lane Grp Delay (d), s/veh	65.7	45.2	54.2	60.5	28.9	27.3	83.1	18.2	18.3	69.2	30.4	35.0
Lane Grp LOS	E	D	D	E	C	C	F	B	B	E	C	D
Approach Vol, veh/h		270			905			572			1996	
Approach Delay, s/veh		54.5			42.7			26.3			32.9	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	9.2	16.8		30.9	38.5		9.6	53.2		8.2	51.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	16.0		32.0	38.0		6.0	47.0		9.0	50.0	
Max Q Clear Time (g_c+I1), s	6.0	10.9		26.2	11.3		6.4	8.3		5.3	37.4	
Green Ext Time (p_c), s	0.0	1.9		0.7	4.6		0.0	27.2		0.0	10.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				35.8								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
30: Ygnacio Valley Rd & Clayton Blvd

Existing +Project AM  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	342	33	432	1138	132	147	294	163	260	1011	496
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	280	1232	0	553	1676	0	219	2019	572	353	2236	634
Arrive On Green	0.08	0.22	0.00	0.16	0.30	0.00	0.06	0.36	0.36	0.10	0.40	0.40
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	217	372	0	470	1237	0	160	320	177	283	1099	539
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	6.8	6.1	0.0	14.6	21.9	0.0	5.0	4.3	8.8	8.9	16.1	34.1
Cycle Q Clear(g_c), s	6.8	6.1	0.0	14.6	21.9	0.0	5.0	4.3	8.8	8.9	16.1	34.1
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	1232	0	553	1676	0	219	2019	572	353	2236	634
V/C Ratio(X)	0.78	0.30	0.00	0.85	0.74	0.00	0.73	0.16	0.31	0.80	0.49	0.85
Avail Cap(c_a), veh/h	344	1268	0	750	1927	0	250	2019	572	500	2384	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.1	35.3	0.0	44.4	34.1	0.0	50.1	23.4	24.8	47.8	24.2	29.5
Incr Delay (d2), s/veh	8.7	0.1	0.0	6.9	1.3	0.0	9.0	0.0	0.3	6.2	0.2	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	2.9	0.0	6.9	10.5	0.0	2.5	2.0	3.5	4.2	7.5	14.9
Lane Grp Delay (d), s/veh	57.8	35.5	0.0	51.3	35.5	0.0	59.1	23.4	25.1	54.0	24.3	39.2
Lane Grp LOS	E	D		D	D		E	C	C	D	C	D
Approach Vol, veh/h		589			1707			657			1921	
Approach Delay, s/veh		43.7			39.8			32.6			32.9	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.0	28.3		21.7	37.1		11.0	43.8		15.3	48.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	25.0		24.0	38.0		8.0	39.0		16.0	47.0	
Max Q Clear Time (g_c+I1), s	8.8	8.1		16.6	23.9		7.0	10.8		10.9	36.1	
Green Ext Time (p_c), s	0.2	10.4		1.1	9.2		0.0	16.2		0.4	8.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				36.6								
HCM 2010 LOS				D								
<b>Notes</b>												

**Intersection**

Intersection Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	688	5	9	1095	6	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	748	5	10	1190	7	29

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	753
Stage 1	-	-	-
Stage 2	-	-	-
Follow-up Headway	-	-	2.23
Pot Capacity-1 Maneuver	-	-	846
Stage 1	-	-	-
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	-	-	846
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.8
HCM LOS			B












Minor Lane / Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	179	619	-	-	846	-
HCM Lane V/C Ratio	0.036	0.047	-	-	0.012	-
HCM Control Delay (s)	25.9	11.1	-	-	9.305	-
HCM Lane LOS	D	B			A	
HCM 95th %tile Q(veh)	0.113	0.149	-	-	0.035	-

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined

HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd






















Existing +Project AM  
 3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	99	286	698	94	102	291
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	141	2129	1316	177	448	400
Arrive On Green	0.08	0.58	0.41	0.41	0.26	0.26
Sat Flow, veh/h	1757	3689	3186	428	1757	1568
Grp Volume(v), veh/h	108	311	439	422	111	316
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1769	1757	1568
Q Serve(g_s), s	2.9	1.9	8.8	8.8	2.4	9.0
Cycle Q Clear(g_c), s	2.9	1.9	8.8	8.8	2.4	9.0
Prop In Lane	1.00			0.24	1.00	1.00
Lane Grp Cap(c), veh/h	141	2129	762	731	448	400
V/C Ratio(X)	0.77	0.15	0.58	0.58	0.25	0.79
Avail Cap(c_a), veh/h	516	4411	1509	1447	921	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	4.7	10.8	10.8	14.1	16.6
Incr Delay (d2), s/veh	8.4	0.0	0.7	0.7	0.3	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	0.7	3.4	3.3	1.0	0.4
Lane Grp Delay (d), s/veh	29.9	4.7	11.5	11.5	14.4	20.1
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		419	861		427	
Approach Delay, s/veh		11.2	11.5		18.6	
Approach LOS		B	B		B	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	7.8	31.5	23.7			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	57.0	39.0			
Max Q Clear Time (g_c+I1), s	4.9	3.9	10.8			
Green Ext Time (p_c), s	0.2	10.1	8.9			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			13.2			
HCM 2010 LOS			B			
<b>Notes</b>						























HCM 2010 Signalized Intersection Summary  
33: Somersville Rd & Fairview Dr

Existing +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	0	96	0	0	0	775	709	0	2	219	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	216	0	134	66	157	0	1158	2963	0	4	478	52
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.66	0.80	0.00	0.00	0.29	0.29
Sat Flow, veh/h	1757	0	1568	1272	1845	0	1757	3689	0	1757	3273	354
Grp Volume(v), veh/h	45	0	104	0	0	0	842	771	0	2	133	131
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1272	1845	0	1757	1845	0	1757	1845	1782
Q Serve(g_s), s	2.6	0.0	7.1	0.0	0.0	0.0	34.4	5.7	0.0	0.1	6.5	6.7
Cycle Q Clear(g_c), s	2.6	0.0	7.1	0.0	0.0	0.0	34.4	5.7	0.0	0.1	6.5	6.7
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.20
Lane Grp Cap(c), veh/h	216	0	134	66	157	0	1158	2963	0	4	269	260
V/C Ratio(X)	0.21	0.00	0.78	0.00	0.00	0.00	0.73	0.26	0.00	0.53	0.49	0.50
Avail Cap(c_a), veh/h	322	0	229	143	269	0	1218	2963	0	64	269	260
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.36	0.36	0.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	47.0	0.0	49.1	0.0	0.0	0.0	12.2	2.7	0.0	54.5	35.4	35.5
Incr Delay (d2), s/veh	0.5	0.0	9.3	0.0	0.0	0.0	0.8	0.1	0.0	81.3	6.2	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	0.0	3.2	0.0	0.0	0.0	14.0	2.0	0.0	0.1	3.3	3.3
Lane Grp Delay (d), s/veh	47.5	0.0	58.4	0.0	0.0	0.0	13.0	2.8	0.0	135.8	41.7	42.2
Lane Grp LOS	D		E				B	A		F	D	D
Approach Vol, veh/h		149			0			1613			266	
Approach Delay, s/veh		55.1			0.0			8.1			42.6	
Approach LOS		E						A			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		13.4			13.4		76.2	92.0		4.2	20.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		16.0			16.0		76.0	88.0		4.0	16.0	
Max Q Clear Time (g_c+I1), s		9.1			0.0		36.4	7.7		2.1	8.7	
Green Ext Time (p_c), s		0.3			0.0		11.6	12.5		0.0	0.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.1								
HCM 2010 LOS				B								
<b>Notes</b>												



















HCM 2010 Signalized Intersection Summary  
34: Fairview Dr & Delta Fair Blvd

Existing +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	336	150	21	446	7	595	6	28	8	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	21	537	236	37	832	14	847	8	892	215	48	30
Arrive On Green	0.01	0.22	0.22	0.02	0.23	0.23	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1757	2432	1069	1757	3619	60	1291	14	1568	209	84	53
Grp Volume(v), veh/h	12	275	253	23	247	246	654	0	30	13	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1656	1757	1845	1834	1305	0	1568	346	0	0
Q Serve(g_s), s	0.4	8.7	8.9	0.8	7.5	7.6	0.0	0.0	0.5	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.4	8.7	8.9	0.8	7.5	7.6	28.5	0.0	0.5	28.8	0.0	0.0
Prop In Lane	1.00		0.65	1.00		0.03	0.99		1.00	0.69		0.15
Lane Grp Cap(c), veh/h	21	408	366	37	424	422	855	0	892	293	0	0
V/C Ratio(X)	0.57	0.68	0.69	0.62	0.58	0.58	0.77	0.00	0.03	0.04	0.00	0.00
Avail Cap(c_a), veh/h	111	495	444	111	495	492	1317	0	1410	770	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.1	22.6	22.7	30.8	21.7	21.7	12.0	0.0	6.0	12.0	0.0	0.0
Incr Delay (d2), s/veh	21.8	2.7	3.5	15.9	1.3	1.3	1.5	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	4.1	3.9	0.5	3.4	3.4	8.0	0.0	0.2	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	52.9	25.4	26.2	46.7	23.0	23.0	13.5	0.0	6.0	12.1	0.0	0.0
Lane Grp LOS	D	C	C	D	C	C	B		A	B		
Approach Vol, veh/h		540			516			684				13
Approach Delay, s/veh		26.3			24.0			13.2				12.1
Approach LOS		C			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.8	18.0		5.3	18.6			40.0				40.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	17.0		4.0	17.0			57.0				57.0
Max Q Clear Time (g_c+I1), s	2.4	10.9		2.8	9.6			30.5				30.8
Green Ext Time (p_c), s	0.0	3.1		0.0	3.6			5.3				5.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.4								
HCM 2010 LOS				C								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	145	247	194	438	744	287	168	831	286
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				201	350	292	571	1266	487	222	1687	717
Arrive On Green				0.25	0.25	0.25	0.33	1.00	1.00	0.13	0.46	0.00
Sat Flow, veh/h				820	1427	1191	3408	2539	978	1757	3689	1568
Grp Volume(v), veh/h				347	0	290	476	587	534	183	903	0
Grp Sat Flow(s),veh/h/ln				1804	0	1635	1704	1845	1672	1757	1845	1568
Q Serve(g_s), s				16.6	0.0	15.0	11.9	0.2	0.2	9.4	16.2	0.0
Cycle Q Clear(g_c), s				16.6	0.0	15.0	11.9	0.2	0.2	9.4	16.2	0.0
Prop In Lane				0.45		0.73	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h				442	0	401	571	920	834	222	1687	717
V/C Ratio(X)				0.79	0.00	0.72	0.83	0.64	0.64	0.82	0.54	0.00
Avail Cap(c_a), veh/h				743	0	673	1071	920	834	457	1687	717
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.63	0.63	0.63	1.00	1.00	0.00
Uniform Delay (d), s/veh				32.6	0.0	32.0	29.5	0.1	0.1	39.3	18.0	0.0
Incr Delay (d2), s/veh				3.1	0.0	2.5	2.1	2.2	2.4	7.5	1.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				7.9	0.0	6.4	4.5	0.6	0.6	4.6	7.6	0.0
Lane Grp Delay (d), s/veh				35.7	0.0	34.4	31.6	2.2	2.5	46.8	19.2	0.0
Lane Grp LOS				D		C	C	A	A	D	B	
Approach Vol, veh/h					637			1597			1086	
Approach Delay, s/veh					35.1			11.1			23.9	
Approach LOS					D			B			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					26.6		19.4	50.0		15.7	46.2	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					18.6		13.9	2.2		11.4	18.2	
Green Ext Time (p_c), s					4.0		1.6	22.8		0.4	15.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay											19.9	
HCM 2010 LOS											B	
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	584	0	749	0	0	0	0	870	130	128	604	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	723	759	1290				0	1520	226	267	1891	0
Arrive On Green	0.41	0.00	0.41				0.00	0.32	0.32	0.30	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4711	700	1757	3689	0
Grp Volume(v), veh/h	635	0	814				0	740	347	139	657	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1721	1757	1845	0
Q Serve(g_s), s	35.1	0.0	21.7				0.0	17.9	18.0	6.9	0.0	0.0
Cycle Q Clear(g_c), s	35.1	0.0	21.7				0.0	17.9	18.0	6.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.41	1.00		0.00
Lane Grp Cap(c), veh/h	723	759	1290				0	1191	556	267	1891	0
V/C Ratio(X)	0.88	0.00	0.63				0.00	0.62	0.62	0.52	0.35	0.00
Avail Cap(c_a), veh/h	967	1016	1727				0	1191	556	267	1891	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.83	0.83	0.00
Uniform Delay (d), s/veh	28.6	0.0	24.6				0.0	30.2	30.3	33.5	0.0	0.0
Incr Delay (d2), s/veh	7.3	0.0	0.5				0.0	2.4	5.2	1.5	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	16.6	0.0	8.5				0.0	8.7	8.6	2.9	0.1	0.0
Lane Grp Delay (d), s/veh	35.9	0.0	25.2				0.0	32.7	35.5	35.0	0.4	0.0
Lane Grp LOS	D		C					C	D	D	A	
Approach Vol, veh/h		1449						1087			796	
Approach Delay, s/veh		29.9						33.6			6.5	
Approach LOS		C						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		47.3						38.0		20.0	58.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		58.0						34.0		16.0	54.0	
Max Q Clear Time (g_c+I1), s		37.1						20.0		8.9	2.0	
Green Ext Time (p_c), s		6.2						6.3		2.8	5.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			25.5									
HCM 2010 LOS			C									
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	219	767	158	123	340	217	147	613	200	493	736	259
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	265	841	173	146	796	338	189	707	301	542	1449	616
Arrive On Green	0.15	0.28	0.28	0.08	0.22	0.22	0.11	0.19	0.19	0.31	0.39	0.39
Sat Flow, veh/h	1757	2969	612	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	238	518	488	134	370	236	160	666	217	536	800	282
Grp Sat Flow(s),veh/h/ln	1757	1845	1737	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.0	33.6	33.6	9.1	10.5	16.7	10.7	21.4	15.6	36.4	20.2	16.0
Cycle Q Clear(g_c), s	16.0	33.6	33.6	9.1	10.5	16.7	10.7	21.4	15.6	36.4	20.2	16.0
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	523	492	146	796	338	189	707	301	542	1449	616
V/C Ratio(X)	0.90	0.99	0.99	0.92	0.46	0.70	0.85	0.94	0.72	0.99	0.55	0.46
Avail Cap(c_a), veh/h	293	523	492	146	796	338	278	707	301	542	1449	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.0	42.9	42.9	54.6	41.0	43.4	52.6	47.8	45.5	41.3	28.3	27.0
Incr Delay (d2), s/veh	26.7	37.0	38.3	49.9	0.4	6.2	14.7	20.9	8.2	35.9	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.2	21.1	20.0	6.2	5.0	7.3	5.7	12.1	7.0	21.6	9.4	6.3
Lane Grp Delay (d), s/veh	76.7	79.9	81.1	104.5	41.4	49.6	67.3	68.7	53.7	77.2	28.7	27.5
Lane Grp LOS	E	E	F	F	D	D	E	E	D	E	C	C
Approach Vol, veh/h		1244			740			1043			1618	
Approach Delay, s/veh		79.8			55.5			65.4			44.6	
Approach LOS		E			E			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.1	38.0		14.0	29.9		16.9	27.0		41.0	51.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	20.0	34.0		10.0	24.0		19.0	23.0		37.0	41.0	
Max Q Clear Time (g_c+I1), s	18.0	35.6		11.1	18.7		12.7	23.4		38.4	22.2	
Green Ext Time (p_c), s	0.1	0.0		0.0	3.9		0.2	0.0		0.0	11.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				60.4								
HCM 2010 LOS				E								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Existing +Project PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	49	3	391	104	119	34	583	975	123	380	113
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	266	280	238	517	280	238	71	2358	1002	163	2552	1085
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.04	0.64	0.64	0.09	0.69	0.69
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	61	53	3	425	113	129	37	634	1060	134	413	123
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.2	2.6	0.2	12.5	5.7	7.9	2.1	7.7	66.0	7.7	4.0	2.7
Cycle Q Clear(g_c), s	3.2	2.6	0.2	12.5	5.7	7.9	2.1	7.7	66.0	7.7	4.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	266	280	238	517	280	238	71	2358	1002	163	2552	1085
V/C Ratio(X)	0.23	0.19	0.01	0.82	0.40	0.54	0.52	0.27	1.06	0.82	0.16	0.11
Avail Cap(c_a), veh/h	306	322	273	594	322	273	272	2358	1002	204	2552	1085
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	38.3	37.2	42.4	39.6	40.5	48.6	8.1	18.6	46.0	5.5	5.3
Incr Delay (d2), s/veh	0.4	0.3	0.0	8.1	0.9	1.9	5.8	0.1	44.9	18.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	1.2	0.1	5.9	2.7	3.3	1.1	3.3	36.2	4.4	1.6	0.9
Lane Grp Delay (d), s/veh	38.9	38.6	37.2	50.6	40.5	42.4	54.4	8.2	63.5	64.9	5.6	5.4
Lane Grp LOS	D	D	D	D	D	D	D	A	F	E	A	A
Approach Vol, veh/h		117			667			1731			670	
Approach Delay, s/veh		38.7			47.3			43.1			17.4	
Approach LOS		D			D			D			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		19.7			19.7		8.2	70.0		13.6		75.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			18.0		16.0	66.0		12.0		62.0
Max Q Clear Time (g_c+I1), s		5.2			14.5		4.1	68.0		9.7		6.0
Green Ext Time (p_c), s		2.6			1.2		0.0	0.0		0.1		23.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.4								
HCM 2010 LOS				D								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Existing +Project PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	89	1046	167	171	273	108	78	247	265	234	409	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	124	1248	531	219	1447	615	108	709	301	288	819	228
Arrive On Green	0.07	0.34	0.34	0.12	0.39	0.39	0.06	0.19	0.19	0.16	0.29	0.29
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2779	774
Grp Volume(v), veh/h	97	1137	182	186	297	117	85	268	288	254	294	276
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1708
Q Serve(g_s), s	4.8	26.1	7.7	9.2	4.7	4.3	4.2	5.6	16.1	12.5	11.8	12.0
Cycle Q Clear(g_c), s	4.8	26.1	7.7	9.2	4.7	4.3	4.2	5.6	16.1	12.5	11.8	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	124	1248	531	219	1447	615	108	709	301	288	543	503
V/C Ratio(X)	0.78	0.91	0.34	0.85	0.21	0.19	0.78	0.38	0.96	0.88	0.54	0.55
Avail Cap(c_a), veh/h	199	1293	550	219	1447	615	139	709	301	298	543	503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	28.0	21.9	37.9	17.8	17.6	40.9	31.1	35.3	36.1	26.2	26.2
Incr Delay (d2), s/veh	10.3	9.6	0.4	26.0	0.1	0.1	19.6	0.3	39.8	24.4	1.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.5	13.5	2.9	5.7	2.1	1.6	2.5	2.6	9.6	7.5	5.6	5.2
Lane Grp Delay (d), s/veh	50.8	37.6	22.3	63.9	17.8	17.8	60.5	31.4	75.2	60.6	27.3	27.5
Lane Grp LOS	D	D	C	E	B	B	E	C	E	E	C	C
Approach Vol, veh/h		1416			600			641			824	
Approach Delay, s/veh		36.5			32.1			54.9			37.6	
Approach LOS		D			C			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.2	33.9		15.0	38.7		9.5	21.0		18.5	30.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	31.0		11.0	32.0		7.0	17.0		15.0	25.0	
Max Q Clear Time (g_c+I1), s	6.8	28.1		11.2	6.7		6.2	18.1		14.5	14.0	
Green Ext Time (p_c), s	0.1	1.9		0.0	13.3		0.0	0.0		0.0	4.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St




























Existing +Project PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	997	27	21	546	86	16	38	8	130	74	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	151	1249	33	32	1163	989	25	76	17	167	104	120
Arrive On Green	0.09	0.70	0.70	0.02	0.63	0.63	0.01	0.05	0.05	0.10	0.13	0.13
Sat Flow, veh/h	1757	1788	48	1757	1845	1568	1757	1466	322	1757	784	902
Grp Volume(v), veh/h	76	0	1113	23	593	93	17	0	50	141	0	172
Grp Sat Flow(s),veh/h/ln	1757	0	1836	1757	1845	1568	1757	0	1788	1757	0	1686
Q Serve(g_s), s	4.8	0.0	54.4	1.5	20.5	1.5	1.1	0.0	3.2	9.3	0.0	11.6
Cycle Q Clear(g_c), s	4.8	0.0	54.4	1.5	20.5	1.5	1.1	0.0	3.2	9.3	0.0	11.6
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	151	0	1283	32	1163	989	25	0	93	167	0	223
V/C Ratio(X)	0.50	0.00	0.87	0.73	0.51	0.09	0.67	0.00	0.54	0.84	0.00	0.77
Avail Cap(c_a), veh/h	180	0	1283	60	1163	989	75	0	244	180	0	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.00	0.36	0.70	0.70	0.70	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.2	0.0	13.5	57.3	11.8	2.7	57.6	0.0	54.3	52.2	0.0	49.2
Incr Delay (d2), s/veh	0.9	0.0	3.2	19.8	1.1	0.1	26.1	0.0	4.8	27.5	0.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	0.0	22.2	0.9	8.8	1.0	0.7	0.0	1.6	5.5	0.0	5.4
Lane Grp Delay (d), s/veh	52.2	0.0	16.7	77.1	12.9	2.8	83.6	0.0	59.1	79.8	0.0	55.5
Lane Grp LOS	D		B	E	B	A	F		E	E		E
Approach Vol, veh/h		1189			709			67				313
Approach Delay, s/veh		19.0			13.7			65.3				66.4
Approach LOS		B			B			E				E
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	14.1	86.0		6.1	78.0		5.7	10.1		15.2		19.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	82.0		4.0	74.0		5.0	16.0		12.0		23.0
Max Q Clear Time (g_c+I1), s	6.8	56.4		3.5	22.5		3.1	5.2		11.3		13.6
Green Ext Time (p_c), s	0.1	10.9		0.0	4.7		0.0	0.9		0.0		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.2								
HCM 2010 LOS				C								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

Existing +Project PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 						 	
Volume (veh/h)	28	643	22	582	254	80	39	23	224	69	58	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	44	1457	50	982	2487	1057	307	322	274	307	272	43
Arrive On Green	0.02	0.41	0.41	0.29	0.67	0.67	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1757	3546	122	3408	3689	1568	1757	1845	1568	1757	1554	247
Grp Volume(v), veh/h	30	363	360	633	276	87	42	25	243	75	0	73
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1801
Q Serve(g_s), s	1.6	13.7	13.7	15.4	2.5	1.8	1.9	1.1	14.4	3.5	0.0	3.3
Cycle Q Clear(g_c), s	1.6	13.7	13.7	15.4	2.5	1.8	1.9	1.1	14.4	3.5	0.0	3.3
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	44	758	749	982	2487	1057	307	322	274	307	0	315
V/C Ratio(X)	0.69	0.48	0.48	0.64	0.11	0.08	0.14	0.08	0.89	0.24	0.00	0.23
Avail Cap(c_a), veh/h	111	758	749	1113	2487	1057	333	350	297	307	0	315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.9	20.5	20.5	29.5	5.5	5.3	33.1	32.8	38.3	33.8	0.0	33.7
Incr Delay (d2), s/veh	17.5	2.2	2.2	0.9	0.1	0.1	0.2	0.1	24.7	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	6.6	6.5	6.6	1.0	0.6	0.9	0.5	7.6	1.6	0.0	1.6
Lane Grp Delay (d), s/veh	63.4	22.7	22.7	30.5	5.5	5.5	33.3	32.9	63.0	34.2	0.0	34.1
Lane Grp LOS	E	C	C	C	A	A	C	C	E	C		C
Approach Vol, veh/h		753			996			310				148
Approach Delay, s/veh		24.3			21.4			56.5				34.1
Approach LOS		C			C			E				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.4	43.0		31.4	68.0			20.6				20.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	39.0		31.0	64.0			18.0				16.0
Max Q Clear Time (g_c+I1), s	3.6	15.7		17.4	4.5			16.4				5.5
Green Ext Time (p_c), s	0.7	4.7		2.2	2.3			0.2				1.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.2								
HCM 2010 LOS				C								
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
9: Lovridge Rd & California Ave/N Park Blvd

Existing +Project PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	297	281	329	78	154	17	433	550	197	17	175	256
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	454	527	448	166	658	70	858	1082	387	30	671	285
Arrive On Green	0.13	0.29	0.29	0.05	0.20	0.20	0.25	0.42	0.42	0.02	0.18	0.18
Sat Flow, veh/h	3408	1845	1568	3408	3279	349	3408	2598	928	1757	3689	1568
Grp Volume(v), veh/h	323	305	358	85	93	92	471	424	388	18	190	278
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1783	1704	1845	1681	1757	1845	1568
Q Serve(g_s), s	6.2	9.7	14.6	1.7	2.9	3.0	8.3	12.0	12.0	0.7	3.1	8.4
Cycle Q Clear(g_c), s	6.2	9.7	14.6	1.7	2.9	3.0	8.3	12.0	12.0	0.7	3.1	8.4
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	454	527	448	166	370	358	858	768	700	30	671	285
V/C Ratio(X)	0.71	0.58	0.80	0.51	0.25	0.26	0.55	0.55	0.55	0.61	0.28	0.98
Avail Cap(c_a), veh/h	1089	992	843	396	616	596	1436	1421	1294	153	1608	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	21.1	22.8	31.9	23.2	23.2	22.4	15.2	15.2	33.6	24.3	13.5
Incr Delay (d2), s/veh	2.1	1.0	3.3	2.4	0.4	0.4	0.6	0.6	0.7	18.2	0.2	19.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	4.5	5.8	0.8	1.4	1.3	3.5	5.3	4.9	0.5	1.4	4.5
Lane Grp Delay (d), s/veh	30.6	22.1	26.1	34.4	23.5	23.6	22.9	15.8	15.9	51.8	24.5	33.0
Lane Grp LOS	C	C	C	C	C	C	C	B	B	D	C	C
Approach Vol, veh/h		986			270			1283			486	
Approach Delay, s/veh		26.3			26.9			18.5			30.4	
Approach LOS		C			C			B			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.2	23.6		7.3	17.8		21.3	32.7		5.2	16.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	22.0	37.0		8.0	23.0		29.0	53.0		6.0	30.0	
Max Q Clear Time (g_c+I1), s	8.2	16.6		3.7	5.0		10.3	14.0		2.7	10.4	
Green Ext Time (p_c), s	1.0	3.1		0.5	1.2		7.1	8.7		0.0	2.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	759	0	451	0	0	0	0	631	355	124	459	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1265	0	582				0	1523	647	352	2043	0
Arrive On Green	0.37	0.00	0.37				0.00	0.41	0.41	0.10	0.55	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	825	0	490				0	686	386	135	499	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	21.4	0.0	30.5				0.0	14.3	20.4	3.9	7.4	0.0
Cycle Q Clear(g_c), s	21.4	0.0	30.5				0.0	14.3	20.4	3.9	7.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1265	0	582				0	1523	647	352	2043	0
V/C Ratio(X)	0.65	0.00	0.84				0.00	0.45	0.60	0.38	0.24	0.00
Avail Cap(c_a), veh/h	1695	0	780				0	1523	647	352	2043	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	27.8	0.0	30.6				0.0	22.6	24.4	44.6	12.3	0.0
Incr Delay (d2), s/veh	0.6	0.0	6.3				0.0	1.0	4.0	0.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.2	0.0	12.9				0.0	6.7	8.7	1.8	3.3	0.0
Lane Grp Delay (d), s/veh	28.4	0.0	37.0				0.0	23.5	28.4	45.2	12.5	0.0
Lane Grp LOS	C		D					C	C	D	B	
Approach Vol, veh/h		1315						1072			634	
Approach Delay, s/veh		31.6						25.3			19.5	
Approach LOS		C						C			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		43.6						48.0		15.0	63.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		53.0						44.0		11.0	59.0	
Max Q Clear Time (g_c+I1), s		32.5						22.4		5.9	9.4	
Green Ext Time (p_c), s		7.1						6.4		1.7	4.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			26.8									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

Existing +Project PM  
 3/15/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	503	1039	237	195	379	132	205	426	139	232	360	114
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	657	1553	660	287	1153	490	262	835	355	332	645	274
Arrive On Green	0.19	0.42	0.42	0.08	0.31	0.31	0.15	0.23	0.23	0.10	0.17	0.17
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	547	1129	258	212	412	143	223	463	151	252	391	124
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	14.4	23.9	10.7	5.7	8.1	6.5	11.6	10.4	7.7	6.7	9.1	6.6
Cycle Q Clear(g_c), s	14.4	23.9	10.7	5.7	8.1	6.5	11.6	10.4	7.7	6.7	9.1	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	657	1553	660	287	1153	490	262	835	355	332	645	274
V/C Ratio(X)	0.83	0.73	0.39	0.74	0.36	0.29	0.85	0.55	0.43	0.76	0.61	0.45
Avail Cap(c_a), veh/h	984	1894	805	401	1262	537	413	1223	520	510	907	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	22.6	18.8	41.8	24.9	24.3	38.8	32.0	31.0	41.1	35.6	34.6
Incr Delay (d2), s/veh	3.9	1.1	0.4	4.5	0.2	0.3	9.6	0.6	0.8	3.6	0.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.6	11.1	4.1	2.7	3.7	2.5	5.8	4.9	3.1	3.1	4.4	2.7
Lane Grp Delay (d), s/veh	40.2	23.7	19.1	46.3	25.1	24.6	48.4	32.6	31.8	44.7	36.5	35.7
Lane Grp LOS	D	C	B	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1934			767			837			767	
Approach Delay, s/veh		27.8			30.9			36.7			39.1	
Approach LOS		C			C			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.0	43.4		11.9	33.2		17.9	25.2		13.1	20.3	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	27.0	48.0		11.0	32.0		22.0	31.0		14.0	23.0	
Max Q Clear Time (g_c+I1), s	16.4	25.9		7.7	10.1		13.6	12.4		8.7	11.1	
Green Ext Time (p_c), s	1.6	13.5		0.2	13.4		0.4	6.6		0.4	5.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				32.1								
HCM 2010 LOS				C								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

Existing +Project PM  
 3/15/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	129	938	442	234	389	249
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	167	1240	1005	854	462	413
Arrive On Green	0.10	0.67	0.54	0.54	0.26	0.26
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	140	1020	480	254	423	271
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	9.7	50.1	19.8	10.9	28.9	19.0
Cycle Q Clear(g_c), s	9.7	50.1	19.8	10.9	28.9	19.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	167	1240	1005	854	462	413
V/C Ratio(X)	0.84	0.82	0.48	0.30	0.91	0.66
Avail Cap(c_a), veh/h	256	1240	1005	854	555	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.87	0.87	1.00	1.00
Uniform Delay (d), s/veh	54.9	14.9	17.3	15.3	44.2	40.5
Incr Delay (d2), s/veh	9.1	4.1	1.4	0.8	17.9	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.7	21.5	8.9	4.2	15.2	0.3
Lane Grp Delay (d), s/veh	64.1	18.9	18.7	16.1	62.1	42.9
Lane Grp LOS	E	B	B	B	E	D
Approach Vol, veh/h		1160	734		694	
Approach Delay, s/veh		24.4	17.8		54.6	
Approach LOS		C	B		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	15.7	87.0	71.3			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	18.0	83.0	61.0			
Max Q Clear Time (g_c+I1), s	11.7	52.1	21.8			
Green Ext Time (p_c), s	0.2	15.7	17.5			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			30.6			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
13: Ventura Dr & Buchanan Rd

Existing +Project PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	1259	90	12	626	11	70	20	40	178	93	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	21	1383	1175	21	1355	24	156	76	149	194	210	35
Arrive On Green	0.01	0.75	0.75	0.01	0.75	0.75	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1757	1845	1568	1757	1807	32	1256	559	1093	1318	1540	259
Grp Volume(v), veh/h	7	1368	98	13	0	692	76	0	65	193	0	118
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1839	1256	0	1652	1318	0	1799
Q Serve(g_s), s	0.5	84.3	2.0	0.9	0.0	17.7	7.0	0.0	4.2	11.8	0.0	7.1
Cycle Q Clear(g_c), s	0.5	84.3	2.0	0.9	0.0	17.7	14.1	0.0	4.2	16.0	0.0	7.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.66	1.00		0.14
Lane Grp Cap(c), veh/h	21	1383	1175	21	0	1379	156	0	225	194	0	245
V/C Ratio(X)	0.34	0.99	0.08	0.63	0.00	0.50	0.49	0.00	0.29	0.99	0.00	0.48
Avail Cap(c_a), veh/h	60	1383	1175	60	0	1379	156	0	225	194	0	245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	0.91	0.00	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.5	14.2	3.9	57.7	0.0	5.9	53.4	0.0	45.6	54.6	0.0	46.9
Incr Delay (d2), s/veh	3.9	13.3	0.1	25.1	0.0	1.2	2.3	0.0	0.7	62.4	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	35.9	0.6	0.5	0.0	6.8	2.4	0.0	1.8	9.2	0.0	3.4
Lane Grp Delay (d), s/veh	61.5	27.5	4.0	82.8	0.0	7.1	55.7	0.0	46.3	117.0	0.0	48.3
Lane Grp LOS	E	C	A	F		A	E		D	F		D
Approach Vol, veh/h		1473			705			141			311	
Approach Delay, s/veh		26.1			8.5			51.4			90.9	
Approach LOS		C			A			D			F	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.4	92.0		5.4	92.0			20.0			20.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	4.0	88.0		4.0	88.0			16.0			16.0	
Max Q Clear Time (g_c+I1), s	2.5	86.3		2.9	19.7			16.1			18.0	
Green Ext Time (p_c), s	1.4	1.5		0.0	5.6			0.0			0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 15: Tuscany Meadows Dr & Buchanan Rd

Existing +Project PM  
 3/15/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1440	77	94	674	45	55
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1485	1262	73	1622	95	85
Arrive On Green	1.00	1.00	0.08	1.00	0.05	0.05
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1565	84	102	733	49	60
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	97.0	0.0	5.0	0.0	3.3	4.5
Cycle Q Clear(g_c), s	97.0	0.0	5.0	0.0	3.3	4.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1485	1262	73	1622	95	85
V/C Ratio(X)	1.05	0.07	1.40	0.45	0.51	0.71
Avail Cap(c_a), veh/h	1485	1262	73	1622	233	208
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.85	0.85	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	55.3	0.0	55.5	56.1
Incr Delay (d2), s/veh	26.3	0.0	236.0	0.8	4.3	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.9	0.0	6.9	0.4	1.6	2.1
Lane Grp Delay (d), s/veh	26.3	0.0	291.2	0.8	59.7	66.3
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1649			835	109	
Approach Delay, s/veh	25.0			36.3	63.3	
Approach LOS	C			D	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	101.0		9.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	97.0		5.0	106.0		
Max Q Clear Time (g_c+I1), s	99.0		7.0	2.0		
Green Ext Time (p_c), s	0.0		0.0	67.8		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			30.2			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 17: Proposed Apartments & Buchanan Rd























Existing +Project PM  
 3/15/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1529	66	80	782	36	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1515	1288	59	1639	78	70
Arrive On Green	1.00	1.00	0.03	0.89	0.04	0.04
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1662	72	87	850	39	47
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	98.0	0.0	4.0	11.4	2.6	3.5
Cycle Q Clear(g_c), s	98.0	0.0	4.0	11.4	2.6	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1515	1288	59	1639	78	70
V/C Ratio(X)	1.10	0.06	1.48	0.52	0.50	0.67
Avail Cap(c_a), veh/h	1515	1288	59	1639	236	210
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	57.7	1.4	55.7	56.1
Incr Delay (d2), s/veh	44.8	0.0	285.8	1.2	4.8	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	18.9	0.0	6.5	2.7	1.3	1.6
Lane Grp Delay (d), s/veh	44.8	0.0	343.5	2.6	60.5	66.8
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1734			937	86	
Approach Delay, s/veh	43.0			34.2	63.9	
Approach LOS	D			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	102.0		8.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	98.0		4.0	106.0		
Max Q Clear Time (g_c+I1), s	100.0		6.0	13.4		
Green Ext Time (p_c), s	0.0		0.0	7.4		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			40.7			
HCM 2010 LOS			D			
<b>Notes</b>						















HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	339	125	233	196	63	22	399	499	118	24	744	166
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	689	373	317	689	263	93	829	2801	646	37	1852	409
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.41	1.00	1.00	0.02	0.42	0.42
Sat Flow, veh/h	3408	1845	1568	3408	1303	460	3408	4353	1004	1757	4393	970
Grp Volume(v), veh/h	368	136	253	213	0	92	434	457	213	26	678	311
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1763	1704	1845	1668	1757	1845	1674
Q Serve(g_s), s	8.7	5.7	13.8	4.8	0.0	4.0	8.7	0.0	0.0	1.3	11.7	11.9
Cycle Q Clear(g_c), s	8.7	5.7	13.8	4.8	0.0	4.0	8.7	0.0	0.0	1.3	11.7	11.9
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.60	1.00		0.58
Lane Grp Cap(c), veh/h	689	373	317	689	0	356	829	2374	1073	37	1555	706
V/C Ratio(X)	0.53	0.36	0.80	0.31	0.00	0.26	0.52	0.19	0.20	0.70	0.44	0.44
Avail Cap(c_a), veh/h	832	450	383	689	0	356	983	2374	1073	117	1555	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	31.0	34.2	30.6	0.0	30.3	22.8	0.0	0.0	43.8	18.5	18.5
Incr Delay (d2), s/veh	0.6	0.6	9.5	0.3	0.0	0.4	0.5	0.2	0.4	20.8	0.9	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	2.7	6.2	2.1	0.0	1.8	3.3	0.1	0.1	0.8	5.5	5.2
Lane Grp Delay (d), s/veh	32.8	31.6	43.7	30.9	0.0	30.6	23.3	0.2	0.4	64.6	19.4	20.5
Lane Grp LOS	C	C	D	C		C	C	A	A	E	B	C
Approach Vol, veh/h		757			305			1104			1015	
Approach Delay, s/veh		36.2			30.8			9.3			20.9	
Approach LOS		D			C			A			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		22.2			22.2		25.9	62.0		5.9		42.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		22.0			18.0		26.0	58.0		6.0		38.0
Max Q Clear Time (g_c+I1), s		15.8			6.8		10.7	2.0		3.3		13.9
Green Ext Time (p_c), s		2.4			3.5		5.5	7.4		0.0		7.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.5								
HCM 2010 LOS				C								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Existing +Project PM  
 3/15/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	340	422	287	584	892	278
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	1105	509	662	3329	2049	581
Arrive On Green	0.32	0.32	0.39	1.00	0.37	0.37
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	370	459	312	635	970	302
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	8.9	30.2	7.4	0.0	14.5	16.2
Cycle Q Clear(g_c), s	8.9	30.2	7.4	0.0	14.5	16.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1105	509	662	3329	2049	581
V/C Ratio(X)	0.33	0.90	0.47	0.19	0.47	0.52
Avail Cap(c_a), veh/h	1483	682	662	3329	2049	581
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.96	0.96	0.83	0.83
Uniform Delay (d), s/veh	27.7	34.9	28.9	0.0	26.0	26.5
Incr Delay (d2), s/veh	0.2	12.4	0.5	0.1	0.7	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.8	1.8	2.9	0.0	6.9	6.8
Lane Grp Delay (d), s/veh	27.8	47.3	29.4	0.1	26.6	29.3
Lane Grp LOS	C	D	C	A	C	C
Approach Vol, veh/h	829			947	1272	
Approach Delay, s/veh	38.6			9.8	27.3	
Approach LOS	D			A	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			25.0	69.0	44.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			21.0	65.0	40.0	
Max Q Clear Time (g_c+I1), s			9.4	2.0	18.2	
Green Ext Time (p_c), s			4.3	6.6	8.5	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			24.9			
HCM 2010 LOS			C			
<b>Notes</b>						
























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	245	385	434	0	0	0	0	742	629	428	969	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	867	469	797				0	2724	772	517	3752	0
Arrive On Green	0.25	0.25	0.25				0.00	0.98	0.98	0.30	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	266	418	472				0	807	684	465	1053	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.4	25.8	15.6				0.0	0.4	6.3	15.4	0.0	0.0
Cycle Q Clear(g_c), s	7.4	25.8	15.6				0.0	0.4	6.3	15.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	867	469	797				0	2724	772	517	3752	0
V/C Ratio(X)	0.31	0.89	0.59				0.00	0.30	0.89	0.90	0.28	0.00
Avail Cap(c_a), veh/h	924	500	850				0	2724	772	578	3752	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.78	0.78	0.87	0.87	0.00
Uniform Delay (d), s/veh	35.6	42.4	38.6				0.0	0.5	0.5	40.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	17.3	1.0				0.0	0.2	11.5	14.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	14.6	6.4				0.0	0.2	2.8	7.0	0.1	0.0
Lane Grp Delay (d), s/veh	35.8	59.7	39.6				0.0	0.7	12.0	54.4	0.2	0.0
Lane Grp LOS	D	E	D					A	B	D	A	
Approach Vol, veh/h		1156						1491			1518	
Approach Delay, s/veh		46.0						5.9			16.8	
Approach LOS		D						A			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		34.0						62.1		21.9	84.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		32.0						56.0		20.0	80.0	
Max Q Clear Time (g_c+I1), s		27.8						8.3		17.4	2.0	
Green Ext Time (p_c), s		2.2						28.3		0.5	35.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			21.0									
HCM 2010 LOS			C									
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	480	420	34	47	128	366	51	659	24	382	674	263
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1148	567	46	592	621	528	70	1689	61	656	1737	738
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.01	0.10	0.10	0.38	0.94	0.94
Sat Flow, veh/h	3408	1684	136	1757	1845	1568	1757	5308	192	3408	3689	1568
Grp Volume(v), veh/h	522	0	494	51	139	398	55	497	245	415	733	286
Grp Sat Flow(s),veh/h/ln	1704	0	1821	1757	1845	1568	1757	1845	1811	1704	1845	1568
Q Serve(g_s), s	9.4	0.0	19.4	1.6	4.2	17.7	2.5	9.9	10.0	7.8	1.5	1.3
Cycle Q Clear(g_c), s	9.4	0.0	19.4	1.6	4.2	17.7	2.5	9.9	10.0	7.8	1.5	1.3
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	1148	0	613	592	621	528	70	1174	576	656	1737	738
V/C Ratio(X)	0.45	0.00	0.81	0.09	0.22	0.75	0.79	0.42	0.43	0.63	0.42	0.39
Avail Cap(c_a), veh/h	1692	0	904	592	621	528	134	1174	576	781	1737	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.96	0.96	0.96	0.97	0.97	0.97	0.93	0.93	0.93
Uniform Delay (d), s/veh	20.4	0.0	23.7	17.8	18.7	23.2	38.4	28.4	28.4	21.9	1.3	1.3
Incr Delay (d2), s/veh	0.3	0.0	3.4	0.1	0.2	5.8	17.1	1.1	2.2	1.2	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.0	0.0	9.2	0.7	1.9	7.5	1.4	5.1	5.2	2.8	0.6	0.6
Lane Grp Delay (d), s/veh	20.7	0.0	27.1	17.9	18.9	29.0	55.6	29.5	30.7	23.1	2.0	2.7
Lane Grp LOS	C		C	B	B	C	E	C	C	C	A	A
Approach Vol, veh/h		1016			588			797			1434	
Approach Delay, s/veh		23.8			25.6			31.7			8.2	
Approach LOS		C			C			C			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		30.5			30.5		7.1	29.0		19.1		41.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		39.0			22.0		6.0	25.0		18.0		37.0
Max Q Clear Time (g_c+I1), s		21.4			19.7		4.5	12.0		9.8		3.5
Green Ext Time (p_c), s		5.1			1.6		0.0	4.0		4.7		9.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.9								
HCM 2010 LOS				B								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	347	429	696	43	197	115	272	305	29	235	636	343
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	1	1	1	1	1	2	0	1	2	0
Cap, veh/h	400	1200	510	60	243	206	312	1134	109	287	740	399
Arrive On Green	0.23	0.33	0.00	0.03	0.13	0.00	0.18	0.34	0.34	0.16	0.33	0.33
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3316	317	1757	2257	1217
Grp Volume(v), veh/h	377	466	0	47	214	0	296	184	180	255	565	499
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1789	1757	1845	1630
Q Serve(g_s), s	24.9	11.5	0.0	3.1	13.5	0.0	19.7	8.6	8.7	16.8	35.1	35.1
Cycle Q Clear(g_c), s	24.9	11.5	0.0	3.1	13.5	0.0	19.7	8.6	8.7	16.8	35.1	35.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.75
Lane Grp Cap(c), veh/h	400	1200	510	60	243	206	312	631	612	287	605	534
V/C Ratio(X)	0.94	0.39	0.00	0.78	0.88	0.00	0.95	0.29	0.29	0.89	0.93	0.93
Avail Cap(c_a), veh/h	401	1200	510	119	250	212	312	631	612	416	624	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	30.8	0.0	56.7	50.5	0.0	48.1	28.4	28.5	48.4	38.5	38.5
Incr Delay (d2), s/veh	30.4	0.2	0.0	19.2	28.2	0.0	37.5	0.3	0.3	15.2	21.0	23.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	14.4	5.3	0.0	1.8	8.3	0.0	12.2	4.0	4.0	8.8	20.0	18.0
Lane Grp Delay (d), s/veh	75.3	31.0	0.0	75.9	78.6	0.0	85.6	28.7	28.7	63.6	59.5	61.6
Lane Grp LOS	E	C		E	E		F	C	C	E	E	E
Approach Vol, veh/h		843			261			660			1319	
Approach Delay, s/veh		50.8			78.1			54.2			61.1	
Approach LOS		D			E			D			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	31.0	42.5		8.1	19.6		25.0	44.5		23.3	42.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	27.0	35.0		8.0	16.0		21.0	33.0		28.0	40.0	
Max Q Clear Time (g_c+I1), s	26.9	13.5		5.1	15.5		21.7	10.7		18.8	37.1	
Green Ext Time (p_c), s	0.0	4.1		0.0	0.1		0.0	10.4		0.5	1.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				58.3								
HCM 2010 LOS				E								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 23: Sequoia Dr & Somersville Rd

Existing +Project PM  
 3/15/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	143	26	39	463	1132	243
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	216	193	341	2672	2672	1136
Arrive On Green	0.12	0.12	0.72	0.72	0.72	0.72
Sat Flow, veh/h	1757	1568	347	3689	3689	1568
Grp Volume(v), veh/h	155	28	42	503	1230	264
Grp Sat Flow(s),veh/h/ln	1757	1568	347	1845	1845	1568
Q Serve(g_s), s	4.5	0.8	3.0	2.3	7.2	2.9
Cycle Q Clear(g_c), s	4.5	0.8	10.2	2.3	7.2	2.9
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	216	193	341	2672	2672	1136
V/C Ratio(X)	0.72	0.15	0.12	0.19	0.46	0.23
Avail Cap(c_a), veh/h	971	867	639	5838	5838	2481
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	20.5	5.1	2.3	3.0	2.4
Incr Delay (d2), s/veh	4.4	0.3	0.2	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.1	0.3	0.2	0.6	2.1	0.7
Lane Grp Delay (d), s/veh	26.5	20.9	5.3	2.3	3.1	2.5
Lane Grp LOS	C	C	A	A	A	A
Approach Vol, veh/h	183			545	1494	
Approach Delay, s/veh	25.6			2.6	3.0	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				42.0	42.0	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				83.0	83.0	
Max Q Clear Time (g_c+I1), s				12.2	9.2	
Green Ext Time (p_c), s				25.8	26.0	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			4.8			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd




















Existing +Project PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	63	386	145	89	218	71	80	245	24	247	404	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	467	981	365	344	1027	325	406	783	76	529	873	742
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1051	2566	955	824	2688	851	895	1654	162	1072	1845	1568
Grp Volume(v), veh/h	68	301	277	97	161	153	87	0	292	268	439	50
Grp Sat Flow(s),veh/h/ln	1051	1845	1676	824	1845	1694	895	0	1816	1072	1845	1568
Q Serve(g_s), s	2.6	6.6	6.8	5.5	3.3	3.4	4.1	0.0	5.6	11.6	9.1	1.0
Cycle Q Clear(g_c), s	6.0	6.6	6.8	12.2	3.3	3.4	13.2	0.0	5.6	17.1	9.1	1.0
Prop In Lane	1.00		0.57	1.00		0.50	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	467	705	641	344	705	648	406	0	859	529	873	742
V/C Ratio(X)	0.15	0.43	0.43	0.28	0.23	0.24	0.21	0.00	0.34	0.51	0.50	0.07
Avail Cap(c_a), veh/h	922	1502	1365	701	1502	1380	1068	0	2202	1322	2237	1901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	12.6	12.6	17.2	11.5	11.6	14.6	0.0	9.1	14.5	10.1	7.9
Incr Delay (d2), s/veh	0.1	0.4	0.5	0.4	0.2	0.2	0.3	0.0	0.2	0.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	2.8	2.6	1.1	1.4	1.3	0.9	0.0	2.2	2.9	3.8	0.3
Lane Grp Delay (d), s/veh	13.8	13.0	13.1	17.6	11.7	11.8	14.9	0.0	9.4	15.3	10.5	8.0
Lane Grp LOS	B	B	B	B	B	B	B		A	B	B	A
Approach Vol, veh/h		646			411			379			757	
Approach Delay, s/veh		13.1			13.1			10.6			12.0	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		25.1			25.1			30.1			30.1	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		45.0			45.0			67.0			67.0	
Max Q Clear Time (g_c+I1), s		8.8			14.2			15.2			19.1	
Green Ext Time (p_c), s		7.1			6.9			7.0			7.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Existing +Project PM
























3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	102	1032	7	24	560	110	4	17	7	219	19	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	145	1897	14	42	1378	271	95	284	111	442	55	334
Arrive On Green	0.08	0.52	0.52	0.02	0.46	0.46	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1757	3659	26	1757	2996	589	89	1171	458	1366	226	1376
Grp Volume(v), veh/h	111	566	564	26	374	355	30	0	0	238	0	149
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1741	1718	0	0	1366	0	1602
Q Serve(g_s), s	3.4	11.9	11.9	0.8	7.7	7.7	0.0	0.0	0.0	9.1	0.0	4.3
Cycle Q Clear(g_c), s	3.4	11.9	11.9	0.8	7.7	7.7	0.7	0.0	0.0	9.8	0.0	4.3
Prop In Lane	1.00		0.01	1.00		0.34	0.13		0.27	1.00		0.86
Lane Grp Cap(c), veh/h	145	956	954	42	848	801	490	0	0	442	0	388
V/C Ratio(X)	0.77	0.59	0.59	0.62	0.44	0.44	0.06	0.00	0.00	0.54	0.00	0.38
Avail Cap(c_a), veh/h	410	1358	1354	158	1093	1031	1039	0	0	896	0	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	9.3	9.3	26.9	10.2	10.2	16.3	0.0	0.0	20.0	0.0	17.6
Incr Delay (d2), s/veh	8.3	0.6	0.6	14.2	0.4	0.4	0.1	0.0	0.0	1.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.8	4.6	4.5	0.5	3.2	3.0	0.3	0.0	0.0	3.0	0.0	1.7
Lane Grp Delay (d), s/veh	33.3	9.9	9.9	41.1	10.6	10.6	16.3	0.0	0.0	21.1	0.0	18.2
Lane Grp LOS	C	A	A	D	B	B	B			C		B
Approach Vol, veh/h		1241			755			30				387
Approach Delay, s/veh		12.0			11.6			16.3				20.0
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	8.6	32.9		5.3	29.6			17.5				17.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	13.0	41.0		5.0	33.0			32.0				32.0
Max Q Clear Time (g_c+I1), s	5.4	13.9		2.8	9.7			2.7				11.8
Green Ext Time (p_c), s	0.1	15.0		0.0	13.7			1.9				1.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				13.2								
HCM 2010 LOS				B								
<b>Notes</b>												






























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	143	120	1025	12	59	68	697	751	9	71	1136	230
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	322	338	1392	57	278	287	889	2299	977	99	1873	379
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.26	0.62	0.62	0.06	0.42	0.42
Sat Flow, veh/h	1757	1845	3136	309	1520	1568	3408	3689	1568	1757	4470	905
Grp Volume(v), veh/h	155	130	1114	77	0	74	758	816	10	77	1019	466
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1829	0	1568	1704	1845	1568	1757	1845	1685
Q Serve(g_s), s	6.9	5.4	16.0	3.1	0.0	3.5	18.5	9.4	0.2	3.8	19.4	19.4
Cycle Q Clear(g_c), s	6.9	5.4	16.0	3.1	0.0	3.5	18.5	9.4	0.2	3.8	19.4	19.4
Prop In Lane	1.00		1.00	0.17		1.00	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	322	338	1392	335	0	287	889	2299	977	99	1546	706
V/C Ratio(X)	0.48	0.39	0.80	0.23	0.00	0.26	0.85	0.35	0.01	0.77	0.66	0.66
Avail Cap(c_a), veh/h	322	338	1392	335	0	287	1209	2532	1076	241	1730	790
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	31.4	21.0	30.5	0.0	30.6	30.7	8.0	6.2	40.7	20.4	20.4
Incr Delay (d2), s/veh	1.1	0.7	3.4	0.3	0.0	0.5	4.6	0.1	0.0	12.0	0.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.2	2.6	10.5	1.5	0.0	1.4	8.4	3.8	0.1	2.0	8.7	8.1
Lane Grp Delay (d), s/veh	33.1	32.1	24.4	30.8	0.0	31.1	35.3	8.1	6.3	52.7	21.2	22.1
Lane Grp LOS	C	C	C	C		C	D	A	A	D	C	C
Approach Vol, veh/h		1399			151			1584			1562	
Approach Delay, s/veh		26.1			30.9			21.1			23.0	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		20.0			20.0		26.8	58.5		8.9		40.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		31.0	60.0		12.0		41.0
Max Q Clear Time (g_c+I1), s		18.0			5.5		20.5	11.4		5.8		21.4
Green Ext Time (p_c), s		0.0			5.3		2.3	28.8		0.1		15.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.5								
HCM 2010 LOS				C								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr

Existing +Project PM  
3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	50	0	42	2	0	1	49	1856	3	0	626	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	95	0	85	268	100	85	66	3051	1297	3	3970	58
Arrive On Green	0.05	0.00	0.05	0.05	0.00	0.05	0.04	0.83	0.83	0.00	0.73	0.73
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5440	80
Grp Volume(v), veh/h	54	0	46	2	0	1	53	2017	3	0	461	229
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1831
Q Serve(g_s), s	2.0	0.0	1.9	0.0	0.0	0.0	2.0	14.0	0.0	0.0	2.6	2.6
Cycle Q Clear(g_c), s	2.0	0.0	1.9	0.0	0.0	0.0	2.0	14.0	0.0	0.0	2.6	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	95	0	85	268	100	85	66	3051	1297	3	2693	1336
V/C Ratio(X)	0.57	0.00	0.54	0.01	0.00	0.01	0.80	0.66	0.00	0.00	0.17	0.17
Avail Cap(c_a), veh/h	417	0	373	1177	438	373	235	3726	1583	104	3452	1713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	0.0	31.0	30.1	0.0	30.1	32.1	2.2	1.0	0.0	2.8	2.8
Incr Delay (d2), s/veh	5.2	0.0	5.3	0.0	0.0	0.1	19.1	0.3	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	0.0	0.9	0.0	0.0	0.0	1.2	3.2	0.0	0.0	0.8	0.8
Lane Grp Delay (d), s/veh	36.3	0.0	36.3	30.1	0.0	30.2	51.3	2.5	1.0	0.0	2.8	2.9
Lane Grp LOS	D		D	C		C	D	A	A		A	A
Approach Vol, veh/h		100			3			2073			690	
Approach Delay, s/veh		36.3			30.2			3.8			2.8	
Approach LOS		D			C			A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		7.6			7.6		6.5	59.7		0.0		53.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		9.0	68.0		4.0		63.0
Max Q Clear Time (g_c+I1), s		4.0			2.0		4.0	16.0		0.0		4.6
Green Ext Time (p_c), s		0.2			0.3		0.0	39.6		0.0		43.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.7								
HCM 2010 LOS				A								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	292	158	198	128	41	142	1268	354	57	442	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	339	418	222	252	495	210	188	1934	538	79	1949	236
Arrive On Green	0.19	0.18	0.18	0.14	0.13	0.13	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1757	2272	1204	1757	3689	1568	1757	4169	1160	1757	4845	585
Grp Volume(v), veh/h	299	256	233	215	139	45	154	1219	544	62	364	175
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1640	1757	1845	1741
Q Serve(g_s), s	16.2	12.9	13.3	11.7	3.3	2.5	8.4	25.9	26.0	3.4	6.4	6.6
Cycle Q Clear(g_c), s	16.2	12.9	13.3	11.7	3.3	2.5	8.4	25.9	26.0	3.4	6.4	6.6
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.71	1.00		0.34
Lane Grp Cap(c), veh/h	339	339	300	252	495	210	188	1712	761	79	1484	701
V/C Ratio(X)	0.88	0.75	0.78	0.85	0.28	0.21	0.82	0.71	0.72	0.78	0.24	0.25
Avail Cap(c_a), veh/h	539	453	400	395	604	256	323	1924	855	126	1509	712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	37.8	38.0	40.9	38.1	37.7	42.8	21.0	21.0	46.2	19.4	19.4
Incr Delay (d2), s/veh	10.0	5.0	6.7	10.3	0.3	0.5	8.5	1.1	2.5	15.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.1	6.4	6.1	5.9	1.6	0.0	4.2	11.8	10.8	1.9	2.9	2.8
Lane Grp Delay (d), s/veh	48.4	42.8	44.7	51.2	38.4	38.2	51.3	22.1	23.5	61.3	19.5	19.6
Lane Grp LOS	D	D	D	D	D	D	D	C	C	E	B	B
Approach Vol, veh/h		788			399			1917			601	
Approach Delay, s/veh		45.5			45.3			24.8			23.8	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.9	22.0		18.0	17.1		14.5	49.4		8.4	43.3	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	30.0	24.0		22.0	16.0		18.0	51.0		7.0	40.0	
Max Q Clear Time (g_c+I1), s	18.2	15.3		13.7	5.3		10.4	28.0		5.4	8.6	
Green Ext Time (p_c), s	0.7	2.7		0.4	3.0		0.2	17.3		0.0	21.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.3								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	577	844	26	223	395	136	130	1444	530	245	392	201
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	713	1366	0	309	709	0	201	2327	659	330	2537	719
Arrive On Green	0.21	0.25	0.00	0.09	0.13	0.00	0.06	0.42	0.42	0.10	0.46	0.46
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	627	917	0	242	429	0	141	1570	576	266	426	218
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	19.6	16.5	0.0	7.6	8.1	0.0	4.5	25.2	37.0	8.4	5.0	9.6
Cycle Q Clear(g_c), s	19.6	16.5	0.0	7.6	8.1	0.0	4.5	25.2	37.0	8.4	5.0	9.6
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	713	1366	0	309	709	0	201	2327	659	330	2537	719
V/C Ratio(X)	0.88	0.67	0.00	0.78	0.61	0.00	0.70	0.67	0.87	0.81	0.17	0.30
Avail Cap(c_a), veh/h	868	1509	0	434	805	0	279	2365	670	403	2566	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	37.4	0.0	49.0	45.3	0.0	50.8	25.8	29.2	48.7	17.5	18.7
Incr Delay (d2), s/veh	8.9	1.0	0.0	6.1	1.0	0.0	4.6	0.8	12.1	9.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.4	7.9	0.0	3.7	3.9	0.0	2.1	11.6	16.4	4.1	2.3	3.7
Lane Grp Delay (d), s/veh	51.1	38.4	0.0	55.1	46.4	0.0	55.4	26.5	41.3	58.3	17.5	19.0
Lane Grp LOS	D	D		E	D		E	C	D	E	B	B
Approach Vol, veh/h		1544			671			2287			910	
Approach Delay, s/veh		43.6			49.5			32.1			29.8	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	27.0	31.1		14.0	18.1		10.5	50.2		14.6	54.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	30.0		14.0	16.0		9.0	47.0		13.0	51.0	
Max Q Clear Time (g_c+I1), s	21.6	18.5		9.6	10.1		6.5	39.0		10.4	11.6	
Green Ext Time (p_c), s	1.4	6.8		0.3	4.0		0.1	7.2		0.2	27.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				37.1								
HCM 2010 LOS				D								
<b>Notes</b>												

**Intersection**

Intersection Delay, s/veh 0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1422	13	28	777	18	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1546	14	30	845	20	29

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1560
Stage 1	-	-	-
Stage 2	-	-	-
Follow-up Headway	-	-	2.23
Pot Capacity-1 Maneuver	-	-	415
Stage 1	-	-	-
Stage 2	-	-	-
Time blocked-Platoon, %	-	-	-
Mov Capacity-1 Maneuver	-	-	415
Mov Capacity-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	27.5
HCM LOS			D












Minor Lane / Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	112	337	-	-	415	-
HCM Lane V/C Ratio	0.175	0.087	-	-	0.073	-
HCM Control Delay (s)	43.8	16.7	-	-	14.36	-
HCM Lane LOS	E	C			B	
HCM 95th %tile Q(veh)	0.603	0.284	-	-	0.236	-

**Notes**

~ : Volume Exceeds Capacity; \$ : Delay Exceeds 300 Seconds; Error : Computation Not Defined






















HCM 2010 Signalized Intersection Summary  
32: Delta Fair Blvd & Century Blvd

Existing +Project PM  
3/15/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	372	1168	426	157	172	258
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	469	2467	881	323	370	330
Arrive On Green	0.27	0.67	0.34	0.34	0.21	0.21
Sat Flow, veh/h	1757	3689	2578	945	1757	1568
Grp Volume(v), veh/h	404	1270	330	304	187	280
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1678	1757	1568
Q Serve(g_s), s	14.5	11.5	9.5	9.7	6.2	11.4
Cycle Q Clear(g_c), s	14.5	11.5	9.5	9.7	6.2	11.4
Prop In Lane	1.00			0.56	1.00	1.00
Lane Grp Cap(c), veh/h	469	2467	631	574	370	330
V/C Ratio(X)	0.86	0.51	0.52	0.53	0.51	0.85
Avail Cap(c_a), veh/h	900	3611	750	682	450	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	5.6	17.5	17.6	23.1	25.2
Incr Delay (d2), s/veh	4.8	0.2	0.7	0.8	1.1	13.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.7	3.9	4.2	3.9	2.8	1.2
Lane Grp Delay (d), s/veh	28.0	5.7	18.2	18.3	24.2	38.5
Lane Grp LOS	C	A	B	B	C	D
Approach Vol, veh/h		1674	634		467	
Approach Delay, s/veh		11.1	18.3		32.8	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	21.7	48.4	26.7			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	34.0	65.0	27.0			
Max Q Clear Time (g_c+I1), s	16.5	13.5	11.7			
Green Ext Time (p_c), s	1.2	22.9	11.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			16.4			
HCM 2010 LOS			B			
<b>Notes</b>						





















HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	115	8	503	17	1	2	222	487	13	19	606	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	561	9	555	68	198	395	375	1866	49	30	1100	83
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.21	0.52	0.52	0.02	0.43	0.43
Sat Flow, veh/h	1394	25	1546	841	550	1100	1757	3578	95	1757	3387	257
Grp Volume(v), veh/h	125	0	556	18	0	3	241	272	271	21	359	350
Grp Sat Flow(s),veh/h/ln	1394	0	1572	841	0	1650	1757	1845	1828	1757	1845	1799
Q Serve(g_s), s	7.4	0.0	41.0	1.0	0.0	0.1	14.6	9.7	9.7	1.4	17.4	17.5
Cycle Q Clear(g_c), s	7.5	0.0	41.0	42.0	0.0	0.1	14.6	9.7	9.7	1.4	17.4	17.5
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.05	1.00		0.14
Lane Grp Cap(c), veh/h	561	0	564	68	0	593	375	962	953	30	599	585
V/C Ratio(X)	0.22	0.00	0.99	0.26	0.00	0.01	0.64	0.28	0.28	0.71	0.60	0.60
Avail Cap(c_a), veh/h	561	0	564	68	0	593	421	962	953	75	599	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.76	0.76	0.76	0.84	0.84	0.84
Uniform Delay (d), s/veh	26.5	0.0	37.2	58.3	0.0	24.1	41.9	15.7	15.7	56.9	27.4	27.4
Incr Delay (d2), s/veh	0.2	0.0	34.0	2.0	0.0	0.0	2.1	0.6	0.6	22.6	3.7	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.6	0.0	21.5	0.6	0.0	0.1	6.8	4.5	4.4	0.8	8.2	8.1
Lane Grp Delay (d), s/veh	26.7	0.0	71.2	60.3	0.0	24.1	44.1	16.3	16.3	79.5	31.1	31.2
Lane Grp LOS	C		E	E		C	D	B	B	E	C	C
Approach Vol, veh/h		681			21			784			730	
Approach Delay, s/veh		63.0			55.1			24.8			32.5	
Approach LOS		E			E			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		46.0			46.0		29.0	65.0		6.0		42.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		42.0			42.0		28.0	61.0		5.0		38.0
Max Q Clear Time (g_c+I1), s		43.0			44.0		16.6	11.7		3.4		19.5
Green Ext Time (p_c), s		0.0			0.0		0.6	3.7		0.1		4.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd



















Existing +Project PM  
 3/15/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	827	520	114	342	9	172	18	30	14	10	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	28	1078	659	157	2060	55	307	24	407	89	59	22
Arrive On Green	0.02	0.50	0.50	0.09	0.58	0.58	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1757	2146	1312	1757	3576	96	857	92	1568	92	228	86
Grp Volume(v), veh/h	17	769	695	124	192	190	207	0	33	33	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1613	1757	1845	1828	949	0	1568	406	0	0
Q Serve(g_s), s	0.8	28.7	30.3	5.6	4.0	4.0	0.0	0.0	1.3	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.8	28.7	30.3	5.6	4.0	4.0	18.1	0.0	1.3	18.5	0.0	0.0
Prop In Lane	1.00		0.81	1.00		0.05	0.90		1.00	0.45		0.21
Lane Grp Cap(c), veh/h	28	927	811	157	1062	1053	331	0	407	170	0	0
V/C Ratio(X)	0.62	0.83	0.86	0.79	0.18	0.18	0.63	0.00	0.08	0.19	0.00	0.00
Avail Cap(c_a), veh/h	87	985	861	240	1145	1135	386	0	467	229	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.4	17.1	17.5	35.9	8.1	8.1	28.8	0.0	22.6	24.1	0.0	0.0
Incr Delay (d2), s/veh	20.2	5.8	8.2	9.6	0.1	0.1	2.4	0.0	0.1	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	13.9	13.2	2.9	1.7	1.7	4.2	0.0	0.5	0.5	0.0	0.0
Lane Grp Delay (d), s/veh	59.6	22.9	25.7	45.6	8.2	8.2	31.2	0.0	22.6	24.6	0.0	0.0
Lane Grp LOS	E	C	C	D	A	A	C		C	C		
Approach Vol, veh/h		1481			506			240				33
Approach Delay, s/veh		24.6			17.3			30.1				24.6
Approach LOS		C			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.3	44.5		11.2	50.4			24.9				24.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	43.0		11.0	50.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	2.8	32.3		7.6	6.0			20.1				20.5
Green Ext Time (p_c), s	0.0	8.1		0.1	20.9			0.5				0.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.6								
HCM 2010 LOS				C								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
1: Railroad Ave & SR-4 WB OnRamp

Baseline AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	197	387	269	675	737	160	199	868	388
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				236	477	353	791	1311	285	247	1310	557
Arrive On Green				0.31	0.31	0.31	0.39	0.75	0.75	0.14	0.36	0.00
Sat Flow, veh/h				762	1545	1143	3408	2938	638	1757	3689	1568
Grp Volume(v), veh/h				507	0	420	734	503	472	216	943	0
Grp Sat Flow(s),veh/h/ln				1807	0	1643	1704	1845	1732	1757	1845	1568
Q Serve(g_s), s				31.1	0.0	27.4	23.8	14.7	14.7	13.9	25.6	0.0
Cycle Q Clear(g_c), s				31.1	0.0	27.4	23.8	14.7	14.7	13.9	25.6	0.0
Prop In Lane				0.42		0.70	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h				558	0	508	791	823	773	247	1310	557
V/C Ratio(X)				0.91	0.00	0.83	0.93	0.61	0.61	0.87	0.72	0.00
Avail Cap(c_a), veh/h				594	0	541	856	823	773	365	1310	557
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.48	0.48	0.48	1.00	1.00	0.00
Uniform Delay (d), s/veh				38.3	0.0	37.0	34.4	10.0	10.0	48.6	32.3	0.0
Incr Delay (d2), s/veh				17.3	0.0	9.8	8.7	1.6	1.7	14.4	3.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				16.9	0.0	12.8	10.2	4.7	4.5	7.3	12.5	0.0
Lane Grp Delay (d), s/veh				55.7	0.0	46.8	43.1	11.7	11.8	63.0	35.7	0.0
Lane Grp LOS				E		D	D	B	B	E	D	
Approach Vol, veh/h					927			1709			1159	
Approach Delay, s/veh					51.7			25.2			40.8	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1		6
Phs Duration (G+Y+Rc), s					39.7		30.8	55.5		20.3		45.0
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0		41.0
Max Q Clear Time (g_c+I1), s					33.1		25.8	16.7		15.9		27.6
Green Ext Time (p_c), s					2.5		1.0	16.9		0.4		9.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay											36.4	
HCM 2010 LOS											D	
<b>Notes</b>												





























HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	392	0	458	0	0	0	0	1079	311	303	796	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	475	499	848				0	1544	445	443	2435	0
Arrive On Green	0.27	0.00	0.27				0.00	0.37	0.37	0.50	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4133	1191	1757	3689	0
Grp Volume(v), veh/h	426	0	498				0	1047	464	329	865	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1635	1757	1845	0
Q Serve(g_s), s	26.9	0.0	15.9				0.0	28.6	28.6	17.1	0.0	0.0
Cycle Q Clear(g_c), s	26.9	0.0	15.9				0.0	28.6	28.6	17.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.73	1.00		0.00
Lane Grp Cap(c), veh/h	475	499	848				0	1378	611	443	2435	0
V/C Ratio(X)	0.90	0.00	0.59				0.00	0.76	0.76	0.74	0.36	0.00
Avail Cap(c_a), veh/h	549	577	981				0	1378	611	443	2435	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.59	0.59	0.00
Uniform Delay (d), s/veh	40.5	0.0	36.4				0.0	31.5	31.5	25.6	0.0	0.0
Incr Delay (d2), s/veh	15.9	0.0	0.7				0.0	4.0	8.6	4.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	14.1	0.0	6.4				0.0	14.1	13.3	6.9	0.1	0.0
Lane Grp Delay (d), s/veh	56.4	0.0	37.1				0.0	35.5	40.2	29.6	0.2	0.0
Lane Grp LOS	E		D					D	D	C	A	
Approach Vol, veh/h		924						1511			1194	
Approach Delay, s/veh		46.0						37.0			8.3	
Approach LOS		D						D			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		35.1						47.0		33.0		80.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		36.0						43.0		29.0		76.0
Max Q Clear Time (g_c+I1), s		28.9						30.6		19.1		2.0
Green Ext Time (p_c), s		2.2						8.0		4.9		9.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			29.8									
HCM 2010 LOS			C									
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

Baseline AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 	 	
Volume (veh/h)	297	425	91	158	499	278	132	856	106	172	498	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	359	831	177	206	718	305	175	1136	483	243	1279	543
Arrive On Green	0.20	0.28	0.28	0.12	0.19	0.19	0.10	0.31	0.31	0.14	0.35	0.35
Sat Flow, veh/h	1757	2951	628	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	323	288	273	172	542	302	143	930	115	187	541	272
Grp Sat Flow(s),veh/h/ln	1757	1845	1734	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	18.5	13.7	13.9	9.9	14.3	14.5	8.2	24.0	4.1	10.6	11.6	14.1
Cycle Q Clear(g_c), s	18.5	13.7	13.9	9.9	14.3	14.5	8.2	24.0	4.1	10.6	11.6	14.1
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	359	520	488	206	718	305	175	1136	483	243	1279	543
V/C Ratio(X)	0.90	0.55	0.56	0.84	0.76	0.99	0.82	0.82	0.24	0.77	0.42	0.50
Avail Cap(c_a), veh/h	460	520	488	341	788	335	307	1397	594	273	1325	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	31.5	31.6	44.5	39.2	22.2	45.5	33.0	13.8	42.8	25.8	26.6
Incr Delay (d2), s/veh	17.4	1.3	1.4	8.9	3.8	45.0	9.0	3.3	0.3	11.4	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.9	6.6	6.3	5.0	7.1	9.3	4.1	11.6	1.5	5.5	5.4	5.6
Lane Grp Delay (d), s/veh	57.4	32.8	33.0	53.4	43.0	67.1	54.5	36.3	14.0	54.2	26.0	27.3
Lane Grp LOS	E	C	C	D	D	E	D	D	B	D	C	C
Approach Vol, veh/h		884			1016			1188			1000	
Approach Delay, s/veh		41.8			51.9			36.3			31.6	
Approach LOS		D			D			D			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	25.0	33.0		16.1	24.0		14.3	35.7		18.2	39.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	27.0	29.0		20.0	22.0		18.0	39.0		16.0	37.0	
Max Q Clear Time (g_c+I1), s	20.5	15.9		11.9	16.5		10.2	26.0		12.6	16.1	
Green Ext Time (p_c), s	0.6	6.8		0.3	3.6		0.2	5.7		1.7	5.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				40.2								
HCM 2010 LOS				D								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Baseline AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	86	93	27	937	52	92	7	444	406	79	518	67
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	660	693	589	1280	693	589	103	1420	604	111	1437	611
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.06	0.38	0.38	0.06	0.39	0.39
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	93	101	29	1018	57	100	8	483	441	86	563	73
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.4	2.5	0.8	18.1	1.4	2.9	0.3	6.3	16.4	3.3	7.5	2.0
Cycle Q Clear(g_c), s	2.4	2.5	0.8	18.1	1.4	2.9	0.3	6.3	16.4	3.3	7.5	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	660	693	589	1280	693	589	103	1420	604	111	1437	611
V/C Ratio(X)	0.14	0.15	0.05	0.80	0.08	0.17	0.08	0.34	0.73	0.77	0.39	0.12
Avail Cap(c_a), veh/h	660	693	589	2503	1355	1151	413	1788	760	310	1571	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	14.0	13.5	18.9	13.7	14.2	30.3	14.8	17.9	31.4	15.0	13.3
Incr Delay (d2), s/veh	0.1	0.1	0.0	1.2	0.1	0.1	0.3	0.1	2.7	10.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	1.0	0.3	7.0	0.6	1.0	0.1	2.7	6.3	1.7	3.2	0.7
Lane Grp Delay (d), s/veh	14.1	14.1	13.6	20.1	13.8	14.3	30.6	15.0	20.6	42.2	15.1	13.4
Lane Grp LOS	B	B	B	C	B	B	C	B	C	D	B	B
Approach Vol, veh/h		223			1175			932			722	
Approach Delay, s/veh		14.1			19.3			17.8			18.2	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		29.6			29.6		8.0	30.2		8.3		30.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0			50.0		16.0	33.0		12.0		29.0
Max Q Clear Time (g_c+I1), s		4.5			20.1		2.3	18.4		5.3		9.5
Green Ext Time (p_c), s		5.2			5.5		0.0	7.8		0.1		9.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.2								
HCM 2010 LOS				B								
<b>Notes</b>												





























HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

Baseline AM  
3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	162	40	13	695	1427	54
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	228	204	24	2771	2395	91
Arrive On Green	0.13	0.13	0.01	0.75	0.68	0.68
Sat Flow, veh/h	1757	1568	1757	3689	3532	134
Grp Volume(v), veh/h	176	43	14	755	808	802
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1821
Q Serve(g_s), s	6.5	1.6	0.5	4.3	16.9	17.0
Cycle Q Clear(g_c), s	6.5	1.6	0.5	4.3	16.9	17.0
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	228	204	24	2771	1251	1235
V/C Ratio(X)	0.77	0.21	0.58	0.27	0.65	0.65
Avail Cap(c_a), veh/h	418	373	105	3622	1591	1571
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	26.2	33.0	2.6	6.2	6.2
Incr Delay (d2), s/veh	5.5	0.5	20.3	0.1	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.1	0.0	0.4	1.3	6.0	6.0
Lane Grp Delay (d), s/veh	33.8	26.7	53.3	2.7	6.8	6.9
Lane Grp LOS	C	C	D	A	A	A
Approach Vol, veh/h	219			769	1610	
Approach Delay, s/veh	32.4			3.6	6.8	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			4.9	54.5	49.6	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			4.0	66.0	58.0	
Max Q Clear Time (g_c+I1), s			2.5	6.3	19.0	
Green Ext Time (p_c), s			0.0	34.5	26.5	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			8.0			
HCM 2010 LOS			A			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Baseline AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	145	542	112	105	453	182	188	601	220	228	287	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	199	895	380	146	784	333	252	1011	430	299	790	271
Arrive On Green	0.11	0.24	0.24	0.08	0.21	0.21	0.14	0.27	0.27	0.17	0.30	0.30
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2630	901
Grp Volume(v), veh/h	158	589	122	114	492	198	204	653	239	248	217	204
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1686
Q Serve(g_s), s	6.1	10.0	4.4	4.4	8.4	7.9	7.8	10.8	9.1	9.5	6.5	6.7
Cycle Q Clear(g_c), s	6.1	10.0	4.4	4.4	8.4	7.9	7.8	10.8	9.1	9.5	6.5	6.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	199	895	380	146	784	333	252	1011	430	299	554	506
V/C Ratio(X)	0.79	0.66	0.32	0.78	0.63	0.59	0.81	0.65	0.56	0.83	0.39	0.40
Avail Cap(c_a), veh/h	329	1062	451	253	903	384	455	1328	564	481	690	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	23.7	21.6	31.2	24.9	24.6	28.8	22.2	21.6	27.9	19.3	19.3
Incr Delay (d2), s/veh	7.0	1.2	0.5	8.7	1.1	1.9	6.1	0.7	1.1	6.6	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.0	4.6	1.7	2.3	3.9	3.1	3.8	4.9	3.5	4.6	2.9	2.7
Lane Grp Delay (d), s/veh	37.0	24.9	22.1	39.9	26.0	26.5	34.9	22.9	22.7	34.4	19.7	19.9
Lane Grp LOS	D	C	C	D	C	C	C	C	C	C	B	B
Approach Vol, veh/h		869			804			1096			669	
Approach Delay, s/veh		26.7			28.1			25.1			25.2	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.9	20.9		9.8	18.8		14.0	23.0		15.8		24.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	13.0	20.0		10.0	17.0		18.0	25.0		19.0		26.0
Max Q Clear Time (g_c+I1), s	8.1	12.0		6.4	10.4		9.8	12.8		11.5		8.7
Green Ext Time (p_c), s	0.2	4.9		0.1	4.2		0.3	6.2		0.4		7.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				26.2								
HCM 2010 LOS				C								
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Baseline AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	116	450	5	2	890	85	94	101	3	129	33	159
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	150	1166	12	54	1080	918	126	199	5	164	37	177
Arrive On Green	0.09	0.64	0.64	0.03	0.59	0.59	0.07	0.11	0.11	0.09	0.13	0.13
Sat Flow, veh/h	1757	1823	19	1757	1845	1568	1757	1787	49	1757	277	1332
Grp Volume(v), veh/h	126	0	494	2	967	92	102	0	113	140	0	209
Grp Sat Flow(s),veh/h/ln	1757	0	1841	1757	1845	1568	1757	0	1836	1757	0	1610
Q Serve(g_s), s	9.1	0.0	16.9	0.1	58.6	2.1	7.3	0.0	7.5	10.1	0.0	16.6
Cycle Q Clear(g_c), s	9.1	0.0	16.9	0.1	58.6	2.1	7.3	0.0	7.5	10.1	0.0	16.6
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.03	1.00		0.83
Lane Grp Cap(c), veh/h	150	0	1178	54	1080	918	126	0	204	164	0	214
V/C Ratio(X)	0.84	0.00	0.42	0.04	0.90	0.10	0.81	0.00	0.55	0.85	0.00	0.98
Avail Cap(c_a), veh/h	151	0	1178	55	1080	918	151	0	229	165	0	214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.00	0.79	0.38	0.38	0.38	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.8	0.0	11.4	60.3	23.2	4.6	58.6	0.0	53.9	57.2	0.0	55.4
Incr Delay (d2), s/veh	27.1	0.0	0.9	0.1	4.9	0.1	23.2	0.0	2.3	32.6	0.0	55.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.2	0.0	7.3	0.1	26.7	1.2	4.2	0.0	3.7	6.1	0.0	10.2
Lane Grp Delay (d), s/veh	84.8	0.0	12.2	60.4	28.0	4.6	81.8	0.0	56.3	89.8	0.0	110.7
Lane Grp LOS	F		B	E	C	A	F		E	F		F
Approach Vol, veh/h		620			1061			215				349
Approach Delay, s/veh		27.0			26.1			68.4				102.3
Approach LOS		C			C			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	14.9	86.0		7.9	79.0		13.2	18.2		16.0		21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	11.0	82.0		4.0	75.0		11.0	16.0		12.0		17.0
Max Q Clear Time (g_c+I1), s	11.1	18.9		2.1	60.6		9.3	9.5		12.1		18.6
Green Ext Time (p_c), s	0.0	3.5		0.1	6.7		0.1	0.4		0.0		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				42.2								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave























Baseline AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 						 	
Volume (veh/h)	33	274	22	630	338	137	21	50	82	78	95	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	59	1039	83	1500	2638	1121	182	191	163	182	162	25
Arrive On Green	0.03	0.31	0.31	0.44	0.71	0.71	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1757	3372	270	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	36	162	160	685	367	149	23	54	89	85	0	119
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.6	5.4	5.5	11.4	2.6	2.4	1.0	2.2	4.4	3.7	0.0	5.1
Cycle Q Clear(g_c), s	1.6	5.4	5.5	11.4	2.6	2.4	1.0	2.2	4.4	3.7	0.0	5.1
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	59	568	554	1500	2638	1121	182	191	163	182	0	187
V/C Ratio(X)	0.61	0.29	0.29	0.46	0.14	0.13	0.13	0.28	0.55	0.47	0.00	0.64
Avail Cap(c_a), veh/h	173	568	554	1722	2638	1121	390	409	348	433	0	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.66	0.66	0.66	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	21.3	21.3	15.9	3.7	3.6	33.0	33.6	34.5	34.2	0.0	34.9
Incr Delay (d2), s/veh	9.9	1.3	1.3	0.1	0.1	0.2	0.3	0.8	2.9	1.9	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	2.6	2.6	4.6	0.9	0.8	0.4	1.0	1.8	1.7	0.0	2.5
Lane Grp Delay (d), s/veh	48.6	22.5	22.6	16.1	3.7	3.8	33.3	34.4	37.4	36.1	0.0	38.5
Lane Grp LOS	D	C	C	B	A	A	C	C	D	D		D
Approach Vol, veh/h		358			1201			166			204	
Approach Delay, s/veh		25.2			10.8			35.8			37.5	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.7	29.0		39.7	62.0			12.4			12.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	8.0	25.0		41.0	58.0			18.0			20.0	
Max Q Clear Time (g_c+I1), s	3.6	7.5		13.4	4.6			6.4			7.1	
Green Ext Time (p_c), s	1.2	1.7		2.8	3.2			1.2			1.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.4								
HCM 2010 LOS				B								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 9: Lovridge Rd & California Ave/N Park Blvd

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	60	269	45	136	3	550	301	88	7	219	522
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	182	390	331	111	687	14	810	1526	441	14	1198	509
Arrive On Green	0.05	0.21	0.21	0.03	0.19	0.19	0.24	0.55	0.55	0.01	0.32	0.32
Sat Flow, veh/h	3408	1845	1568	3408	3604	73	3408	2754	795	1757	3689	1568
Grp Volume(v), veh/h	113	65	292	49	76	75	598	217	206	8	238	567
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1832	1704	1845	1704	1757	1845	1568
Q Serve(g_s), s	2.7	2.4	14.9	1.2	2.9	2.9	13.4	4.9	5.1	0.4	3.8	20.9
Cycle Q Clear(g_c), s	2.7	2.4	14.9	1.2	2.9	2.9	13.4	4.9	5.1	0.4	3.8	20.9
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	182	390	331	111	352	349	810	1022	945	14	1198	509
V/C Ratio(X)	0.62	0.17	0.88	0.44	0.21	0.22	0.74	0.21	0.22	0.56	0.20	1.11
Avail Cap(c_a), veh/h	330	469	399	206	402	399	1196	1652	1527	85	2188	930
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	26.6	31.6	39.2	28.2	28.2	29.1	9.3	9.3	40.8	20.1	16.9
Incr Delay (d2), s/veh	3.4	0.2	17.6	2.7	0.3	0.3	1.3	0.1	0.1	30.2	0.1	62.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	1.1	7.4	0.5	1.3	1.3	5.7	2.1	2.0	0.3	1.7	16.3
Lane Grp Delay (d), s/veh	41.7	26.8	49.2	41.9	28.5	28.5	30.5	9.4	9.4	71.0	20.2	79.0
Lane Grp LOS	D	C	D	D	C	C	C	A	A	E	C	F
Approach Vol, veh/h		470			200			1021			813	
Approach Delay, s/veh		44.3			31.8			21.7			61.7	
Approach LOS		D			C			C			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	8.4	21.5		6.7	19.7		23.6	49.8		4.7		30.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	8.0	21.0		5.0	18.0		29.0	74.0		4.0		49.0
Max Q Clear Time (g_c+I1), s	4.7	16.9		3.2	4.9		15.4	7.1		2.4		22.9
Green Ext Time (p_c), s	0.1	0.5		0.2	0.7		4.2	5.6		0.0		4.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					39.8							
HCM 2010 LOS					D							
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	416	0	362	0	0	0	0	647	193	129	478	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1013	0	466				0	1944	826	206	2309	0
Arrive On Green	0.30	0.00	0.30				0.00	0.53	0.53	0.06	0.63	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	452	0	393				0	703	210	140	520	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	11.2	0.0	24.4				0.0	11.6	7.6	4.2	6.4	0.0
Cycle Q Clear(g_c), s	11.2	0.0	24.4				0.0	11.6	7.6	4.2	6.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1013	0	466				0	1944	826	206	2309	0
V/C Ratio(X)	0.45	0.00	0.84				0.00	0.36	0.25	0.68	0.23	0.00
Avail Cap(c_a), veh/h	1542	0	710				0	1944	826	427	2309	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.93	0.93	0.00
Uniform Delay (d), s/veh	29.6	0.0	34.2				0.0	14.4	13.4	47.8	8.5	0.0
Incr Delay (d2), s/veh	0.3	0.0	5.8				0.0	0.5	0.7	3.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.8	0.0	10.4				0.0	5.3	3.0	1.9	2.7	0.0
Lane Grp Delay (d), s/veh	29.9	0.0	40.0				0.0	14.9	14.2	51.4	8.7	0.0
Lane Grp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		845						913			660	
Approach Delay, s/veh		34.6						14.7			17.7	
Approach LOS		C						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		34.9						58.7		10.3	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						48.0		13.0	65.0	
Max Q Clear Time (g_c+I1), s		26.4						13.6		6.2	8.4	
Green Ext Time (p_c), s		4.4						11.8		0.2	13.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			22.5									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	184	237	152	175	676	180	198	542	133	181	343	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	300	1201	511	288	1187	505	266	1040	442	297	803	341
Arrive On Green	0.09	0.33	0.33	0.08	0.32	0.32	0.15	0.28	0.28	0.09	0.22	0.22
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	200	258	165	190	735	196	215	589	145	197	373	168
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	4.1	3.7	5.7	3.9	12.2	7.0	8.6	9.9	5.3	4.1	6.4	6.8
Cycle Q Clear(g_c), s	4.1	3.7	5.7	3.9	12.2	7.0	8.6	9.9	5.3	4.1	6.4	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	300	1201	511	288	1187	505	266	1040	442	297	803	341
V/C Ratio(X)	0.67	0.21	0.32	0.66	0.62	0.39	0.81	0.57	0.33	0.66	0.46	0.49
Avail Cap(c_a), veh/h	659	2039	867	612	1988	845	655	1886	802	659	1223	520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.0	17.7	18.4	32.1	20.8	19.0	29.7	22.2	20.6	32.0	24.6	24.8
Incr Delay (d2), s/veh	2.5	0.1	0.4	2.6	0.5	0.5	5.8	0.5	0.4	2.5	0.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.8	1.6	2.1	1.8	5.5	2.6	4.1	4.4	2.0	1.8	2.9	2.6
Lane Grp Delay (d), s/veh	34.5	17.8	18.8	34.7	21.3	19.5	35.5	22.7	21.0	34.5	25.1	25.9
Lane Grp LOS	C	B	B	C	C	B	D	C	C	C	C	C
Approach Vol, veh/h		623			1121			949			738	
Approach Delay, s/veh		23.4			23.3			25.3			27.8	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.4	27.6		10.1	27.3		15.0	24.4		10.3	19.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	14.0	40.0		13.0	39.0		27.0	37.0		14.0	24.0	
Max Q Clear Time (g_c+I1), s	6.1	7.7		5.9	14.2		10.6	11.9		6.1	8.8	
Green Ext Time (p_c), s	0.4	9.9		0.3	9.1		0.5	8.5		0.4	6.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				24.8								
HCM 2010 LOS				C								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

Baseline AM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	270	379	923	252	170	190
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	324	1504	1107	941	216	193
Arrive On Green	0.18	0.82	0.60	0.60	0.12	0.12
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	293	412	1003	274	185	207
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	21.2	6.9	62.0	11.0	13.4	16.0
Cycle Q Clear(g_c), s	21.2	6.9	62.0	11.0	13.4	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	324	1504	1107	941	216	193
V/C Ratio(X)	0.90	0.27	0.91	0.29	0.86	1.07
Avail Cap(c_a), veh/h	324	1504	1107	941	216	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.50	0.50	1.00	1.00
Uniform Delay (d), s/veh	51.9	2.9	22.8	12.6	55.9	57.0
Incr Delay (d2), s/veh	23.9	0.4	6.8	0.4	27.0	85.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	11.6	2.3	28.3	4.1	7.7	17.6
Lane Grp Delay (d), s/veh	75.8	3.2	29.6	13.0	82.8	142.4
Lane Grp LOS	E	A	C	B	F	F
Approach Vol, veh/h		705	1277		392	
Approach Delay, s/veh		33.4	26.0		114.3	
Approach LOS		C	C		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	28.0	110.0	82.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	24.0	106.0	78.0			
Max Q Clear Time (g_c+I1), s	23.2	8.9	64.0			
Green Ext Time (p_c), s	0.3	3.7	7.4			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			42.8			
HCM 2010 LOS			D			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	477	76	25	999	11	177	108	44	14	10	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	9	1293	1099	35	1304	14	280	217	89	169	110	180
Arrive On Green	0.00	0.70	0.70	0.02	0.72	0.72	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1757	1845	1568	1757	1821	20	1362	1244	510	1204	631	1032
Grp Volume(v), veh/h	10	518	83	27	0	1098	192	0	165	15	0	29
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1841	1362	0	1755	1204	0	1663
Q Serve(g_s), s	0.6	13.4	1.9	1.8	0.0	48.0	15.8	0.0	9.8	1.3	0.0	1.7
Cycle Q Clear(g_c), s	0.6	13.4	1.9	1.8	0.0	48.0	17.5	0.0	9.8	11.1	0.0	1.7
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.29	1.00		0.62
Lane Grp Cap(c), veh/h	9	1293	1099	35	0	1319	280	0	305	169	0	289
V/C Ratio(X)	1.17	0.40	0.08	0.76	0.00	0.83	0.69	0.00	0.54	0.09	0.00	0.10
Avail Cap(c_a), veh/h	61	1293	1099	92	0	1319	305	0	337	191	0	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.66	0.00	0.66	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.0	7.1	5.4	55.8	0.0	11.4	47.1	0.0	43.1	48.2	0.0	39.7
Incr Delay (d2), s/veh	189.7	0.8	0.1	19.8	0.0	4.2	5.7	0.0	1.5	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	5.5	0.7	1.0	0.0	19.6	6.0	0.0	4.6	0.4	0.0	0.7
Lane Grp Delay (d), s/veh	246.7	7.9	5.5	75.6	0.0	15.7	52.7	0.0	44.6	48.4	0.0	39.9
Lane Grp LOS	F	A	A	E		B	D		D	D		D
Approach Vol, veh/h		611			1125			357				44
Approach Delay, s/veh		11.5			17.1			49.0				42.8
Approach LOS		B			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.6	84.3		6.3	86.0			23.9				23.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	80.0		6.0	82.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	2.6	15.4		3.8	50.0			19.5				13.1
Green Ext Time (p_c), s	0.0	4.0		0.0	11.7			0.5				1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr























Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	23	0	0	0	0	61	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	20	42	0	47	99	0	20	0	106	20	125	0
Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	25	0	0	0	0	66	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	20	42	0	47	99	0	20	0	106	20	125	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00
Avail Cap(c_a), veh/h	795	6680	0	4573	14613	0	795	0	5501	795	6472	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	13.1	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0
Lane Grp LOS	B						A					
Approach Vol, veh/h	0			25			66			0		
Approach Delay, s/veh	0.0			13.1			9.8			0.0		
Approach LOS	B			B			A			A		
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.2	4.2		0.0	4.6		0.0	4.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		23.0	35.0		4.0	31.0		4.0	31.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.1	0.0		0.0	2.4		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	0.3		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.7								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy













Baseline AM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	31	37	202	76	29	197	436	141	24	506	262
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	394	213	181	394	147	57	489	2837	883	39	2137	908
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.05	0.23	0.23	0.02	0.58	0.58
Sat Flow, veh/h	3408	1845	1568	3408	1269	489	3408	4051	1261	1757	3689	1568
Grp Volume(v), veh/h	113	34	40	220	0	115	214	430	197	26	550	285
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1622	1757	1845	1568
Q Serve(g_s), s	2.3	1.2	1.7	4.5	0.0	4.6	4.5	6.9	7.2	1.1	5.5	6.9
Cycle Q Clear(g_c), s	2.3	1.2	1.7	4.5	0.0	4.6	4.5	6.9	7.2	1.1	5.5	6.9
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	394	213	181	394	0	203	489	2584	1136	39	2137	908
V/C Ratio(X)	0.29	0.16	0.22	0.56	0.00	0.57	0.44	0.17	0.17	0.66	0.26	0.31
Avail Cap(c_a), veh/h	872	472	401	1056	0	545	872	2584	1136	237	2137	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	29.6	29.8	31.0	0.0	31.1	32.4	11.2	11.3	36.0	7.7	8.0
Incr Delay (d2), s/veh	0.4	0.3	0.6	1.2	0.0	2.5	0.6	0.1	0.3	17.4	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	0.6	0.7	2.0	0.0	2.2	2.1	3.4	3.3	0.7	2.3	2.6
Lane Grp Delay (d), s/veh	30.4	29.9	30.4	32.3	0.0	33.5	33.0	11.3	11.6	53.4	8.0	8.9
Lane Grp LOS	C	C	C	C		C	C	B	B	D	A	A
Approach Vol, veh/h		187			335			841			861	
Approach Delay, s/veh		30.3			32.7			16.9			9.7	
Approach LOS		C			C			B			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		12.6			12.6		14.7	56.0		5.7		47.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0			23.0		19.0	52.0		10.0		43.0
Max Q Clear Time (g_c+I1), s		4.3			6.6		6.5	9.2		3.1		8.9
Green Ext Time (p_c), s		1.9			2.0		4.0	5.7		0.0		6.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.6								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Baseline AM  
 3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	216	241	514	491	403	289
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	654	301	661	4074	2802	794
Arrive On Green	0.19	0.19	0.19	0.74	0.51	0.51
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	235	262	559	534	438	314
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	6.7	18.1	17.6	3.1	4.7	13.8
Cycle Q Clear(g_c), s	6.7	18.1	17.6	3.1	4.7	13.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	654	301	661	4074	2802	794
V/C Ratio(X)	0.36	0.87	0.85	0.13	0.16	0.40
Avail Cap(c_a), veh/h	918	422	1163	4074	2802	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.93	0.93
Uniform Delay (d), s/veh	39.1	43.7	43.3	4.3	14.7	17.0
Incr Delay (d2), s/veh	0.3	13.3	3.0	0.1	0.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	1.1	8.0	1.3	2.1	5.5
Lane Grp Delay (d), s/veh	39.4	56.9	46.2	4.4	14.8	18.3
Lane Grp LOS	D	E	D	A	B	B
Approach Vol, veh/h	497			1093	752	
Approach Delay, s/veh	48.6			25.8	16.3	
Approach LOS	D			C	B	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			25.6	86.0	60.4	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			38.0	82.0	40.0	
Max Q Clear Time (g_c+I1), s			19.6	5.1	15.8	
Green Ext Time (p_c), s			2.0	10.6	8.7	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			27.6			
HCM 2010 LOS			C			
<b>Notes</b>						


























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Baseline AM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	208	0	236	0	0	0	0	838	367	135	542	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	387	209	356				0	3934	1115	213	4488	0
Arrive On Green	0.11	0.00	0.11				0.00	1.00	1.00	0.12	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	226	0	257				0	911	399	147	589	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	6.7	0.0	8.4				0.0	0.0	0.0	4.4	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	8.4				0.0	0.0	0.0	4.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	387	209	356				0	3934	1115	213	4488	0
V/C Ratio(X)	0.58	0.00	0.72				0.00	0.23	0.36	0.69	0.13	0.00
Avail Cap(c_a), veh/h	836	452	769				0	3934	1115	579	4488	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	0.83	0.83	0.95	0.95	0.00
Uniform Delay (d), s/veh	44.6	0.0	45.4				0.0	0.0	0.0	45.4	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	2.8				0.0	0.1	0.7	3.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.0	0.0	3.5				0.0	0.0	0.2	1.9	0.0	0.0
Lane Grp Delay (d), s/veh	46.0	0.0	48.2				0.0	0.1	0.7	49.2	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		483						1310			736	
Approach Delay, s/veh		47.2						0.3			9.9	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		16.0						79.4		10.6	90.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		26.0						64.0		18.0	86.0	
Max Q Clear Time (g_c+I1), s		10.4						2.0		6.4	2.0	
Green Ext Time (p_c), s		1.7						20.3		0.3	21.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.0									
HCM 2010 LOS			B									
<b>Notes</b>												



























HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	263	115	3	39	315	413	81	582	10	137	293	282
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1169	615	15	602	632	538	213	2339	41	235	1398	594
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.04	0.14	0.14	0.12	0.63	0.63
Sat Flow, veh/h	3408	1794	43	1757	1845	1568	1757	5423	94	3408	3689	1568
Grp Volume(v), veh/h	286	0	128	42	342	449	88	430	214	149	318	307
Grp Sat Flow(s),veh/h/ln	1704	0	1837	1757	1845	1568	1757	1845	1828	1704	1845	1568
Q Serve(g_s), s	4.6	0.0	3.8	1.2	11.4	20.2	3.7	8.0	8.0	3.2	2.8	8.2
Cycle Q Clear(g_c), s	4.6	0.0	3.8	1.2	11.4	20.2	3.7	8.0	8.0	3.2	2.8	8.2
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	1169	0	630	602	632	538	213	1591	789	235	1398	594
V/C Ratio(X)	0.24	0.00	0.20	0.07	0.54	0.84	0.41	0.27	0.27	0.63	0.23	0.52
Avail Cap(c_a), veh/h	1169	0	630	987	1037	881	321	1591	789	445	1398	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.78	0.78	0.78	0.98	0.98	0.98	0.99	0.99	0.99
Uniform Delay (d), s/veh	18.0	0.0	17.8	16.9	20.3	23.1	34.1	22.1	22.1	32.9	9.2	10.2
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.6	2.9	1.3	0.4	0.8	2.8	0.4	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.0	1.7	0.5	5.2	8.0	1.8	4.1	4.1	1.4	1.2	2.8
Lane Grp Delay (d), s/veh	18.1	0.0	17.9	17.0	20.8	26.1	35.3	22.5	22.9	35.7	9.6	13.4
Lane Grp LOS	B		B	B	C	C	D	C	C	D	A	B
Approach Vol, veh/h		414			833			732			774	
Approach Delay, s/veh		18.1			23.5			24.2			16.1	
Approach LOS		B			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		30.2			30.2		13.3	37.0		9.3	33.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		18.0			43.0		14.0	33.0		10.0	29.0	
Max Q Clear Time (g_c+I1), s		6.6			22.2		5.7	10.0		5.2	10.2	
Green Ext Time (p_c), s		4.6			4.1		0.5	4.3		0.3	3.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.8								
HCM 2010 LOS				C								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	253	180	134	14	339	396	484	940	19	39	111	94
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	306	1419	603	24	413	351	562	1511	31	53	480	204
Arrive On Green	0.17	0.38	0.00	0.01	0.22	0.00	0.32	0.42	0.42	0.03	0.13	0.13
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3602	74	1757	3689	1568
Grp Volume(v), veh/h	275	196	0	15	368	0	526	523	520	42	121	102
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1832	1757	1845	1568
Q Serve(g_s), s	16.1	3.6	0.0	0.9	20.3	0.0	30.6	24.2	24.2	2.5	3.1	6.4
Cycle Q Clear(g_c), s	16.1	3.6	0.0	0.9	20.3	0.0	30.6	24.2	24.2	2.5	3.1	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	306	1419	603	24	413	351	562	774	768	53	480	204
V/C Ratio(X)	0.90	0.14	0.00	0.63	0.89	0.00	0.94	0.68	0.68	0.79	0.25	0.50
Avail Cap(c_a), veh/h	351	1474	626	84	456	388	652	877	871	117	632	268
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	21.0	0.0	51.6	39.6	0.0	34.7	24.7	24.7	50.6	41.1	42.6
Incr Delay (d2), s/veh	22.8	0.0	0.0	24.6	18.3	0.0	19.6	1.8	1.8	22.1	0.3	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.0	1.6	0.0	0.6	11.6	0.0	16.5	11.4	11.3	1.5	1.5	2.6
Lane Grp Delay (d), s/veh	65.3	21.1	0.0	76.2	57.8	0.0	54.3	26.5	26.5	72.8	41.4	44.4
Lane Grp LOS	E	C		E	E		D	C	C	E	D	D
Approach Vol, veh/h		471			383			1569			265	
Approach Delay, s/veh		46.9			58.6			35.8			47.6	
Approach LOS		D			E			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.3	44.4		5.4	27.5		37.6	48.1		7.2	17.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	21.0	42.0		5.0	26.0		39.0	50.0		7.0	18.0	
Max Q Clear Time (g_c+I1), s	18.1	5.6		2.9	22.3		32.6	26.2		4.5	8.4	
Green Ext Time (p_c), s	0.2	3.8		0.0	1.2		1.1	8.9		0.0	5.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				42.2								
HCM 2010 LOS				D								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	9	0	7	13	1348	0	1	2	251	8	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	147	395	0	15	118	50	8	28	57	498	681	1158
Arrive On Green	0.08	0.11	0.00	0.01	0.03	0.00	0.00	0.05	0.05	0.15	0.37	0.37
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	103	10	0	8	14	0	0	0	3	273	9	43
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	1.3	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.7	0.1	0.1
Cycle Q Clear(g_c), s	1.3	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.7	0.1	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	147	395	0	15	118	50	8	0	85	498	681	1158
V/C Ratio(X)	0.70	0.03	0.00	0.53	0.12	0.00	0.00	0.00	0.04	0.55	0.01	0.04
Avail Cap(c_a), veh/h	453	11720	0	302	11404	4847	302	0	1275	1171	1742	2962
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.4	9.3	0.0	11.5	11.0	0.0	0.0	0.0	10.5	9.2	4.7	0.5
Incr Delay (d2), s/veh	6.0	0.0	0.0	25.3	0.4	0.0	0.0	0.0	0.2	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Lane Grp Delay (d), s/veh	16.4	9.3	0.0	36.8	11.4	0.0	0.0	0.0	10.7	10.2	4.7	0.5
Lane Grp LOS	B	A		D	B				B	B	A	A
Approach Vol, veh/h		113			22			3			325	
Approach Delay, s/veh		15.7			20.6			10.7			8.7	
Approach LOS		B			C			B			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	5.9	6.5		4.2	4.7		0.0	5.2		7.4	12.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	74.0		4.0	72.0		4.0	18.0		8.0	22.0	
Max Q Clear Time (g_c+I1), s	3.3	2.1		2.1	2.1		0.0	2.0		3.7	2.1	
Green Ext Time (p_c), s	0.1	0.4		0.0	0.1		0.0	0.1		0.4	0.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				11.0								
HCM 2010 LOS				B								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

Baseline AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	159	54	50	373	204	125	421	52	63	104	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	340	965	318	525	818	443	688	729	91	371	836	710
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	788	2659	876	1133	2254	1220	1252	1609	200	874	1845	1568
Grp Volume(v), veh/h	25	118	114	54	331	296	136	0	515	68	113	9
Grp Sat Flow(s),veh/h/ln	788	1845	1690	1133	1845	1629	1252	0	1809	874	1845	1568
Q Serve(g_s), s	1.1	1.9	2.0	1.5	6.0	6.2	3.1	0.0	9.5	2.8	1.6	0.1
Cycle Q Clear(g_c), s	7.3	1.9	2.0	3.5	6.0	6.2	4.6	0.0	9.5	12.3	1.6	0.1
Prop In Lane	1.00		0.52	1.00		0.75	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	340	669	613	525	669	591	688	0	820	371	836	710
V/C Ratio(X)	0.07	0.18	0.19	0.10	0.49	0.50	0.20	0.00	0.63	0.18	0.14	0.01
Avail Cap(c_a), veh/h	834	1826	1673	1235	1826	1612	2109	0	2873	1363	2929	2490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	9.4	9.5	10.6	10.7	10.8	8.3	0.0	9.1	13.8	6.9	6.5
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.1	0.6	0.7	0.1	0.0	0.8	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.7	0.7	0.4	2.4	2.2	0.8	0.0	3.5	0.6	0.6	0.0
Lane Grp Delay (d), s/veh	13.7	9.5	9.6	10.7	11.3	11.4	8.4	0.0	9.9	14.0	7.0	6.5
Lane Grp LOS	B	A	A	B	B	B	A		A	B	A	A
Approach Vol, veh/h		257			681			651			190	
Approach Delay, s/veh		10.0			11.3			9.6			9.5	
Approach LOS		A			B			A			A	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		19.8			19.8			23.7			23.7	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		43.0			43.0			69.0			69.0	
Max Q Clear Time (g_c+I1), s		9.3			8.2			11.5			14.3	
Green Ext Time (p_c), s		6.5			6.5			5.4			5.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.3								
HCM 2010 LOS				B								
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	414	2	9	969	215	6	9	12	207	13	124
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	232	2161	10	17	1367	302	114	153	156	318	35	334
Arrive On Green	0.13	0.59	0.59	0.01	0.47	0.47	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1757	3670	16	1757	2927	648	221	660	673	1369	149	1441
Grp Volume(v), veh/h	191	226	226	10	662	625	30	0	0	225	0	149
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1730	1553	0	0	1369	0	1590
Q Serve(g_s), s	7.5	4.1	4.1	0.4	21.1	21.4	0.0	0.0	0.0	11.2	0.0	5.6
Cycle Q Clear(g_c), s	7.5	4.1	4.1	0.4	21.1	21.4	6.4	0.0	0.0	16.4	0.0	5.6
Prop In Lane	1.00		0.01	1.00		0.37	0.23		0.43	1.00		0.91
Lane Grp Cap(c), veh/h	232	1086	1085	17	861	808	423	0	0	318	0	369
V/C Ratio(X)	0.82	0.21	0.21	0.57	0.77	0.77	0.07	0.00	0.00	0.71	0.00	0.40
Avail Cap(c_a), veh/h	372	1301	1299	99	1015	952	588	0	0	464	0	539
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.0	6.8	6.8	34.9	15.7	15.8	21.3	0.0	0.0	30.1	0.0	23.1
Incr Delay (d2), s/veh	7.9	0.1	0.1	26.4	3.1	3.4	0.1	0.0	0.0	2.9	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	1.7	1.7	0.3	9.6	9.1	0.4	0.0	0.0	4.2	0.0	2.2
Lane Grp Delay (d), s/veh	37.9	6.9	6.9	61.4	18.8	19.2	21.3	0.0	0.0	33.0	0.0	23.8
Lane Grp LOS	D	A	A	E	B	B	C			C		C
Approach Vol, veh/h		643			1297			30				374
Approach Delay, s/veh		16.1			19.3			21.3				29.3
Approach LOS		B			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	13.4	46.0		4.7	37.3			21.9				21.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	15.0	50.0		4.0	39.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	9.5	6.1		2.4	23.4			8.4				18.4
Green Ext Time (p_c), s	0.2	17.9		0.0	10.2			1.6				0.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.0								
HCM 2010 LOS				C								
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			 				 	 			  	
Volume (veh/h)	188	50	474	11	113	78	913	1161	9	49	868	147
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	291	306	1586	27	277	260	1160	2395	1018	67	1603	271
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.34	0.65	0.65	0.04	0.35	0.35
Sat Flow, veh/h	1757	1845	3136	163	1673	1568	3408	3689	1568	1757	4616	780
Grp Volume(v), veh/h	204	54	515	135	0	85	992	1262	10	53	753	350
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1836	0	1568	1704	1845	1568	1757	1845	1707
Q Serve(g_s), s	9.0	2.1	7.9	5.4	0.0	3.9	22.1	14.9	0.2	2.4	13.7	13.8
Cycle Q Clear(g_c), s	9.0	2.1	7.9	5.4	0.0	3.9	22.1	14.9	0.2	2.4	13.7	13.8
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	291	306	1586	304	0	260	1160	2395	1018	67	1281	593
V/C Ratio(X)	0.70	0.18	0.32	0.44	0.00	0.33	0.86	0.53	0.01	0.79	0.59	0.59
Avail Cap(c_a), veh/h	387	406	1758	359	0	307	1626	2753	1170	193	1399	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	29.3	11.9	30.7	0.0	30.1	25.1	7.6	5.1	39.0	21.9	21.9
Incr Delay (d2), s/veh	3.7	0.3	0.1	1.0	0.0	0.7	3.4	0.2	0.0	18.0	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	1.0	2.8	2.6	0.0	1.6	9.6	5.8	0.1	1.4	6.3	5.9
Lane Grp Delay (d), s/veh	35.8	29.6	12.1	31.7	0.0	30.8	28.5	7.8	5.1	57.0	22.4	23.1
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		773			220			2264			1156	
Approach Delay, s/veh		19.6			31.4			16.9			24.2	
Approach LOS		B			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		17.5			17.5		31.8	57.1		7.1		32.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		39.0	61.0		9.0		31.0
Max Q Clear Time (g_c+I1), s		11.0			7.4		24.1	16.9		4.4		15.8
Green Ext Time (p_c), s		2.6			2.9		3.7	28.4		0.0		12.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.0								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr





























Baseline AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	24	0	98	0	0	0	56	473	3	0	1516	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	169	0	150	475	177	150	77	2822	1199	3	3530	64
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.04	0.76	0.76	0.00	0.65	0.65
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5418	99
Grp Volume(v), veh/h	26	0	107	0	0	0	61	514	3	0	1122	556
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1827
Q Serve(g_s), s	0.8	0.0	3.8	0.0	0.0	0.0	2.0	2.2	0.0	0.0	8.8	8.8
Cycle Q Clear(g_c), s	0.8	0.0	3.8	0.0	0.0	0.0	2.0	2.2	0.0	0.0	8.8	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	169	0	150	475	177	150	77	2822	1199	3	2404	1191
V/C Ratio(X)	0.15	0.00	0.71	0.00	0.00	0.00	0.80	0.18	0.00	0.00	0.47	0.47
Avail Cap(c_a), veh/h	550	0	491	1379	514	437	336	4237	1801	122	3788	1876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	0.0	25.2	0.0	0.0	0.0	27.2	1.8	1.6	0.0	5.0	5.0
Incr Delay (d2), s/veh	0.4	0.0	6.1	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	0.0	1.7	0.0	0.0	0.0	1.2	0.6	0.0	0.0	3.2	3.2
Lane Grp Delay (d), s/veh	24.3	0.0	31.3	0.0	0.0	0.0	43.9	1.9	1.6	0.0	5.2	5.3
Lane Grp LOS	C		C				D	A	A		A	A
Approach Vol, veh/h		133			0			578			1678	
Approach Delay, s/veh		29.9			0.0			6.3			5.2	
Approach LOS		C						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		9.5			9.5		6.5	48.0		0.0		41.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		11.0	66.0		4.0		59.0
Max Q Clear Time (g_c+I1), s		5.8			0.0		4.0	4.2		0.0		10.8
Green Ext Time (p_c), s		0.5			0.0		0.1	30.0		0.0		26.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			6.8									
HCM 2010 LOS			A									
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		  	  	
Volume (veh/h)	61	69	124	377	385	90	67	383	79	50	1430	360
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	85	218	185	442	1186	504	93	1999	401	69	1853	462
Arrive On Green	0.05	0.12	0.12	0.25	0.32	0.32	0.05	0.45	0.45	0.04	0.43	0.43
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4478	898	1757	4280	1066
Grp Volume(v), veh/h	66	75	135	410	418	98	73	340	162	54	1338	607
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1686	1757	1845	1656
Q Serve(g_s), s	4.1	4.1	9.2	25.2	9.6	5.0	4.5	6.2	6.5	3.4	35.7	36.4
Cycle Q Clear(g_c), s	4.1	4.1	9.2	25.2	9.6	5.0	4.5	6.2	6.5	3.4	35.7	36.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.53	1.00		0.64
Lane Grp Cap(c), veh/h	85	218	185	442	1186	504	93	1647	753	69	1597	717
V/C Ratio(X)	0.78	0.34	0.73	0.93	0.35	0.19	0.79	0.21	0.21	0.78	0.84	0.85
Avail Cap(c_a), veh/h	159	267	227	508	1266	538	95	1647	753	143	1666	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.1	44.9	47.1	40.5	28.8	27.2	51.8	18.7	18.8	52.7	27.9	28.1
Incr Delay (d2), s/veh	14.1	0.9	8.9	21.9	0.2	0.2	33.5	0.1	0.1	16.9	3.8	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	2.0	4.2	14.0	4.5	2.0	2.9	2.9	2.7	1.9	17.0	16.6
Lane Grp Delay (d), s/veh	66.3	45.8	56.0	62.3	28.9	27.4	85.3	18.8	18.9	69.6	31.7	36.8
Lane Grp LOS	E	D	E	E	C	C	F	B	B	E	C	D
Approach Vol, veh/h		276			926			575			1999	
Approach Delay, s/veh		55.7			43.6			27.3			34.3	
Approach LOS		E			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	9.3	17.1		31.9	39.6		9.9	53.4		8.4	51.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	16.0		32.0	38.0		6.0	47.0		9.0	50.0	
Max Q Clear Time (g_c+I1), s	6.1	11.2		27.2	11.6		6.5	8.5		5.4	38.4	
Green Ext Time (p_c), s	0.0	1.9		0.6	4.7		0.0	27.1		0.0	9.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				37.1								
HCM 2010 LOS				D								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
30: Ygnacio Valley Rd & Clayton Blvd

Baseline AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	205	351	34	443	1167	133	151	293	167	261	1008	503
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	285	1258	0	563	1711	0	223	1985	562	353	2197	622
Arrive On Green	0.08	0.23	0.00	0.17	0.31	0.00	0.07	0.36	0.36	0.10	0.40	0.40
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	223	382	0	482	1268	0	164	318	182	284	1096	547
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	7.1	6.3	0.0	15.2	22.7	0.0	5.2	4.3	9.3	9.0	16.4	35.6
Cycle Q Clear(g_c), s	7.1	6.3	0.0	15.2	22.7	0.0	5.2	4.3	9.3	9.0	16.4	35.6
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	285	1258	0	563	1711	0	223	1985	562	353	2197	622
V/C Ratio(X)	0.78	0.30	0.00	0.86	0.74	0.00	0.74	0.16	0.32	0.80	0.50	0.88
Avail Cap(c_a), veh/h	340	1304	0	741	1956	0	247	1985	562	494	2307	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	35.4	0.0	44.8	34.1	0.0	50.6	24.1	25.7	48.4	25.0	30.8
Incr Delay (d2), s/veh	9.6	0.1	0.0	7.6	1.3	0.0	9.9	0.0	0.3	6.5	0.2	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.5	3.0	0.0	7.3	10.8	0.0	2.6	2.0	3.7	4.3	7.5	15.9
Lane Grp Delay (d), s/veh	59.2	35.5	0.0	52.4	35.5	0.0	60.5	24.1	26.0	54.8	25.2	43.5
Lane Grp LOS	E	D		D	D		E	C	C	D	C	D
Approach Vol, veh/h		605			1750			664			1927	
Approach Delay, s/veh		44.2			40.1			33.6			34.8	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.2	29.1		22.2	38.1		11.2	43.6		15.4	47.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	26.0		24.0	39.0		8.0	38.0		16.0	46.0	
Max Q Clear Time (g_c+I1), s	9.1	8.3		17.2	24.7		7.2	11.3		11.0	37.6	
Green Ext Time (p_c), s	0.1	11.0		1.1	9.5		0.0	15.7		0.4	6.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				37.7								
HCM 2010 LOS				D								
<b>Notes</b>												















HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Baseline AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	517	5	9	989	11	6	0	28	7	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	17	2237	20	19	2234	25	257	0	68	233	0	68
Arrive On Green	0.01	0.61	0.61	0.01	0.61	0.61	0.04	0.00	0.04	0.04	0.00	0.04
Sat Flow, veh/h	1757	3651	32	1757	3641	41	1393	0	1568	1361	0	1568
Grp Volume(v), veh/h	9	284	283	10	545	542	7	0	30	8	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1839	1757	1845	1837	1393	0	1568	1361	0	1568
Q Serve(g_s), s	0.2	2.5	2.5	0.2	5.8	5.8	0.2	0.0	0.7	0.2	0.0	0.1
Cycle Q Clear(g_c), s	0.2	2.5	2.5	0.2	5.8	5.8	0.3	0.0	0.7	0.9	0.0	0.1
Prop In Lane	1.00		0.02	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	17	1130	1126	19	1132	1127	257	0	68	233	0	68
V/C Ratio(X)	0.54	0.25	0.25	0.54	0.48	0.48	0.03	0.00	0.44	0.03	0.00	0.06
Avail Cap(c_a), veh/h	391	4207	4194	391	4207	4191	894	0	785	856	0	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	3.2	3.2	17.7	3.8	3.8	16.6	0.0	16.8	17.2	0.0	16.5
Incr Delay (d2), s/veh	24.0	0.1	0.1	22.1	0.3	0.3	0.0	0.0	4.5	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.4	0.4	0.2	1.2	1.2	0.1	0.0	0.3	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	41.7	3.3	3.3	39.8	4.1	4.1	16.7	0.0	21.3	17.3	0.0	16.9
Lane Grp LOS	D	A	A	D	A	A	B		C	B		B
Approach Vol, veh/h		576			1097			37				12
Approach Delay, s/veh		3.9			4.5			20.4				17.1
Approach LOS		A			A			C				B
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.3	26.0		4.4	26.1			5.5				5.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	82.0		8.0	82.0			18.0				18.0
Max Q Clear Time (g_c+I1), s	2.2	4.5		2.2	7.8			2.7				2.9
Green Ext Time (p_c), s	0.0	14.3		0.0	14.2			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.7								
HCM 2010 LOS				A								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd

Baseline AM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			 
Volume (veh/h)	101	293	704	71	96	298
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	144	2110	1340	135	457	408
Arrive On Green	0.08	0.57	0.41	0.41	0.26	0.26
Sat Flow, veh/h	1757	3689	3299	332	1757	1568
Grp Volume(v), veh/h	110	318	428	414	104	324
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1786	1757	1568
Q Serve(g_s), s	2.9	1.9	8.5	8.5	2.2	9.2
Cycle Q Clear(g_c), s	2.9	1.9	8.5	8.5	2.2	9.2
Prop In Lane	1.00			0.19	1.00	1.00
Lane Grp Cap(c), veh/h	144	2110	749	726	457	408
V/C Ratio(X)	0.77	0.15	0.57	0.57	0.23	0.79
Avail Cap(c_a), veh/h	517	4416	1511	1463	922	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	4.8	10.9	10.9	13.9	16.4
Incr Delay (d2), s/veh	8.2	0.0	0.7	0.7	0.3	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	0.7	3.5	3.4	0.9	0.4
Lane Grp Delay (d), s/veh	29.6	4.8	11.6	11.6	14.1	20.0
Lane Grp LOS	C	A	B	B	B	B
Approach Vol, veh/h		428	842		428	
Approach Delay, s/veh		11.2	11.6		18.6	
Approach LOS		B	B		B	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	7.9	31.2	23.3			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	57.0	39.0			
Max Q Clear Time (g_c+I1), s	4.9	3.9	10.5			
Green Ext Time (p_c), s	0.2	9.9	8.8			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			13.3			
HCM 2010 LOS			B			
<b>Notes</b>						





















HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	42	0	83	0	0	0	742	563	0	2	175	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	200	0	120	66	141	0	1153	2992	0	4	496	69
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.66	0.81	0.00	0.00	0.05	0.05
Sat Flow, veh/h	1757	0	1568	1289	1845	0	1757	3689	0	1757	3168	443
Grp Volume(v), veh/h	46	0	90	0	0	0	807	612	0	2	109	108
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1289	1845	0	1757	1845	0	1757	1845	1766
Q Serve(g_s), s	2.7	0.0	6.1	0.0	0.0	0.0	31.7	4.1	0.0	0.1	6.2	6.4
Cycle Q Clear(g_c), s	2.7	0.0	6.1	0.0	0.0	0.0	31.7	4.1	0.0	0.1	6.2	6.4
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.25
Lane Grp Cap(c), veh/h	200	0	120	66	141	0	1153	2992	0	4	289	277
V/C Ratio(X)	0.23	0.00	0.75	0.00	0.00	0.00	0.70	0.20	0.00	0.53	0.38	0.39
Avail Cap(c_a), veh/h	325	0	231	158	272	0	1214	2992	0	65	289	277
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.54	0.54	0.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	47.5	0.0	49.1	0.0	0.0	0.0	11.8	2.3	0.0	54.2	46.3	46.4
Incr Delay (d2), s/veh	0.6	0.0	9.1	0.0	0.0	0.0	0.9	0.1	0.0	81.5	3.7	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	2.8	0.0	0.0	0.0	13.1	1.4	0.0	0.1	3.4	3.4
Lane Grp Delay (d), s/veh	48.1	0.0	58.2	0.0	0.0	0.0	12.8	2.4	0.0	135.7	50.0	50.4
Lane Grp LOS	D		E				B	A		F	D	D
Approach Vol, veh/h		136			0			1419			219	
Approach Delay, s/veh		54.8			0.0			8.3			51.0	
Approach LOS		D						A			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		12.3			12.3		75.2	92.0		4.2		21.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		75.0	88.0		4.0		17.0
Max Q Clear Time (g_c+I1), s		8.1			0.0		33.7	6.1		2.1		8.4
Green Ext Time (p_c), s		0.3			0.0		9.2	9.6		0.0		0.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					17.1							
HCM 2010 LOS					B							
<b>Notes</b>												



















HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

Baseline AM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	344	136	22	457	7	554	6	29	8	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	21	593	231	39	886	14	818	8	845	225	50	31
Arrive On Green	0.01	0.23	0.23	0.02	0.24	0.24	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	1757	2529	986	1757	3621	58	1292	15	1568	225	93	58
Grp Volume(v), veh/h	12	271	251	24	253	252	609	0	32	13	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1671	1757	1845	1834	1307	0	1568	375	0	0
Q Serve(g_s), s	0.4	7.8	7.9	0.8	7.1	7.1	0.0	0.0	0.6	0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.4	7.8	7.9	0.8	7.1	7.1	24.5	0.0	0.6	24.7	0.0	0.0
Prop In Lane	1.00		0.59	1.00		0.03	0.99		1.00	0.69		0.15
Lane Grp Cap(c), veh/h	21	433	392	39	451	449	826	0	845	306	0	0
V/C Ratio(X)	0.56	0.63	0.64	0.62	0.56	0.56	0.74	0.00	0.04	0.04	0.00	0.00
Avail Cap(c_a), veh/h	120	565	512	120	565	562	1405	0	1495	903	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.9	20.2	20.2	28.5	19.4	19.4	11.9	0.0	6.4	11.1	0.0	0.0
Incr Delay (d2), s/veh	21.3	1.5	1.7	15.0	1.1	1.1	1.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	3.5	3.3	0.5	3.2	3.2	7.1	0.0	0.2	0.2	0.0	0.0
Lane Grp Delay (d), s/veh	50.2	21.7	22.0	43.5	20.5	20.5	13.2	0.0	6.4	11.1	0.0	0.0
Lane Grp LOS	D	C	C	D	C	C	B		A	B		
Approach Vol, veh/h		534			529			641				13
Approach Delay, s/veh		22.5			21.6			12.9				11.1
Approach LOS		C			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.7	17.8		5.3	18.4			35.7				35.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	18.0		4.0	18.0			56.0				56.0
Max Q Clear Time (g_c+I1), s	2.4	9.9		2.8	9.1			26.5				26.7
Green Ext Time (p_c), s	0.0	3.8		0.0	4.1			4.9				4.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.5								
HCM 2010 LOS				B								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	175	253	199	462	758	294	172	844	293
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				238	355	295	594	1233	478	225	1626	691
Arrive On Green				0.26	0.26	0.26	0.35	0.97	0.97	0.13	0.44	0.00
Sat Flow, veh/h				922	1376	1143	3408	2534	982	1757	3689	1568
Grp Volume(v), veh/h				371	0	310	502	599	545	187	917	0
Grp Sat Flow(s),veh/h/ln				1799	0	1643	1704	1845	1671	1757	1845	1568
Q Serve(g_s), s				18.2	0.0	16.3	12.9	2.3	2.3	9.8	17.5	0.0
Cycle Q Clear(g_c), s				18.2	0.0	16.3	12.9	2.3	2.3	9.8	17.5	0.0
Prop In Lane				0.51		0.70	1.00		0.59	1.00		1.00
Lane Grp Cap(c), veh/h				464	0	424	594	898	814	225	1626	691
V/C Ratio(X)				0.80	0.00	0.73	0.85	0.67	0.67	0.83	0.56	0.00
Avail Cap(c_a), veh/h				723	0	661	1046	898	814	446	1626	691
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.59	0.59	0.59	1.00	1.00	0.00
Uniform Delay (d), s/veh				32.8	0.0	32.1	29.6	0.7	0.7	40.2	19.7	0.0
Incr Delay (d2), s/veh				3.5	0.0	2.5	2.0	2.3	2.6	7.7	1.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				8.7	0.0	7.0	4.9	0.9	0.9	4.9	8.1	0.0
Lane Grp Delay (d), s/veh				36.2	0.0	34.5	31.6	3.0	3.3	47.9	21.1	0.0
Lane Grp LOS				D		C	C	A	A	D	C	
Approach Vol, veh/h					681			1646			1104	
Approach Delay, s/veh					35.5			11.8			25.6	
Approach LOS					D			B			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					28.4		20.5	50.0		16.1	45.6	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					20.2		14.9	4.3		11.8	19.5	
Green Ext Time (p_c), s					4.2		1.6	22.8		0.4	15.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay											21.0	
HCM 2010 LOS											C	
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave




























Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	599	0	793	0	0	0	0	901	148	131	638	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	739	775	1318				0	1475	242	263	1862	0
Arrive On Green	0.42	0.00	0.42				0.00	0.32	0.32	0.30	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4639	761	1757	3689	0
Grp Volume(v), veh/h	651	0	862				0	778	362	142	693	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1710	1757	1845	0
Q Serve(g_s), s	36.5	0.0	23.5				0.0	19.5	19.6	7.2	0.0	0.0
Cycle Q Clear(g_c), s	36.5	0.0	23.5				0.0	19.5	19.6	7.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.44	1.00		0.00
Lane Grp Cap(c), veh/h	739	775	1318				0	1173	544	263	1862	0
V/C Ratio(X)	0.88	0.00	0.65				0.00	0.66	0.67	0.54	0.37	0.00
Avail Cap(c_a), veh/h	953	1000	1700				0	1173	544	263	1862	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.80	0.80	0.00
Uniform Delay (d), s/veh	28.5	0.0	24.8				0.0	31.5	31.6	34.4	0.0	0.0
Incr Delay (d2), s/veh	7.9	0.0	0.6				0.0	3.0	6.3	1.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	17.4	0.0	9.1				0.0	9.5	9.3	3.0	0.1	0.0
Lane Grp Delay (d), s/veh	36.5	0.0	25.4				0.0	34.5	37.9	36.2	0.5	0.0
Lane Grp LOS	D		C					C	D	D	A	
Approach Vol, veh/h		1513						1140			835	
Approach Delay, s/veh		30.2						35.6			6.5	
Approach LOS		C						D			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		49.0						38.0		20.0	58.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		58.0						34.0		16.0	54.0	
Max Q Clear Time (g_c+I1), s		38.5						21.6		9.2	2.0	
Green Ext Time (p_c), s		6.5						6.1		2.8	6.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			26.3									
HCM 2010 LOS			C									
<b>Notes</b>												






























HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

Baseline PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	225	757	167	141	333	198	153	677	213	463	840	266
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	273	807	178	161	783	333	194	794	337	499	1433	609
Arrive On Green	0.16	0.28	0.28	0.09	0.21	0.21	0.11	0.22	0.22	0.28	0.39	0.39
Sat Flow, veh/h	1757	2928	647	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	245	519	486	153	362	215	166	736	232	503	913	289
Grp Sat Flow(s),veh/h/ln	1757	1845	1730	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.4	33.0	33.0	10.4	10.3	8.3	11.1	23.4	13.0	34.0	24.1	16.5
Cycle Q Clear(g_c), s	16.4	33.0	33.0	10.4	10.3	8.3	11.1	23.4	13.0	34.0	24.1	16.5
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	508	477	161	783	333	194	794	337	499	1433	609
V/C Ratio(X)	0.90	1.02	1.02	0.95	0.46	0.65	0.85	0.93	0.69	1.01	0.64	0.47
Avail Cap(c_a), veh/h	308	508	477	161	783	333	264	801	340	499	1433	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	43.4	43.4	54.1	41.2	13.3	52.3	46.1	27.6	42.9	29.8	27.5
Incr Delay (d2), s/veh	25.6	45.1	46.5	55.5	0.4	4.3	17.9	16.7	5.7	42.5	0.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.4	21.9	20.7	7.2	4.9	3.5	6.0	12.9	5.6	21.1	11.5	6.5
Lane Grp Delay (d), s/veh	75.2	88.5	89.8	109.6	41.6	17.5	70.2	62.8	33.2	85.3	30.7	28.0
Lane Grp LOS	E	F	F	F	D	B	E	E	C	F	C	C
Approach Vol, veh/h		1250			730			1134			1705	
Approach Delay, s/veh		86.4			48.8			57.8			46.4	
Approach LOS		F			D			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.6	37.0		15.0	29.4		17.2	29.8		38.0	50.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	21.0	33.0		11.0	23.0		18.0	26.0		34.0	42.0	
Max Q Clear Time (g_c+I1), s	18.4	35.0		12.4	12.3		13.1	25.4		36.0	26.1	
Green Ext Time (p_c), s	0.2	0.0		0.0	6.8		0.2	0.3		0.0	8.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				59.8								
HCM 2010 LOS				E								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Baseline PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	57	50	3	382	107	105	35	680	941	98	534	116
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	268	281	239	519	281	239	73	2408	1023	134	2537	1078
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.04	0.65	0.65	0.08	0.69	0.69
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	62	54	3	415	116	114	38	739	1023	107	580	126
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.1	2.6	0.2	11.9	5.8	6.7	2.1	8.8	65.9	6.1	5.9	2.8
Cycle Q Clear(g_c), s	3.1	2.6	0.2	11.9	5.8	6.7	2.1	8.8	65.9	6.1	5.9	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	268	281	239	519	281	239	73	2408	1023	134	2537	1078
V/C Ratio(X)	0.23	0.19	0.01	0.80	0.41	0.48	0.52	0.31	1.00	0.80	0.23	0.12
Avail Cap(c_a), veh/h	313	328	279	640	347	295	278	2408	1023	191	2537	1078
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	37.4	36.4	41.4	38.8	39.2	47.5	7.6	17.5	45.9	5.9	5.4
Incr Delay (d2), s/veh	0.4	0.3	0.0	5.8	1.0	1.5	5.7	0.1	28.0	14.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	1.2	0.1	5.4	2.7	2.8	1.1	3.7	31.6	3.3	2.4	1.0
Lane Grp Delay (d), s/veh	38.1	37.8	36.4	47.2	39.7	40.7	53.2	7.7	45.6	60.2	5.9	5.4
Lane Grp LOS	D	D	D	D	D	D	D	A	D	E	A	A
Approach Vol, veh/h		119			645			1800			813	
Approach Delay, s/veh		37.9			44.7			30.2			13.0	
Approach LOS		D			D			C			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		19.4			19.4		8.2	70.0		11.7		73.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			19.0		16.0	66.0		11.0		61.0
Max Q Clear Time (g_c+I1), s		5.1			13.9		4.1	67.9		8.1		7.9
Green Ext Time (p_c), s		2.6			1.5		0.0	0.0		0.1		27.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.1								
HCM 2010 LOS				C								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

Baseline PM  
3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	99	26	44	1557	749	170
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	152	136	63	2908	2008	456
Arrive On Green	0.09	0.09	0.04	0.79	0.69	0.69
Sat Flow, veh/h	1757	1568	1757	3689	2911	662
Grp Volume(v), veh/h	108	28	48	1692	516	483
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1728
Q Serve(g_s), s	3.8	1.1	1.7	11.5	7.7	7.7
Cycle Q Clear(g_c), s	3.8	1.1	1.7	11.5	7.7	7.7
Prop In Lane	1.00	1.00	1.00			0.38
Lane Grp Cap(c), veh/h	152	136	63	2908	1273	1192
V/C Ratio(X)	0.71	0.21	0.76	0.58	0.41	0.41
Avail Cap(c_a), veh/h	494	441	165	3692	1557	1459
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	27.2	30.6	2.6	4.3	4.3
Incr Delay (d2), s/veh	6.0	0.7	17.0	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	1.0	1.0	2.9	2.7	2.5
Lane Grp Delay (d), s/veh	34.4	27.9	47.6	2.8	4.5	4.5
Lane Grp LOS	C	C	D	A	A	A
Approach Vol, veh/h	136			1740	999	
Approach Delay, s/veh	33.1			4.1	4.5	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			6.3	54.4	48.1	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			6.0	64.0	54.0	
Max Q Clear Time (g_c+I1), s			3.7	13.5	9.7	
Green Ext Time (p_c), s			0.0	36.9	33.5	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			5.6			
HCM 2010 LOS			A			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Baseline PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	1018	159	175	254	111	74	253	272	240	419	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	131	1207	513	217	1388	590	103	746	317	294	851	252
Arrive On Green	0.07	0.33	0.33	0.12	0.38	0.38	0.06	0.20	0.20	0.17	0.31	0.31
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2735	811
Grp Volume(v), veh/h	103	1107	173	190	276	121	80	275	296	261	306	285
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1702
Q Serve(g_s), s	5.1	25.7	7.4	9.5	4.5	4.6	4.0	5.7	16.5	12.9	12.2	12.4
Cycle Q Clear(g_c), s	5.1	25.7	7.4	9.5	4.5	4.6	4.0	5.7	16.5	12.9	12.2	12.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	131	1207	513	217	1388	590	103	746	317	294	574	529
V/C Ratio(X)	0.79	0.92	0.34	0.88	0.20	0.21	0.78	0.37	0.93	0.89	0.53	0.54
Avail Cap(c_a), veh/h	217	1243	528	217	1388	590	178	746	317	296	574	529
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	28.8	22.7	38.4	18.7	18.8	41.4	30.6	35.0	36.2	25.3	25.4
Incr Delay (d2), s/veh	9.9	10.6	0.4	30.5	0.1	0.2	11.9	0.3	33.8	25.9	0.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.6	13.3	2.9	6.1	2.0	1.8	2.1	2.7	9.4	7.8	5.7	5.4
Lane Grp Delay (d), s/veh	50.4	39.4	23.0	68.8	18.8	18.9	53.3	30.9	68.7	62.2	26.3	26.5
Lane Grp LOS	D	D	C	E	B	B	D	C	E	E	C	C
Approach Vol, veh/h		1383			587			651			852	
Approach Delay, s/veh		38.2			35.0			50.9			37.3	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.6	33.1		15.0	37.5		9.2	22.0		18.9	31.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	30.0		11.0	30.0		9.0	18.0		15.0	24.0	
Max Q Clear Time (g_c+I1), s	7.1	27.7		11.5	6.6		6.0	18.5		14.9	14.4	
Green Ext Time (p_c), s	0.1	1.5		0.0	12.2		0.0	0.0		0.0	4.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.8								
HCM 2010 LOS				D								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Baseline PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	936	28	22	525	85	16	39	8	126	76	87
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	154	1243	37	33	1160	986	26	78	17	164	104	118
Arrive On Green	0.09	0.70	0.70	0.02	0.63	0.63	0.01	0.05	0.05	0.09	0.13	0.13
Sat Flow, veh/h	1757	1783	53	1757	1845	1568	1757	1473	316	1757	786	900
Grp Volume(v), veh/h	78	0	1047	24	571	92	17	0	51	137	0	178
Grp Sat Flow(s),veh/h/ln	1757	0	1835	1757	1845	1568	1757	0	1789	1757	0	1686
Q Serve(g_s), s	4.9	0.0	46.7	1.6	19.3	1.5	1.1	0.0	3.2	8.9	0.0	11.9
Cycle Q Clear(g_c), s	4.9	0.0	46.7	1.6	19.3	1.5	1.1	0.0	3.2	8.9	0.0	11.9
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	154	0	1280	33	1160	986	26	0	95	164	0	222
V/C Ratio(X)	0.51	0.00	0.82	0.74	0.49	0.09	0.67	0.00	0.54	0.84	0.00	0.80
Avail Cap(c_a), veh/h	182	0	1280	61	1160	986	76	0	246	197	0	348
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.00	0.43	0.68	0.68	0.68	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	0.0	12.4	56.7	11.6	2.7	56.9	0.0	53.6	51.8	0.0	49.0
Incr Delay (d2), s/veh	1.1	0.0	2.6	19.5	1.0	0.1	25.9	0.0	4.7	22.5	0.0	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	0.0	19.0	0.9	8.3	1.0	0.7	0.0	1.6	5.1	0.0	5.6
Lane Grp Delay (d), s/veh	51.7	0.0	15.0	76.3	12.6	2.8	82.8	0.0	58.3	74.2	0.0	56.0
Lane Grp LOS	D		B	E	B	A	F		E	E		E
Approach Vol, veh/h		1125			687			68				315
Approach Delay, s/veh		17.5			13.5			64.4				64.0
Approach LOS		B			B			E				E
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	14.2	85.0		6.2	77.0		5.7	10.1		14.8		19.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	81.0		4.0	73.0		5.0	16.0		13.0		24.0
Max Q Clear Time (g_c+I1), s	6.9	48.7		3.6	21.3		3.1	5.2		10.9		13.9
Green Ext Time (p_c), s	0.1	10.7		0.0	4.5		0.0	0.9		0.1		0.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				24.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

Baseline PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	29	659	23	576	260	82	40	24	238	71	59	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	46	1395	49	996	2433	1034	328	344	292	328	291	45
Arrive On Green	0.03	0.39	0.39	0.29	0.66	0.66	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3544	124	3408	3689	1568	1757	1845	1568	1757	1558	243
Grp Volume(v), veh/h	32	373	368	626	283	89	43	26	259	77	0	74
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.7	14.4	14.4	15.0	2.7	1.9	1.9	1.1	15.1	3.5	0.0	3.3
Cycle Q Clear(g_c), s	1.7	14.4	14.4	15.0	2.7	1.9	1.9	1.1	15.1	3.5	0.0	3.3
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	46	726	718	996	2433	1034	328	344	292	328	0	336
V/C Ratio(X)	0.69	0.51	0.51	0.63	0.12	0.09	0.13	0.08	0.89	0.24	0.00	0.22
Avail Cap(c_a), veh/h	112	726	718	1124	2433	1034	374	392	334	328	0	336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.84	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.4	21.7	21.7	28.8	5.9	5.8	31.9	31.6	37.3	32.5	0.0	32.4
Incr Delay (d2), s/veh	16.8	2.6	2.6	0.8	0.1	0.1	0.2	0.1	21.8	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	6.9	6.9	6.5	1.1	0.7	0.9	0.5	7.7	1.6	0.0	1.5
Lane Grp Delay (d), s/veh	62.2	24.2	24.3	29.6	6.0	5.9	32.1	31.6	59.1	32.9	0.0	32.8
Lane Grp LOS	E	C	C	C	A	A	C	C	E	C		C
Approach Vol, veh/h		773			998			328				151
Approach Delay, s/veh		25.8			20.8			53.4				32.8
Approach LOS		C			C			D				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.5	41.0		31.5	66.0			21.5				21.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	37.0		31.0	62.0			20.0				16.0
Max Q Clear Time (g_c+I1), s	3.7	16.4		17.0	4.7			17.1				5.5
Green Ext Time (p_c), s	0.7	4.7		2.2	2.3			0.4				1.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 9: Loveridge Rd & California Ave/N Park Blvd




















Baseline PM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	304	288	349	86	149	17	434	564	192	17	179	262
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	455	547	465	175	700	77	835	1087	370	30	681	289
Arrive On Green	0.13	0.30	0.30	0.05	0.21	0.21	0.24	0.41	0.41	0.02	0.18	0.18
Sat Flow, veh/h	3408	1845	1568	3408	3268	358	3408	2634	897	1757	3689	1568
Grp Volume(v), veh/h	330	313	379	93	91	89	472	429	393	18	195	285
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1781	1704	1845	1686	1757	1845	1568
Q Serve(g_s), s	6.7	10.3	16.1	1.9	2.9	3.0	8.7	12.8	12.8	0.7	3.3	9.1
Cycle Q Clear(g_c), s	6.7	10.3	16.1	1.9	2.9	3.0	8.7	12.8	12.8	0.7	3.3	9.1
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.53	1.00		1.00
Lane Grp Cap(c), veh/h	455	547	465	175	395	382	835	761	696	30	681	289
V/C Ratio(X)	0.73	0.57	0.82	0.53	0.23	0.23	0.57	0.56	0.56	0.61	0.29	0.99
Avail Cap(c_a), veh/h	996	950	808	380	616	595	1328	1387	1268	122	1592	677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.9	21.4	23.5	33.2	23.3	23.3	23.8	16.1	16.2	35.1	25.2	14.3
Incr Delay (d2), s/veh	2.2	0.9	3.6	2.5	0.3	0.3	0.6	0.7	0.7	18.6	0.2	21.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.0	4.7	6.4	0.9	1.3	1.3	3.7	5.6	5.2	0.5	1.5	5.0
Lane Grp Delay (d), s/veh	32.1	22.4	27.0	35.7	23.6	23.7	24.4	16.8	16.9	53.7	25.4	35.6
Lane Grp LOS	C	C	C	D	C	C	C	B	B	D	C	D
Approach Vol, veh/h		1022			273			1294			498	
Approach Delay, s/veh		27.2			27.7			19.6			32.3	
Approach LOS		C			C			B			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.6	25.3		7.7	19.4		21.6	33.6		5.2	17.3	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	21.0	37.0		8.0	24.0		28.0	54.0		5.0	31.0	
Max Q Clear Time (g_c+I1), s	8.7	18.1		3.9	5.0		10.7	14.8		2.7	11.1	
Green Ext Time (p_c), s	0.9	3.2		0.5	1.2		6.9	8.9		0.0	2.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				24.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

























Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	764	0	444	0	0	0	0	641	369	127	489	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1247	0	574				0	1548	658	350	2065	0
Arrive On Green	0.37	0.00	0.37				0.00	0.42	0.42	0.10	0.56	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	830	0	483				0	697	401	138	532	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	21.9	0.0	30.3				0.0	14.5	21.4	4.1	8.0	0.0
Cycle Q Clear(g_c), s	21.9	0.0	30.3				0.0	14.5	21.4	4.1	8.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1247	0	574				0	1548	658	350	2065	0
V/C Ratio(X)	0.67	0.00	0.84				0.00	0.45	0.61	0.39	0.26	0.00
Avail Cap(c_a), veh/h	1653	0	760				0	1548	658	350	2065	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.90	0.90	0.00
Uniform Delay (d), s/veh	28.5	0.0	31.2				0.0	22.3	24.3	45.0	12.1	0.0
Incr Delay (d2), s/veh	0.6	0.0	6.6				0.0	0.9	4.2	0.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.3	0.0	12.9				0.0	6.9	9.1	1.8	3.6	0.0
Lane Grp Delay (d), s/veh	29.1	0.0	37.7				0.0	23.2	28.4	45.6	12.4	0.0
Lane Grp LOS	C		D					C	C	D	B	
Approach Vol, veh/h		1313						1098			670	
Approach Delay, s/veh		32.3						25.1			19.3	
Approach LOS		C						C			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		43.2						49.0		15.0	64.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		52.0						45.0		11.0	60.0	
Max Q Clear Time (g_c+I1), s		32.3						23.4		6.1	10.0	
Green Ext Time (p_c), s		6.9						6.6		1.8	4.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			26.9									
HCM 2010 LOS			C									
<b>Notes</b>												















HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	518	1067	184	209	393	135	176	434	149	238	364	121
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	676	1607	683	304	1204	512	229	746	317	342	635	270
Arrive On Green	0.20	0.44	0.44	0.09	0.33	0.33	0.13	0.20	0.20	0.10	0.17	0.17
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	563	1160	200	227	427	147	191	472	162	259	396	132
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	14.7	24.0	7.6	6.0	8.2	6.5	9.8	10.8	8.5	6.9	9.2	7.1
Cycle Q Clear(g_c), s	14.7	24.0	7.6	6.0	8.2	6.5	9.8	10.8	8.5	6.9	9.2	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	676	1607	683	304	1204	512	229	746	317	342	635	270
V/C Ratio(X)	0.83	0.72	0.29	0.75	0.35	0.29	0.83	0.63	0.51	0.76	0.62	0.49
Avail Cap(c_a), veh/h	1030	1990	846	441	1354	575	398	1075	457	552	836	355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	21.5	16.9	41.2	23.8	23.2	39.3	33.8	32.9	40.6	35.6	34.7
Incr Delay (d2), s/veh	3.6	1.0	0.2	4.0	0.2	0.3	7.7	0.9	1.3	3.4	1.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.7	11.0	2.9	2.8	3.8	2.5	4.9	5.1	3.4	3.1	4.4	2.9
Lane Grp Delay (d), s/veh	39.3	22.5	17.2	45.2	24.0	23.5	47.0	34.7	34.2	44.0	36.6	36.0
Lane Grp LOS	D	C	B	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1923			801			825			787	
Approach Delay, s/veh		26.9			29.9			37.5			38.9	
Approach LOS		C			C			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.4	44.4		12.3	34.2		16.1	22.7		13.3	20.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	50.0		12.0	34.0		21.0	27.0		15.0	21.0	
Max Q Clear Time (g_c+I1), s	16.7	26.0		8.0	10.2		11.8	12.8		8.9	11.2	
Green Ext Time (p_c), s	1.7	14.4		0.3	14.3		0.3	5.9		0.5	4.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.6								
HCM 2010 LOS				C								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

Baseline PM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	139	872	417	202	334	265
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	179	1296	1047	890	406	363
Arrive On Green	0.10	0.70	0.57	0.57	0.23	0.23
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	151	948	453	220	363	288
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	10.2	38.0	17.0	8.5	24.2	20.9
Cycle Q Clear(g_c), s	10.2	38.0	17.0	8.5	24.2	20.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	179	1296	1047	890	406	363
V/C Ratio(X)	0.84	0.73	0.43	0.25	0.89	0.79
Avail Cap(c_a), veh/h	276	1296	1047	890	537	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.88	0.88	1.00	1.00
Uniform Delay (d), s/veh	53.4	11.0	15.0	13.2	45.1	43.8
Incr Delay (d2), s/veh	8.7	2.3	1.1	0.6	14.1	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.0	15.3	7.6	3.3	12.5	17.7
Lane Grp Delay (d), s/veh	62.1	13.3	16.1	13.7	59.2	50.5
Lane Grp LOS	E	B	B	B	E	D
Approach Vol, veh/h		1099	673		651	
Approach Delay, s/veh		20.0	15.3		55.3	
Approach LOS		C	B		E	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	16.3	89.0	72.7			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	19.0	85.0	62.0			
Max Q Clear Time (g_c+I1), s	12.2	40.0	19.0			
Green Ext Time (p_c), s	0.2	16.0	15.7			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			28.2			
HCM 2010 LOS			C			
<b>Notes</b>						























HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	1070	168	39	528	11	118	21	56	182	95	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	53	1280	1088	53	1249	26	206	79	208	230	271	45
Arrive On Green	0.03	0.69	0.69	0.03	0.69	0.69	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1757	1845	1568	1757	1800	38	1254	448	1187	1296	1545	255
Grp Volume(v), veh/h	7	1163	183	42	0	586	128	0	84	198	0	120
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1838	1254	0	1635	1296	0	1800
Q Serve(g_s), s	0.5	62.5	4.8	2.8	0.0	17.2	12.0	0.0	5.3	15.7	0.0	7.0
Cycle Q Clear(g_c), s	0.5	62.5	4.8	2.8	0.0	17.2	19.1	0.0	5.3	21.0	0.0	7.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.73	1.00		0.14
Lane Grp Cap(c), veh/h	53	1280	1088	53	0	1275	206	0	287	230	0	316
V/C Ratio(X)	0.13	0.91	0.17	0.79	0.00	0.46	0.62	0.00	0.29	0.86	0.00	0.38
Avail Cap(c_a), veh/h	59	1280	1088	59	0	1275	206	0	287	230	0	316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.55	0.93	0.00	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.5	15.2	6.4	57.6	0.0	8.2	52.0	0.0	42.9	53.1	0.0	43.6
Incr Delay (d2), s/veh	0.6	6.6	0.2	43.6	0.0	1.1	5.6	0.0	0.6	26.7	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	26.6	1.6	1.9	0.0	7.1	4.2	0.0	2.3	7.8	0.0	3.3
Lane Grp Delay (d), s/veh	57.1	21.8	6.5	101.2	0.0	9.3	57.6	0.0	43.4	79.9	0.0	44.3
Lane Grp LOS	E	C	A	F		A	E		D	E		D
Approach Vol, veh/h		1353			628			212			318	
Approach Delay, s/veh		19.9			15.5			52.0			66.5	
Approach LOS		B			B			D			E	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	7.6	87.0		7.6	87.0			25.0			25.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	4.0	83.0		4.0	83.0			21.0			21.0	
Max Q Clear Time (g_c+I1), s	2.5	64.5		4.8	19.2			21.1			23.0	
Green Ext Time (p_c), s	1.2	10.4		0.0	4.4			0.0			0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.4								
HCM 2010 LOS				C								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Volume (veh/h)	0	0	0	53	0	0	0	0	31	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	20	42	0	106	222	0	20	0	57	20	67	0
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	58	0	0	0	0	34	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	20	42	0	106	222	0	20	0	57	20	67	0
V/C Ratio(X)	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00
Avail Cap(c_a), veh/h	794	6668	0	5954	17504	0	794	0	4251	794	5001	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	8.4	0.0	0.0	0.0	0.0	13.9	0.0	0.0	0.0
Lane Grp LOS	A						B					
Approach Vol, veh/h	0			58			34			0		
Approach Delay, s/veh	0.0			8.4			13.9			0.0		
Approach LOS				A			B					
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.5	4.5		0.0	4.3		0.0	4.3	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		30.0	42.0		4.0	24.0		4.0	24.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.3	0.0		0.0	2.2		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0		0.0	0.1		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.5								
HCM 2010 LOS				B								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	348	128	234	196	65	23	406	502	119	25	743	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	691	374	318	691	264	93	830	2797	645	38	1839	418
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.41	1.00	1.00	0.02	0.42	0.42
Sat Flow, veh/h	3408	1845	1568	3408	1304	459	3408	4353	1004	1757	4367	992
Grp Volume(v), veh/h	378	139	254	213	0	96	441	461	214	27	682	311
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1764	1704	1845	1667	1757	1845	1670
Q Serve(g_s), s	9.0	5.9	13.9	4.8	0.0	4.1	8.8	0.0	0.0	1.4	11.8	12.0
Cycle Q Clear(g_c), s	9.0	5.9	13.9	4.8	0.0	4.1	8.8	0.0	0.0	1.4	11.8	12.0
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.60	1.00		0.59
Lane Grp Cap(c), veh/h	691	374	318	691	0	357	830	2371	1072	38	1553	703
V/C Ratio(X)	0.55	0.37	0.80	0.31	0.00	0.27	0.53	0.19	0.20	0.71	0.44	0.44
Avail Cap(c_a), veh/h	831	450	382	691	0	357	982	2371	1072	117	1553	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.3	31.0	34.2	30.6	0.0	30.3	22.9	0.0	0.0	43.9	18.6	18.6
Incr Delay (d2), s/veh	0.7	0.6	9.7	0.3	0.0	0.4	0.5	0.2	0.4	21.0	0.9	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.9	2.8	6.3	2.1	0.0	1.9	3.4	0.1	0.1	0.8	5.5	5.2
Lane Grp Delay (d), s/veh	32.9	31.6	43.9	30.9	0.0	30.7	23.4	0.2	0.4	64.8	19.5	20.6
Lane Grp LOS	C	C	D	C		C	C	A	A	E	B	C
Approach Vol, veh/h		771			309			1116			1020	
Approach Delay, s/veh		36.3			30.8			9.4			21.0	
Approach LOS		D			C			A			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		22.3			22.3		26.0	62.0		6.0		42.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		22.0			18.0		26.0	58.0		6.0		38.0
Max Q Clear Time (g_c+I1), s		15.9			6.8		10.8	2.0		3.4		14.0
Green Ext Time (p_c), s		2.4			3.6		5.5	7.5		0.0		7.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.6								
HCM 2010 LOS				C								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Baseline PM  
 3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	349	364	258	584	884	285
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	973	448	365	3538	2737	776
Arrive On Green	0.29	0.29	0.04	0.21	0.49	0.49
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	379	396	280	635	961	310
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	9.5	25.7	8.7	10.0	11.3	13.2
Cycle Q Clear(g_c), s	9.5	25.7	8.7	10.0	11.3	13.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	973	448	365	3538	2737	776
V/C Ratio(X)	0.39	0.88	0.77	0.18	0.35	0.40
Avail Cap(c_a), veh/h	1410	649	705	3538	2737	776
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.96	0.96	0.83	0.83
Uniform Delay (d), s/veh	30.6	36.3	50.0	19.1	16.4	16.9
Incr Delay (d2), s/veh	0.3	10.1	3.3	0.1	0.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.1	1.3	4.2	5.1	5.1	5.3
Lane Grp Delay (d), s/veh	30.8	46.4	53.2	19.2	16.7	18.2
Lane Grp LOS	C	D	D	B	B	B
Approach Vol, veh/h	775			915	1271	
Approach Delay, s/veh	38.8			29.6	17.1	
Approach LOS	D			C	B	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			15.4	72.0	56.6	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			22.0	68.0	42.0	
Max Q Clear Time (g_c+I1), s			10.7	12.0	15.2	
Green Ext Time (p_c), s			0.7	20.6	15.0	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			26.6			
HCM 2010 LOS			C			
<b>Notes</b>						
























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	251	395	380	0	0	0	0	710	606	439	894	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	889	481	818				0	2669	756	528	3714	0
Arrive On Green	0.26	0.26	0.26				0.00	0.96	0.96	0.31	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	273	429	413				0	772	659	477	972	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.6	26.4	13.2				0.0	0.8	11.0	15.8	0.0	0.0
Cycle Q Clear(g_c), s	7.6	26.4	13.2				0.0	0.8	11.0	15.8	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	889	481	818				0	2669	756	528	3714	0
V/C Ratio(X)	0.31	0.89	0.50				0.00	0.29	0.87	0.90	0.26	0.00
Avail Cap(c_a), veh/h	956	517	879				0	2669	756	579	3714	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.78	0.78	0.91	0.91	0.00
Uniform Delay (d), s/veh	35.0	41.9	37.0				0.0	1.1	1.3	39.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	16.8	0.5				0.0	0.2	10.7	15.5	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	14.6	5.3				0.0	0.3	2.9	7.3	0.1	0.0
Lane Grp Delay (d), s/veh	35.1	58.7	37.5				0.0	1.3	11.9	55.3	0.2	0.0
Lane Grp LOS	D	E	D					A	B	E	A	
Approach Vol, veh/h		1115						1431			1449	
Approach Delay, s/veh		45.1						6.2			18.3	
Approach LOS		D						A			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		34.7						60.8		22.2	83.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		33.0						55.0		20.0	79.0	
Max Q Clear Time (g_c+I1), s		28.4						13.0		17.8	2.0	
Green Ext Time (p_c), s		2.3						24.3		0.4	31.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			21.4									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd



























Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	492	431	30	43	131	375	49	596	22	392	537	270
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1230	614	43	634	665	566	54	1670	62	540	1633	694
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.01	0.10	0.10	0.26	0.74	0.74
Sat Flow, veh/h	3408	1703	120	1757	1845	1568	1757	5304	196	3408	3689	1568
Grp Volume(v), veh/h	535	0	501	47	142	408	53	450	222	426	584	293
Grp Sat Flow(s),veh/h/ln	1704	0	1823	1757	1845	1568	1757	1845	1810	1704	1845	1568
Q Serve(g_s), s	8.6	0.0	17.5	1.3	3.9	16.3	2.2	8.2	8.3	8.4	4.1	5.1
Cycle Q Clear(g_c), s	8.6	0.0	17.5	1.3	3.9	16.3	2.2	8.2	8.3	8.4	4.1	5.1
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	1230	0	658	634	665	566	54	1161	570	540	1633	694
V/C Ratio(X)	0.44	0.00	0.76	0.07	0.21	0.72	0.99	0.39	0.39	0.79	0.36	0.42
Avail Cap(c_a), veh/h	1886	0	1009	634	665	566	219	1161	570	896	1633	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.96	0.96	0.96	0.97	0.97	0.97	0.95	0.95	0.95
Uniform Delay (d), s/veh	17.5	0.0	20.4	15.2	16.0	20.0	35.8	25.9	25.9	25.5	5.8	5.9
Incr Delay (d2), s/veh	0.2	0.0	1.9	0.0	0.2	4.3	52.6	1.0	1.9	2.5	0.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.5	0.0	8.0	0.5	1.7	6.6	1.7	4.3	4.4	3.3	1.5	1.8
Lane Grp Delay (d), s/veh	17.8	0.0	22.2	15.2	16.2	24.3	88.4	26.8	27.9	28.0	6.4	7.7
Lane Grp LOS	B		C	B	B	C	F	C	C	C	A	A
Approach Vol, veh/h		1036			597			725			1303	
Approach Delay, s/veh		19.9			21.6			31.6			13.7	
Approach LOS		B			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		30.1			30.1		6.2	26.8		15.5	36.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		40.0			23.0		9.0	22.0		19.0	32.0	
Max Q Clear Time (g_c+I1), s		19.5			18.3		4.2	10.3		10.4	7.1	
Green Ext Time (p_c), s		6.6			3.1		0.1	3.5		1.1	5.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.3								
HCM 2010 LOS				C								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	300	446	628	29	200	118	227	259	20	241	560	242
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	376	1335	567	45	319	272	294	798	62	311	907	385
Arrive On Green	0.21	0.36	0.00	0.03	0.17	0.00	0.17	0.24	0.24	0.18	0.25	0.25
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3381	262	1757	3689	1568
Grp Volume(v), veh/h	326	485	0	32	217	0	247	153	151	262	609	203
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1798	1757	1845	1568
Q Serve(g_s), s	14.3	7.7	0.0	1.4	8.8	0.0	10.9	5.5	5.6	11.6	11.9	9.0
Cycle Q Clear(g_c), s	14.3	7.7	0.0	1.4	8.8	0.0	10.9	5.5	5.6	11.6	11.9	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	376	1335	567	45	319	272	294	436	425	311	907	385
V/C Ratio(X)	0.87	0.36	0.00	0.72	0.68	0.00	0.84	0.35	0.36	0.84	0.67	0.53
Avail Cap(c_a), veh/h	680	2119	901	132	484	411	527	553	539	614	1290	548
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	18.8	0.0	38.7	31.0	0.0	32.3	25.5	25.5	31.9	27.3	26.2
Incr Delay (d2), s/veh	6.1	0.2	0.0	19.1	2.5	0.0	6.4	0.5	0.5	6.2	0.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.6	3.3	0.0	0.9	4.3	0.0	5.3	2.6	2.6	5.6	5.5	3.5
Lane Grp Delay (d), s/veh	36.5	18.9	0.0	57.8	33.6	0.0	38.7	26.0	26.0	38.1	28.1	27.3
Lane Grp LOS	D	B		E	C		D	C	C	D	C	C
Approach Vol, veh/h		811			249			551			1074	
Approach Delay, s/veh		26.0			36.7			31.7			30.4	
Approach LOS		C			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	21.1	33.0		6.0	17.9		17.4	22.9		18.2	23.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	31.0	46.0		6.0	21.0		24.0	24.0		28.0	28.0	
Max Q Clear Time (g_c+I1), s	16.3	9.7		3.4	10.8		12.9	7.6		13.6	13.9	
Green Ext Time (p_c), s	0.8	4.7		0.0	3.0		0.5	6.2		0.7	5.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.9								
HCM 2010 LOS				C								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	42	16	0	7	13	337	0	6	4	1134	5	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	69	243	0	15	128	55	4	70	40	1646	1183	2011
Arrive On Green	0.04	0.07	0.00	0.01	0.03	0.00	0.00	0.06	0.06	0.48	0.64	0.64
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	1103	630	3408	1845	3136
Grp Volume(v), veh/h	46	17	0	8	14	0	0	0	11	1233	5	78
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1733	1704	1845	1568
Q Serve(g_s), s	1.1	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.3	12.4	0.0	0.1
Cycle Q Clear(g_c), s	1.1	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.3	12.4	0.0	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	69	243	0	15	128	55	4	0	110	1646	1183	2011
V/C Ratio(X)	0.66	0.07	0.00	0.54	0.11	0.00	0.00	0.00	0.10	0.75	0.00	0.04
Avail Cap(c_a), veh/h	333	2362	0	167	2012	855	167	0	699	4525	3018	5130
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.0	18.5	0.0	20.8	19.7	0.0	0.0	0.0	18.6	8.8	2.7	0.4
Incr Delay (d2), s/veh	10.3	0.1	0.0	26.8	0.4	0.0	0.0	0.0	0.4	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.1	4.1	0.0	0.1
Lane Grp Delay (d), s/veh	30.3	18.6	0.0	47.6	20.1	0.0	0.0	0.0	19.0	9.5	2.7	0.4
Lane Grp LOS	C	B		D	C				B	A	A	A
Approach Vol, veh/h		63			22			11			1316	
Approach Delay, s/veh		27.1			30.1			19.0			9.0	
Approach LOS		C			C			B			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	5.7	6.8		4.4	5.5		0.0	6.7		24.4	31.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	8.0	27.0		4.0	23.0		4.0	17.0		56.0	69.0	
Max Q Clear Time (g_c+I1), s	3.1	2.2		2.2	2.2		0.0	2.3		14.4	2.1	
Green Ext Time (p_c), s	0.1	0.2		0.0	0.0		0.0	0.2		6.0	0.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.2								
HCM 2010 LOS				B								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 25: Buchanan Rd & Delta Fair Blvd

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	390	149	91	207	73	82	251	25	253	414	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	466	973	368	335	1003	342	406	792	78	526	885	752
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1061	2554	965	818	2633	898	899	1652	163	1064	1845	1568
Grp Volume(v), veh/h	60	305	281	99	156	148	89	0	300	275	450	34
Grp Sat Flow(s),veh/h/ln	1061	1845	1674	818	1845	1686	899	0	1816	1064	1845	1568
Q Serve(g_s), s	2.3	7.0	7.2	5.9	3.3	3.4	4.3	0.0	5.9	12.5	9.6	0.7
Cycle Q Clear(g_c), s	5.8	7.0	7.2	13.0	3.3	3.4	14.0	0.0	5.9	18.4	9.6	0.7
Prop In Lane	1.00		0.58	1.00		0.53	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	466	703	638	335	703	642	406	0	871	526	885	752
V/C Ratio(X)	0.13	0.43	0.44	0.30	0.22	0.23	0.22	0.00	0.34	0.52	0.51	0.05
Avail Cap(c_a), veh/h	894	1446	1313	665	1446	1322	1024	0	2119	1258	2153	1830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	13.2	13.2	18.1	12.0	12.1	15.1	0.0	9.3	15.0	10.3	7.9
Incr Delay (d2), s/veh	0.1	0.4	0.5	0.5	0.2	0.2	0.3	0.0	0.2	0.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	3.0	2.7	1.1	1.4	1.3	0.9	0.0	2.3	3.1	3.9	0.2
Lane Grp Delay (d), s/veh	14.1	13.6	13.7	18.6	12.2	12.2	15.4	0.0	9.5	15.8	10.7	8.0
Lane Grp LOS	B	B	B	B	B	B	B		A	B	B	A
Approach Vol, veh/h		646			403			389			759	
Approach Delay, s/veh		13.7			13.8			10.9			12.5	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		25.9			25.9			31.5			31.5	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		45.0			45.0			67.0			67.0	
Max Q Clear Time (g_c+I1), s		9.2			15.0			16.0			20.4	
Green Ext Time (p_c), s		7.0			6.8			7.2			7.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.8								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	103	1051	7	25	564	113	4	17	7	225	19	117
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	145	1906	13	43	1381	277	94	287	112	443	56	337
Arrive On Green	0.08	0.52	0.52	0.02	0.46	0.46	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1757	3659	26	1757	2986	598	91	1168	458	1366	227	1375
Grp Volume(v), veh/h	112	576	574	27	378	358	30	0	0	245	0	148
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1739	1717	0	0	1366	0	1602
Q Serve(g_s), s	3.6	12.5	12.5	0.9	7.9	8.0	0.0	0.0	0.0	9.6	0.0	4.4
Cycle Q Clear(g_c), s	3.6	12.5	12.5	0.9	7.9	8.0	0.7	0.0	0.0	10.4	0.0	4.4
Prop In Lane	1.00		0.01	1.00		0.34	0.13		0.27	1.00		0.86
Lane Grp Cap(c), veh/h	145	961	959	43	853	805	493	0	0	443	0	393
V/C Ratio(X)	0.77	0.60	0.60	0.63	0.44	0.44	0.06	0.00	0.00	0.55	0.00	0.38
Avail Cap(c_a), veh/h	368	1351	1348	153	1126	1062	981	0	0	846	0	866
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	9.6	9.6	27.7	10.4	10.4	16.6	0.0	0.0	20.6	0.0	18.0
Incr Delay (d2), s/veh	8.3	0.6	0.6	14.3	0.4	0.4	0.1	0.0	0.0	1.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	5.0	4.9	0.5	3.2	3.1	0.3	0.0	0.0	3.3	0.0	1.7
Lane Grp Delay (d), s/veh	34.1	10.2	10.2	42.0	10.8	10.8	16.7	0.0	0.0	21.7	0.0	18.6
Lane Grp LOS	C	B	B	D	B	B	B			C		B
Approach Vol, veh/h		1262			763			30				393
Approach Delay, s/veh		12.3			11.9			16.7				20.5
Approach LOS		B			B			B				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	8.7	33.9		5.4	30.5			18.1				18.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	12.0	42.0		5.0	35.0			31.0				31.0
Max Q Clear Time (g_c+I1), s	5.6	14.5		2.9	10.0			2.7				12.4
Green Ext Time (p_c), s	0.1	15.4		0.0	14.6			1.9				1.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				13.5								
HCM 2010 LOS				B								
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	141	123	1049	12	60	70	712	770	9	73	1165	228
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	317	333	1396	55	275	283	902	2309	981	102	1885	369
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.26	0.63	0.63	0.06	0.42	0.42
Sat Flow, veh/h	1757	1845	3136	305	1525	1568	3408	3689	1568	1757	4498	881
Grp Volume(v), veh/h	153	134	1140	78	0	76	774	837	10	79	1038	476
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1829	0	1568	1704	1845	1568	1757	1845	1689
Q Serve(g_s), s	6.9	5.7	16.0	3.2	0.0	3.7	19.1	9.7	0.2	3.9	20.1	20.2
Cycle Q Clear(g_c), s	6.9	5.7	16.0	3.2	0.0	3.7	19.1	9.7	0.2	3.9	20.1	20.2
Prop In Lane	1.00		1.00	0.17		1.00	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	317	333	1396	331	0	283	902	2309	981	102	1547	708
V/C Ratio(X)	0.48	0.40	0.82	0.24	0.00	0.27	0.86	0.36	0.01	0.78	0.67	0.67
Avail Cap(c_a), veh/h	317	333	1396	331	0	283	1193	2500	1062	238	1708	782
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	32.1	21.4	31.0	0.0	31.2	31.0	8.0	6.2	41.1	20.8	20.8
Incr Delay (d2), s/veh	1.1	0.8	3.9	0.4	0.0	0.5	5.0	0.1	0.0	11.8	0.9	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.2	2.7	11.2	1.5	0.0	1.5	8.8	4.0	0.1	2.1	9.1	8.6
Lane Grp Delay (d), s/veh	33.7	32.8	25.3	31.4	0.0	31.7	36.0	8.1	6.2	52.9	21.7	22.8
Lane Grp LOS	C	C	C	C		C	D	A	A	D	C	C
Approach Vol, veh/h		1427			154			1621			1593	
Approach Delay, s/veh		26.9			31.6			21.4			23.6	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		20.0			20.0		27.4	59.4		9.1		41.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		31.0	60.0		12.0		41.0
Max Q Clear Time (g_c+I1), s		18.0			5.7		21.1	11.7		5.9		22.2
Green Ext Time (p_c), s		0.0			5.4		2.3	29.5		0.1		15.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				24.1								
HCM 2010 LOS				C								
<b>Notes</b>												



























HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr

Baseline PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	51	0	43	2	0	1	50	1871	3	0	623	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	97	0	86	272	101	86	68	3051	1297	3	3968	59
Arrive On Green	0.05	0.00	0.05	0.05	0.00	0.05	0.04	0.83	0.83	0.00	0.73	0.73
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5440	80
Grp Volume(v), veh/h	55	0	47	2	0	1	54	2034	3	0	459	228
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1831
Q Serve(g_s), s	2.1	0.0	2.0	0.0	0.0	0.0	2.1	14.4	0.0	0.0	2.6	2.6
Cycle Q Clear(g_c), s	2.1	0.0	2.0	0.0	0.0	0.0	2.1	14.4	0.0	0.0	2.6	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	97	0	86	272	101	86	68	3051	1297	3	2692	1335
V/C Ratio(X)	0.57	0.00	0.55	0.01	0.00	0.01	0.80	0.67	0.00	0.00	0.17	0.17
Avail Cap(c_a), veh/h	414	0	370	1169	435	370	233	3698	1572	104	3426	1700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	0.0	31.2	30.3	0.0	30.3	32.3	2.3	1.0	0.0	2.8	2.8
Incr Delay (d2), s/veh	5.2	0.0	5.3	0.0	0.0	0.1	18.7	0.3	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	0.0	0.9	0.0	0.0	0.0	1.3	3.3	0.0	0.0	0.8	0.8
Lane Grp Delay (d), s/veh	36.5	0.0	36.5	30.3	0.0	30.4	51.0	2.6	1.0	0.0	2.9	2.9
Lane Grp LOS	D		D	C		C	D	A	A		A	A
Approach Vol, veh/h		102			3			2091			687	
Approach Delay, s/veh		36.5			30.3			3.9			2.9	
Approach LOS		D			C			A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		7.7			7.7		6.6	60.1		0.0		53.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		9.0	68.0		4.0		63.0
Max Q Clear Time (g_c+I1), s		4.1			2.0		4.1	16.4		0.0		4.6
Green Ext Time (p_c), s		0.3			0.3		0.0	39.7		0.0		43.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.8								
HCM 2010 LOS				A								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Baseline PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	281	299	162	203	131	42	146	1270	363	58	436	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	344	423	224	257	503	214	193	1910	544	81	1921	235
Arrive On Green	0.20	0.19	0.19	0.15	0.14	0.14	0.11	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	1757	2273	1204	1757	3689	1568	1757	4145	1181	1757	4838	592
Grp Volume(v), veh/h	305	262	239	221	142	46	159	1228	547	63	359	174
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1636	1757	1845	1740
Q Serve(g_s), s	16.8	13.4	13.8	12.2	3.4	2.6	8.8	26.7	26.9	3.5	6.5	6.6
Cycle Q Clear(g_c), s	16.8	13.4	13.8	12.2	3.4	2.6	8.8	26.7	26.9	3.5	6.5	6.6
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.72	1.00		0.34
Lane Grp Cap(c), veh/h	344	343	304	257	503	214	193	1700	754	81	1465	691
V/C Ratio(X)	0.89	0.76	0.79	0.86	0.28	0.22	0.82	0.72	0.73	0.78	0.25	0.25
Avail Cap(c_a), veh/h	513	446	394	371	594	252	336	1893	840	141	1485	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	38.4	38.6	41.4	38.5	38.2	43.3	21.7	21.7	46.9	20.0	20.1
Incr Delay (d2), s/veh	12.1	5.7	7.7	13.1	0.3	0.5	8.5	1.2	2.8	14.8	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.6	6.8	6.3	6.4	1.6	1.1	4.4	12.2	11.2	1.9	2.9	2.8
Lane Grp Delay (d), s/veh	51.0	44.1	46.2	54.6	38.8	38.7	51.8	22.9	24.5	61.7	20.1	20.3
Lane Grp LOS	D	D	D	D	D	D	D	C	C	E	C	C
Approach Vol, veh/h		806			409			1934			596	
Approach Delay, s/veh		47.3			47.3			25.7			24.5	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	23.5	22.5		18.5	17.6		14.9	49.8		8.6	43.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	29.0	24.0		21.0	16.0		19.0	51.0		8.0	40.0	
Max Q Clear Time (g_c+I1), s	18.8	15.8		14.2	5.4		10.8	28.9		5.5	8.6	
Green Ext Time (p_c), s	0.7	2.6		0.3	3.1		0.2	16.9		0.0	21.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				32.5								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
30: Ygnacio Valley Rd & Clayton Blvd






















Baseline PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	588	865	27	229	405	135	133	1458	543	249	389	204
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	722	1372	0	315	711	0	204	2314	656	334	2524	715
Arrive On Green	0.21	0.25	0.00	0.09	0.13	0.00	0.06	0.42	0.42	0.10	0.46	0.46
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	639	940	0	249	440	0	145	1585	590	271	423	222
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	20.2	17.1	0.0	8.0	8.4	0.0	4.7	26.0	39.1	8.7	5.0	10.0
Cycle Q Clear(g_c), s	20.2	17.1	0.0	8.0	8.4	0.0	4.7	26.0	39.1	8.7	5.0	10.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	722	1372	0	315	711	0	204	2314	656	334	2524	715
V/C Ratio(X)	0.88	0.68	0.00	0.79	0.62	0.00	0.71	0.68	0.90	0.81	0.17	0.31
Avail Cap(c_a), veh/h	857	1491	0	429	795	0	276	2337	662	398	2535	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.6	37.9	0.0	49.5	45.9	0.0	51.4	26.4	30.2	49.2	17.8	19.2
Incr Delay (d2), s/veh	9.7	1.2	0.0	6.9	1.2	0.0	5.4	0.8	15.3	10.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.8	8.2	0.0	3.8	4.1	0.0	2.2	12.1	17.8	4.3	2.3	3.8
Lane Grp Delay (d), s/veh	52.3	39.1	0.0	56.4	47.2	0.0	56.7	27.2	45.5	59.6	17.9	19.4
Lane Grp LOS	D	D		E	D		E	C	D	E	B	B
Approach Vol, veh/h		1579			689			2320			916	
Approach Delay, s/veh		44.4			50.5			33.7			30.6	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	27.6	31.6		14.3	18.3		10.7	50.5		14.9	54.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	30.0		14.0	16.0		9.0	47.0		13.0	51.0	
Max Q Clear Time (g_c+I1), s	22.2	19.1		10.0	10.4		6.7	41.1		10.7	12.0	
Green Ext Time (p_c), s	1.3	6.6		0.3	3.9		0.1	5.5		0.2	28.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.4								
HCM 2010 LOS				D								
<b>Notes</b>												
















HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Baseline PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	1286	13	29	599	35	18	0	28	37	0	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	39	2457	25	50	2346	137	215	0	116	210	0	116
Arrive On Green	0.02	0.67	0.67	0.03	0.68	0.68	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1757	3646	37	1757	3452	201	1367	0	1568	1361	0	1568
Grp Volume(v), veh/h	24	707	705	32	348	341	20	0	30	40	0	25
Grp Sat Flow(s),veh/h/ln	1757	1845	1838	1757	1845	1809	1367	0	1568	1361	0	1568
Q Serve(g_s), s	0.7	10.8	10.9	1.0	4.0	4.0	0.7	0.0	1.0	1.5	0.0	0.8
Cycle Q Clear(g_c), s	0.7	10.8	10.9	1.0	4.0	4.0	1.6	0.0	1.0	2.5	0.0	0.8
Prop In Lane	1.00		0.02	1.00		0.11	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	1243	1239	50	1254	1230	215	0	116	210	0	116
V/C Ratio(X)	0.61	0.57	0.57	0.64	0.28	0.28	0.09	0.00	0.26	0.19	0.00	0.22
Avail Cap(c_a), veh/h	263	2827	2817	263	2827	2772	574	0	527	568	0	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.9	4.6	4.6	25.7	3.4	3.4	24.1	0.0	23.4	24.6	0.0	23.3
Incr Delay (d2), s/veh	14.2	0.4	0.4	13.1	0.1	0.1	0.2	0.0	1.2	0.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	2.9	2.9	0.6	1.1	1.1	0.3	0.0	0.4	0.5	0.0	0.3
Lane Grp Delay (d), s/veh	40.1	5.0	5.0	38.8	3.5	3.5	24.2	0.0	24.6	25.0	0.0	24.3
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		1436			721			50				65
Approach Delay, s/veh		5.6			5.1			24.4				24.7
Approach LOS		A			A			C				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.2	40.1		5.5	40.4			7.9				7.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	82.0		8.0	82.0			18.0				18.0
Max Q Clear Time (g_c+I1), s	2.7	12.9		3.0	6.0			3.6				4.5
Green Ext Time (p_c), s	0.0	23.2		0.0	23.6			0.3				0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				6.4								
HCM 2010 LOS				A								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd

Baseline PM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			
Volume (veh/h)	381	1200	441	147	153	265
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	477	2463	896	297	378	337
Arrive On Green	0.27	0.67	0.34	0.34	0.22	0.22
Sat Flow, veh/h	1757	3689	2654	880	1757	1568
Grp Volume(v), veh/h	414	1304	332	307	166	288
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1689	1757	1568
Q Serve(g_s), s	15.3	12.4	9.9	10.0	5.6	12.0
Cycle Q Clear(g_c), s	15.3	12.4	9.9	10.0	5.6	12.0
Prop In Lane	1.00			0.52	1.00	1.00
Lane Grp Cap(c), veh/h	477	2463	623	571	378	337
V/C Ratio(X)	0.87	0.53	0.53	0.54	0.44	0.85
Avail Cap(c_a), veh/h	850	3462	730	669	464	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	5.8	18.2	18.3	23.2	25.7
Incr Delay (d2), s/veh	5.0	0.2	0.7	0.8	0.8	13.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.1	4.4	4.5	4.1	2.4	1.3
Lane Grp Delay (d), s/veh	28.7	6.0	18.9	19.1	24.0	39.3
Lane Grp LOS	C	A	B	B	C	D
Approach Vol, veh/h		1718	639		454	
Approach Delay, s/veh		11.5	19.0		33.7	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	22.5	49.5	27.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	33.0	64.0	27.0			
Max Q Clear Time (g_c+I1), s	17.3	14.4	12.0			
Green Ext Time (p_c), s	1.2	23.3	11.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			16.8			
HCM 2010 LOS			B			
<b>Notes</b>						





















HCM 2010 Signalized Intersection Summary  
33: Somersville Rd & Fairview Dr

Baseline PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	118	8	496	17	1	2	216	402	13	19	441	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	595	10	592	107	211	421	269	1777	57	22	1178	125
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.15	0.50	0.50	0.02	0.72	0.72
Sat Flow, veh/h	1394	26	1546	847	550	1100	1757	3556	114	1757	3280	348
Grp Volume(v), veh/h	128	0	548	18	0	3	235	226	225	21	269	261
Grp Sat Flow(s),veh/h/ln	1394	0	1572	847	0	1650	1757	1845	1825	1757	1845	1783
Q Serve(g_s), s	7.1	0.0	37.7	2.3	0.0	0.1	14.9	8.0	8.0	1.4	6.6	6.7
Cycle Q Clear(g_c), s	7.3	0.0	37.7	40.0	0.0	0.1	14.9	8.0	8.0	1.4	6.6	6.7
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.06	1.00		0.20
Lane Grp Cap(c), veh/h	595	0	602	107	0	632	269	922	912	22	662	640
V/C Ratio(X)	0.22	0.00	0.91	0.17	0.00	0.00	0.87	0.25	0.25	0.97	0.41	0.41
Avail Cap(c_a), veh/h	624	0	634	125	0	666	462	922	912	77	662	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.81	0.81	0.81	0.90	0.90	0.90
Uniform Delay (d), s/veh	24.0	0.0	33.4	52.3	0.0	21.8	47.2	16.3	16.3	55.6	11.2	11.2
Incr Delay (d2), s/veh	0.2	0.0	16.9	0.7	0.0	0.0	7.7	0.5	0.5	77.6	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.5	0.0	17.7	0.5	0.0	0.1	7.3	3.8	3.8	1.1	2.6	2.6
Lane Grp Delay (d), s/veh	24.2	0.0	50.3	53.1	0.0	21.8	54.9	16.8	16.8	133.2	12.9	13.0
Lane Grp LOS	C		D	D		C	D	B	B	F	B	B
Approach Vol, veh/h		676			21			686			551	
Approach Delay, s/veh		45.4			48.6			29.8			17.5	
Approach LOS		D			D			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		47.6			47.6		21.5	61.0		5.4	45.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		46.0			46.0		30.0	57.0		5.0	32.0	
Max Q Clear Time (g_c+I1), s		39.7			42.0		16.9	10.0		3.4	8.7	
Green Ext Time (p_c), s		2.3			1.6		0.5	3.0		0.0	3.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				32.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
34: Fairview Dr & Delta Fair Blvd



















Baseline PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	848	509	117	351	9	162	18	31	14	10	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	28	1121	654	160	2104	55	297	24	386	89	59	22
Arrive On Green	0.02	0.51	0.51	0.09	0.59	0.59	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1757	2188	1276	1757	3579	94	858	98	1568	96	241	91
Grp Volume(v), veh/h	17	773	702	127	197	195	196	0	34	33	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1619	1757	1845	1828	956	0	1568	427	0	0
Q Serve(g_s), s	0.8	28.1	29.8	5.7	3.9	3.9	0.0	0.0	1.3	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.8	28.1	29.8	5.7	3.9	3.9	17.0	0.0	1.3	17.3	0.0	0.0
Prop In Lane	1.00		0.79	1.00		0.05	0.90		1.00	0.45		0.21
Lane Grp Cap(c), veh/h	28	945	830	160	1084	1075	321	0	386	171	0	0
V/C Ratio(X)	0.62	0.82	0.85	0.79	0.18	0.18	0.61	0.00	0.09	0.19	0.00	0.00
Avail Cap(c_a), veh/h	88	1016	892	242	1177	1167	380	0	451	234	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.1	16.4	16.8	35.6	7.6	7.6	29.1	0.0	23.2	24.5	0.0	0.0
Incr Delay (d2), s/veh	20.1	5.0	7.2	9.9	0.1	0.1	2.1	0.0	0.1	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	13.1	12.6	2.9	1.6	1.6	3.9	0.0	0.5	0.5	0.0	0.0
Lane Grp Delay (d), s/veh	59.2	21.4	23.9	45.5	7.7	7.7	31.2	0.0	23.3	25.0	0.0	0.0
Lane Grp LOS	E	C	C	D	A	A	C		C	C		
Approach Vol, veh/h		1492			519			230				33
Approach Delay, s/veh		23.0			16.9			30.0				25.0
Approach LOS		C			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.3	44.9		11.3	51.0			23.7				23.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	44.0		11.0	51.0			23.0				23.0
Max Q Clear Time (g_c+I1), s	2.8	31.8		7.7	5.9			19.0				19.3
Green Ext Time (p_c), s	0.0	9.2		0.1	21.4			0.5				0.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Baseline +Project AM





















3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	197	387	269	717	755	160	199	874	388
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				234	474	351	823	1330	282	247	1289	548
Arrive On Green				0.31	0.31	0.31	0.40	0.75	0.75	0.14	0.35	0.00
Sat Flow, veh/h				762	1545	1143	3408	2953	626	1757	3689	1568
Grp Volume(v), veh/h				507	0	420	779	513	482	216	950	0
Grp Sat Flow(s),veh/h/ln				1807	0	1643	1704	1845	1734	1757	1845	1568
Q Serve(g_s), s				31.7	0.0	27.9	25.9	15.1	15.1	14.1	26.5	0.0
Cycle Q Clear(g_c), s				31.7	0.0	27.9	25.9	15.1	15.1	14.1	26.5	0.0
Prop In Lane				0.42		0.70	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h				555	0	504	823	831	781	247	1289	548
V/C Ratio(X)				0.91	0.00	0.83	0.95	0.62	0.62	0.87	0.74	0.00
Avail Cap(c_a), veh/h				585	0	532	842	831	781	359	1289	548
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.44	0.44	0.44	1.00	1.00	0.00
Uniform Delay (d), s/veh				39.2	0.0	37.8	34.3	9.9	9.9	49.4	33.4	0.0
Incr Delay (d2), s/veh				18.5	0.0	10.4	10.5	1.5	1.6	15.1	3.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				17.5	0.0	13.1	11.4	5.0	4.7	7.5	13.1	0.0
Lane Grp Delay (d), s/veh				57.7	0.0	48.3	44.8	11.4	11.5	64.5	37.2	0.0
Lane Grp LOS				E		D	D	B	B	E	D	
Approach Vol, veh/h					927			1774			1166	
Approach Delay, s/veh					53.4			26.1			42.3	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					40.0		32.3	56.8		20.5	45.0	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					33.7		27.9	17.1		16.1	28.5	
Green Ext Time (p_c), s					2.3		0.4	17.1		0.4	9.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					37.5							
HCM 2010 LOS					D							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave




























Baseline +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	392	0	471	0	0	0	0	1139	311	303	802	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	475	499	849				0	1564	427	442	2435	0
Arrive On Green	0.27	0.00	0.27				0.00	0.37	0.37	0.50	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4189	1143	1757	3689	0
Grp Volume(v), veh/h	426	0	512				0	1090	486	329	872	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1643	1757	1845	0
Q Serve(g_s), s	26.9	0.0	16.4				0.0	30.3	30.3	17.1	0.0	0.0
Cycle Q Clear(g_c), s	26.9	0.0	16.4				0.0	30.3	30.3	17.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.70	1.00		0.00
Lane Grp Cap(c), veh/h	475	499	849				0	1378	613	442	2435	0
V/C Ratio(X)	0.90	0.00	0.60				0.00	0.79	0.79	0.74	0.36	0.00
Avail Cap(c_a), veh/h	549	577	980				0	1378	613	442	2435	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.55	0.55	0.00
Uniform Delay (d), s/veh	40.4	0.0	36.6				0.0	32.1	32.1	25.6	0.0	0.0
Incr Delay (d2), s/veh	15.8	0.0	0.8				0.0	4.7	10.1	3.8	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	14.0	0.0	6.6				0.0	15.0	14.3	6.8	0.1	0.0
Lane Grp Delay (d), s/veh	56.3	0.0	37.4				0.0	36.8	42.2	29.4	0.2	0.0
Lane Grp LOS	E		D					D	D	C	A	
Approach Vol, veh/h		938						1576			1201	
Approach Delay, s/veh		46.0						38.5			8.2	
Approach LOS		D						D			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		35.2						47.0		33.0		80.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		36.0						43.0		29.0		76.0
Max Q Clear Time (g_c+I1), s		28.9						32.3		19.1		2.0
Green Ext Time (p_c), s		2.3						7.4		5.0		9.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			30.6									
HCM 2010 LOS			C									
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	297	435	95	158	529	320	144	874	106	185	504	250
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	357	812	176	205	701	298	189	1144	486	255	1283	545
Arrive On Green	0.20	0.28	0.28	0.12	0.19	0.19	0.11	0.31	0.31	0.15	0.35	0.35
Sat Flow, veh/h	1757	2941	636	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	323	296	280	172	575	348	157	950	115	201	548	272
Grp Sat Flow(s),veh/h/ln	1757	1845	1732	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	18.9	14.6	14.7	10.1	15.8	14.6	9.2	25.2	4.2	11.6	12.0	14.4
Cycle Q Clear(g_c), s	18.9	14.6	14.7	10.1	15.8	14.6	9.2	25.2	4.2	11.6	12.0	14.4
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	510	479	205	701	298	189	1144	486	255	1283	545
V/C Ratio(X)	0.91	0.58	0.59	0.84	0.82	1.17	0.83	0.83	0.24	0.79	0.43	0.50
Avail Cap(c_a), veh/h	433	510	479	333	770	327	317	1364	580	283	1294	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	32.9	33.0	45.6	41.0	22.6	46.1	33.8	14.1	43.5	26.3	27.1
Incr Delay (d2), s/veh	19.9	1.7	1.8	9.8	6.6	105.9	9.0	3.8	0.2	12.6	0.2	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.5	7.0	6.7	5.1	8.1	14.3	4.7	12.2	1.6	6.1	5.5	5.7
Lane Grp Delay (d), s/veh	60.9	34.5	34.8	55.4	47.5	128.5	55.1	37.6	14.3	56.1	26.6	27.8
Lane Grp LOS	E	C	C	E	D	F	E	D	B	E	C	C
Approach Vol, veh/h		899			1095			1222			1021	
Approach Delay, s/veh		44.1			74.5			37.7			32.7	
Approach LOS		D			E			D			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	25.4	33.1		16.3	24.0		15.4	36.7		19.3	40.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	26.0	28.0		20.0	22.0		19.0	39.0		17.0	37.0	
Max Q Clear Time (g_c+I1), s	20.9	16.7		12.1	17.8		11.2	27.2		13.6	16.4	
Green Ext Time (p_c), s	0.5	6.4		0.3	2.3		0.2	5.5		1.7	5.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				47.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd













Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	86	93	27	1046	52	122	7	444	440	89	518	67
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	715	751	638	1388	751	638	92	1341	570	125	1410	599
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.05	0.36	0.36	0.07	0.38	0.38
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	93	101	29	1137	57	133	8	483	478	97	563	73
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.5	2.6	0.8	22.6	1.4	4.2	0.3	7.3	21.2	4.1	8.5	2.3
Cycle Q Clear(g_c), s	2.5	2.6	0.8	22.6	1.4	4.2	0.3	7.3	21.2	4.1	8.5	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	715	751	638	1388	751	638	92	1341	570	125	1410	599
V/C Ratio(X)	0.13	0.13	0.05	0.82	0.08	0.21	0.09	0.36	0.84	0.77	0.40	0.12
Avail Cap(c_a), veh/h	715	751	638	2422	1311	1114	370	1505	640	301	1410	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	14.1	13.6	20.0	13.8	14.6	34.3	17.7	22.1	34.7	17.1	15.2
Incr Delay (d2), s/veh	0.1	0.1	0.0	1.3	0.0	0.2	0.4	0.2	8.8	9.7	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	1.1	0.3	8.9	0.6	1.5	0.2	3.3	9.4	2.1	3.7	0.8
Lane Grp Delay (d), s/veh	14.2	14.2	13.6	21.3	13.8	14.8	34.7	17.9	31.0	44.3	17.3	15.3
Lane Grp LOS	B	B	B	C	B	B	C	B	C	D	B	B
Approach Vol, veh/h		223			1327			969			733	
Approach Delay, s/veh		14.1			20.3			24.5			20.7	
Approach LOS		B			C			C			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		34.9			34.9		8.0	31.6		9.4		33.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			54.0		16.0	31.0		13.0		28.0
Max Q Clear Time (g_c+I1), s		4.6			24.6		2.3	23.2		6.1		10.5
Green Ext Time (p_c), s		5.1			6.4		0.0	4.4		0.1		8.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.2								
HCM 2010 LOS				C								
<b>Notes</b>												































HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

Baseline +Project AM  
3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	162	40	13	729	1536	54
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	226	201	24	2800	2441	86
Arrive On Green	0.13	0.13	0.01	0.76	0.69	0.69
Sat Flow, veh/h	1757	1568	1757	3689	3543	125
Grp Volume(v), veh/h	176	43	14	792	867	862
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1823
Q Serve(g_s), s	6.9	1.7	0.6	4.7	19.6	19.8
Cycle Q Clear(g_c), s	6.9	1.7	0.6	4.7	19.6	19.8
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	226	201	24	2800	1271	1256
V/C Ratio(X)	0.78	0.21	0.59	0.28	0.68	0.69
Avail Cap(c_a), veh/h	396	353	99	3426	1506	1488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	27.8	34.9	2.6	6.5	6.5
Incr Delay (d2), s/veh	5.8	0.5	20.8	0.1	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	0.0	0.4	1.6	7.6	7.6
Lane Grp Delay (d), s/veh	35.8	28.3	55.6	2.7	7.5	7.6
Lane Grp LOS	D	C	E	A	A	A
Approach Vol, veh/h	219			806	1729	
Approach Delay, s/veh	34.3			3.6	7.5	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			5.0	57.9	53.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			4.0	66.0	58.0	
Max Q Clear Time (g_c+I1), s			2.6	6.7	21.8	
Green Ext Time (p_c), s			0.0	38.3	27.1	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			8.5			
HCM 2010 LOS			A			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	145	559	118	105	507	182	206	601	220	228	287	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	198	957	407	146	847	360	273	979	416	296	733	251
Arrive On Green	0.11	0.26	0.26	0.08	0.23	0.23	0.16	0.27	0.27	0.17	0.28	0.28
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2630	901
Grp Volume(v), veh/h	158	608	128	114	551	198	224	653	239	248	217	204
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1686
Q Serve(g_s), s	6.3	10.5	4.7	4.6	9.7	8.0	8.8	11.3	9.5	9.8	6.9	7.1
Cycle Q Clear(g_c), s	6.3	10.5	4.7	4.6	9.7	8.0	8.8	11.3	9.5	9.8	6.9	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	198	957	407	146	847	360	273	979	416	296	514	470
V/C Ratio(X)	0.80	0.64	0.31	0.78	0.65	0.55	0.82	0.67	0.57	0.84	0.42	0.43
Avail Cap(c_a), veh/h	319	1134	482	246	980	416	491	1237	526	442	567	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	23.5	21.4	32.2	25.0	24.3	29.3	23.5	22.8	28.8	21.1	21.2
Incr Delay (d2), s/veh	7.2	0.9	0.4	8.8	1.2	1.3	6.0	0.9	1.3	8.7	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.1	4.8	1.8	2.3	4.5	3.1	4.3	5.1	3.7	4.9	3.2	3.0
Lane Grp Delay (d), s/veh	38.1	24.4	21.8	40.9	26.2	25.6	35.3	24.4	24.0	37.5	21.7	21.8
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		894			863			1116			669	
Approach Delay, s/veh		26.4			28.0			26.5			27.6	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	12.1	22.6		9.9	20.4		15.1	23.0		16.1	23.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	22.0		10.0	19.0		20.0	24.0		18.0	22.0	
Max Q Clear Time (g_c+I1), s	8.3	12.5		6.6	11.7		10.8	13.3		11.8	9.1	
Green Ext Time (p_c), s	0.2	5.8		0.1	4.8		0.4	5.7		0.4	6.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.1								
HCM 2010 LOS				C								
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	116	494	5	2	1029	103	94	101	3	135	33	159
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	123	1181	11	55	1122	954	126	198	5	151	35	166
Arrive On Green	0.07	0.65	0.65	0.03	0.61	0.61	0.07	0.11	0.11	0.09	0.12	0.12
Sat Flow, veh/h	1757	1825	17	1757	1845	1568	1757	1787	49	1757	277	1332
Grp Volume(v), veh/h	126	0	542	2	1118	112	102	0	113	147	0	209
Grp Sat Flow(s),veh/h/ln	1757	0	1842	1757	1845	1568	1757	0	1836	1757	0	1610
Q Serve(g_s), s	9.0	0.0	18.9	0.1	77.3	2.4	7.3	0.0	7.5	10.7	0.0	16.0
Cycle Q Clear(g_c), s	9.0	0.0	18.9	0.1	77.3	2.4	7.3	0.0	7.5	10.7	0.0	16.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.03	1.00		0.83
Lane Grp Cap(c), veh/h	123	0	1192	55	1122	954	126	0	204	151	0	201
V/C Ratio(X)	1.02	0.00	0.45	0.04	1.00	0.12	0.81	0.00	0.55	0.98	0.00	1.04
Avail Cap(c_a), veh/h	123	0	1192	55	1122	954	151	0	229	151	0	201
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.00	0.75	0.38	0.38	0.38	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.6	0.0	11.3	60.2	25.0	4.1	58.6	0.0	54.0	58.5	0.0	56.1
Incr Delay (d2), s/veh	76.2	0.0	0.9	0.1	15.6	0.1	23.2	0.0	2.4	65.7	0.0	74.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.7	0.0	8.1	0.1	37.8	1.4	4.2	0.0	3.7	7.6	0.0	10.9
Lane Grp Delay (d), s/veh	135.8	0.0	12.2	60.3	40.6	4.2	81.8	0.0	56.4	124.1	0.0	130.7
Lane Grp LOS	F		B	E	D	A	F		E	F		F
Approach Vol, veh/h		668			1232			215				356
Approach Delay, s/veh		35.6			37.3			68.4				128.0
Approach LOS		D			D			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	13.0	87.0		8.0	82.0		13.2	18.2		15.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	9.0	83.0		4.0	78.0		11.0	16.0		11.0		16.0
Max Q Clear Time (g_c+I1), s	11.0	20.9		2.1	79.3		9.3	9.5		12.7		18.0
Green Ext Time (p_c), s	0.0	3.9		0.1	0.0		0.1	0.4		0.0		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				52.6								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave























Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 						 	
Volume (veh/h)	33	274	22	685	338	137	21	50	82	78	95	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	60	955	76	1586	2635	1120	182	191	163	182	162	25
Arrive On Green	0.03	0.28	0.28	0.47	0.71	0.71	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	1757	3372	270	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	36	162	160	745	367	149	23	54	89	85	0	119
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.6	5.6	5.7	12.1	2.6	2.4	1.0	2.2	4.4	3.7	0.0	5.1
Cycle Q Clear(g_c), s	1.6	5.6	5.7	12.1	2.6	2.4	1.0	2.2	4.4	3.7	0.0	5.1
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	60	523	509	1586	2635	1120	182	191	163	182	0	187
V/C Ratio(X)	0.60	0.31	0.31	0.47	0.14	0.13	0.13	0.28	0.55	0.47	0.00	0.64
Avail Cap(c_a), veh/h	173	523	509	1805	2635	1120	389	409	348	433	0	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.64	0.64	0.64	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	22.9	22.9	14.9	3.7	3.7	33.1	33.6	34.6	34.3	0.0	34.9
Incr Delay (d2), s/veh	9.2	1.5	1.6	0.1	0.1	0.2	0.3	0.8	2.9	1.9	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	2.8	2.8	4.9	0.9	0.8	0.4	1.0	1.8	1.7	0.0	2.5
Lane Grp Delay (d), s/veh	47.8	24.4	24.5	15.0	3.8	3.8	33.4	34.4	37.4	36.1	0.0	38.5
Lane Grp LOS	D	C	C	B	A	A	C	C	D	D		D
Approach Vol, veh/h		358			1261			166			204	
Approach Delay, s/veh		26.8			10.4			35.9			37.5	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.8	27.0		41.8	62.0			12.4			12.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	8.0	23.0		43.0	58.0			18.0			20.0	
Max Q Clear Time (g_c+I1), s	3.6	7.7		14.1	4.6			6.4			7.1	
Green Ext Time (p_c), s	1.4	1.6		3.1	3.2			1.2			1.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 9: Loveridge Rd & California Ave/N Park Blvd

Baseline +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	60	269	45	154	3	587	301	94	7	219	522
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	180	385	327	110	680	12	845	1527	468	14	1193	507
Arrive On Green	0.05	0.21	0.21	0.03	0.19	0.19	0.25	0.56	0.56	0.01	0.32	0.32
Sat Flow, veh/h	3408	1845	1568	3408	3613	65	3408	2711	831	1757	3689	1568
Grp Volume(v), veh/h	113	65	292	49	85	85	638	221	208	8	238	567
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1698	1757	1845	1568
Q Serve(g_s), s	2.8	2.5	15.4	1.2	3.3	3.4	14.8	5.1	5.2	0.4	4.0	21.6
Cycle Q Clear(g_c), s	2.8	2.5	15.4	1.2	3.3	3.4	14.8	5.1	5.2	0.4	4.0	21.6
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	180	385	327	110	347	345	845	1039	956	14	1193	507
V/C Ratio(X)	0.63	0.17	0.89	0.45	0.24	0.25	0.76	0.21	0.22	0.56	0.20	1.12
Avail Cap(c_a), veh/h	280	433	368	160	368	366	1199	1644	1514	82	2164	920
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	27.7	32.8	40.5	29.4	29.4	29.7	9.2	9.3	42.1	20.9	17.7
Incr Delay (d2), s/veh	3.6	0.2	21.3	2.8	0.4	0.4	1.7	0.1	0.1	30.4	0.1	64.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	1.2	7.9	0.6	1.6	1.6	6.5	2.2	2.1	0.3	1.8	17.0
Lane Grp Delay (d), s/veh	43.1	27.9	54.1	43.3	29.8	29.8	31.4	9.3	9.4	72.6	20.9	81.9
Lane Grp LOS	D	C	D	D	C	C	C	A	A	E	C	F
Approach Vol, veh/h		470			219			1067			813	
Approach Delay, s/veh		47.8			32.8			22.5			63.9	
Approach LOS		D			C			C			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	8.5	21.8		6.7	20.1		25.1	52.0		4.7	31.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	7.0	20.0		4.0	17.0		30.0	76.0		4.0	50.0	
Max Q Clear Time (g_c+I1), s	4.8	17.4		3.2	5.4		16.8	7.2		2.4	23.6	
Green Ext Time (p_c), s	0.1	0.4		0.1	0.8		4.4	5.9		0.0	4.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				41.1								
HCM 2010 LOS				D								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Baseline +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	422	0	373	0	0	0	0	684	193	129	478	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1037	0	477				0	1922	817	205	2285	0
Arrive On Green	0.30	0.00	0.30				0.00	0.52	0.52	0.06	0.62	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	459	0	405				0	743	210	140	520	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	11.4	0.0	25.4				0.0	12.7	7.8	4.2	6.6	0.0
Cycle Q Clear(g_c), s	11.4	0.0	25.4				0.0	12.7	7.8	4.2	6.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1037	0	477				0	1922	817	205	2285	0
V/C Ratio(X)	0.44	0.00	0.85				0.00	0.39	0.26	0.68	0.23	0.00
Avail Cap(c_a), veh/h	1527	0	702				0	1922	817	422	2285	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.92	0.92	0.00
Uniform Delay (d), s/veh	29.3	0.0	34.2				0.0	15.1	13.9	48.3	8.8	0.0
Incr Delay (d2), s/veh	0.3	0.0	6.5				0.0	0.6	0.8	3.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.9	0.0	10.8				0.0	5.8	3.1	2.0	2.8	0.0
Lane Grp Delay (d), s/veh	29.6	0.0	40.7				0.0	15.7	14.7	52.0	9.1	0.0
Lane Grp LOS	C		D					B	B	D	A	
Approach Vol, veh/h		864						953			660	
Approach Delay, s/veh		34.8						15.4			18.2	
Approach LOS		C						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		35.9						58.7		10.3	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						48.0		13.0	65.0	
Max Q Clear Time (g_c+I1), s		27.4						14.7		6.2	8.6	
Green Ext Time (p_c), s		4.5						12.1		0.2	13.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			22.9									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
11: Loveridge Rd & Leland Rd

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	184	237	169	175	676	180	252	579	133	181	354	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	292	1150	489	279	1137	483	326	1161	493	288	789	335
Arrive On Green	0.09	0.31	0.31	0.08	0.31	0.31	0.19	0.31	0.31	0.08	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	200	258	184	190	735	196	274	629	145	197	385	168
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	4.4	4.0	7.1	4.2	13.3	7.6	11.6	10.9	5.4	4.3	7.1	7.3
Cycle Q Clear(g_c), s	4.4	4.0	7.1	4.2	13.3	7.6	11.6	10.9	5.4	4.3	7.1	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	292	1150	489	279	1137	483	326	1161	493	288	789	335
V/C Ratio(X)	0.69	0.22	0.38	0.68	0.65	0.41	0.84	0.54	0.29	0.68	0.49	0.50
Avail Cap(c_a), veh/h	529	1767	751	485	1719	731	705	2101	893	529	1194	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	19.7	20.7	34.5	23.1	21.1	30.4	21.9	20.0	34.4	26.7	26.7
Incr Delay (d2), s/veh	2.9	0.1	0.5	2.9	0.6	0.5	5.8	0.4	0.3	2.9	0.5	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	1.8	2.7	1.9	6.0	2.9	5.6	4.9	2.0	1.9	3.3	2.9
Lane Grp Delay (d), s/veh	37.2	19.8	21.2	37.4	23.7	21.7	36.2	22.3	20.3	37.2	27.1	27.9
Lane Grp LOS	D	B	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		642			1121			1048			750	
Approach Delay, s/veh		25.6			25.7			25.7			29.9	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.6	28.1		10.3	27.8		18.3	28.3		10.5	20.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	37.0		11.0	36.0		31.0	44.0		12.0	25.0	
Max Q Clear Time (g_c+I1), s	6.4	9.1		6.2	15.3		13.6	12.9		6.3	9.3	
Green Ext Time (p_c), s	0.3	9.6		0.2	8.5		0.7	9.7		0.3	7.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				26.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
12: Buchanan Rd & Loveridge Rd

Baseline +Project AM  
3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	270	429	1080	343	198	190
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	284	1504	1149	977	216	193
Arrive On Green	0.16	0.82	0.62	0.62	0.12	0.12
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	293	466	1174	373	215	207
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	21.0	8.1	81.0	15.3	15.9	16.0
Cycle Q Clear(g_c), s	21.0	8.1	81.0	15.3	15.9	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	284	1504	1149	977	216	193
V/C Ratio(X)	1.03	0.31	1.02	0.38	0.99	1.07
Avail Cap(c_a), veh/h	284	1504	1149	977	216	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.84	0.84	0.19	0.19	1.00	1.00
Uniform Delay (d), s/veh	54.5	3.0	24.5	12.1	57.0	57.0
Incr Delay (d2), s/veh	57.6	0.5	17.4	0.2	59.5	85.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	13.9	2.8	39.4	5.4	10.8	17.6
Lane Grp Delay (d), s/veh	112.1	3.4	41.9	12.3	116.5	142.4
Lane Grp LOS	F	A	F	B	F	F
Approach Vol, veh/h		759	1547		422	
Approach Delay, s/veh		45.4	34.7		129.2	
Approach LOS		D	C		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.0	110.0	85.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	21.0	106.0	81.0			
Max Q Clear Time (g_c+I1), s	23.0	10.1	83.0			
Green Ext Time (p_c), s	0.0	4.1	0.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			52.3			
HCM 2010 LOS			D			
<b>Notes</b>						



HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

Baseline +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	555	76	25	1247	11	177	108	44	14	10	17
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	7	1348	1146	35	1364	12	240	182	75	131	92	151
Arrive On Green	0.00	0.73	0.73	0.02	0.75	0.75	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1757	1845	1568	1757	1826	16	1362	1244	510	1204	631	1032
Grp Volume(v), veh/h	10	603	83	27	0	1367	192	0	165	15	0	29
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1842	1362	0	1755	1204	0	1663
Q Serve(g_s), s	0.4	15.2	1.8	1.8	0.0	84.7	15.2	0.0	10.3	1.4	0.0	1.8
Cycle Q Clear(g_c), s	0.4	15.2	1.8	1.8	0.0	84.7	17.0	0.0	10.3	11.7	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.29	1.00		0.62
Lane Grp Cap(c), veh/h	7	1348	1146	35	0	1376	240	0	256	131	0	243
V/C Ratio(X)	1.53	0.45	0.07	0.77	0.00	0.99	0.80	0.00	0.64	0.11	0.00	0.12
Avail Cap(c_a), veh/h	60	1348	1146	91	0	1376	240	0	256	131	0	243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.36	0.00	0.36	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	6.3	4.5	56.8	0.0	14.4	51.1	0.0	46.9	52.4	0.0	43.2
Incr Delay (d2), s/veh	341.4	0.9	0.1	11.8	0.0	13.0	17.3	0.0	5.4	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	6.0	0.6	0.9	0.0	35.7	6.9	0.0	5.1	0.4	0.0	0.8
Lane Grp Delay (d), s/veh	399.4	7.2	4.6	68.6	0.0	27.5	68.4	0.0	52.3	52.8	0.0	43.4
Lane Grp LOS	F	A	A	E		C	E		D	D		D
Approach Vol, veh/h		696			1394			357				44
Approach Delay, s/veh		12.5			28.3			61.0				46.6
Approach LOS		B			C			E				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	89.1		6.3	91.0			21.0				21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	85.0		6.0	87.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	2.4	17.2		3.8	86.7			19.0				13.7
Green Ext Time (p_c), s	0.0	4.9		0.0	0.2			0.0				0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 15: Tuscany Meadows Dr & Buchanan Rd






















Baseline +Project AM  
 3/16/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Volume (veh/h)	627	25	36	1086	74	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	998	848	50	1107	595	531
Arrive On Green	0.54	0.54	0.03	0.60	0.34	0.34
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	682	27	39	1180	80	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	35.0	1.0	2.9	78.0	4.1	6.9
Cycle Q Clear(g_c), s	35.0	1.0	2.9	78.0	4.1	6.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	998	848	50	1107	595	531
V/C Ratio(X)	0.68	0.03	0.78	1.07	0.13	0.22
Avail Cap(c_a), veh/h	998	848	95	1107	595	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	13.9	62.8	26.0	29.8	30.7
Incr Delay (d2), s/veh	1.9	0.0	22.9	46.5	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.7	0.4	1.6	47.2	1.9	2.9
Lane Grp Delay (d), s/veh	23.7	14.0	85.7	72.5	30.3	31.7
Lane Grp LOS	C	B	F	F	C	C
Approach Vol, veh/h	709			1219	196	
Approach Delay, s/veh	23.3			73.0	31.1	
Approach LOS	C			E	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	74.3		7.7	82.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	67.0		7.0	78.0		
Max Q Clear Time (g_c+I1), s	37.0		4.9	80.0		
Green Ext Time (p_c), s	18.1		0.0	0.0		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			52.5			
HCM 2010 LOS			D			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

Baseline +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	23	0	0	0	0	61	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	20	42	0	47	99	0	20	0	106	20	125	0
Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	25	0	0	0	0	66	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	20	42	0	47	99	0	20	0	106	20	125	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00
Avail Cap(c_a), veh/h	795	6680	0	4573	14613	0	795	0	5501	795	6472	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.8	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	13.1	0.0	0.0	0.0	0.0	9.8	0.0	0.0	0.0
Lane Grp LOS	B						A					
Approach Vol, veh/h	0			25			66			0		
Approach Delay, s/veh	0.0			13.1			9.8			0.0		
Approach LOS	B			B			A			A		
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.2	4.2		0.0	4.6		0.0	4.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		23.0	35.0		4.0	31.0		4.0	31.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.1	0.0		0.0	2.4		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	0.3		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.7								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 17: Proposed Apartments & Buchanan Rd























Baseline +Project AM  
 3/16/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	718	16	22	1060	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	861	732	301	1247	435	388
Arrive On Green	0.47	0.47	0.17	0.68	0.25	0.25
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	780	17	24	1152	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	41.0	0.6	1.2	56.5	3.1	5.2
Cycle Q Clear(g_c), s	41.0	0.6	1.2	56.5	3.1	5.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	861	732	301	1247	435	388
V/C Ratio(X)	0.91	0.02	0.08	0.92	0.15	0.25
Avail Cap(c_a), veh/h	1424	1210	301	1687	435	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	15.1	36.5	14.7	30.9	31.7
Incr Delay (d2), s/veh	5.2	0.0	0.1	7.3	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	18.8	0.2	0.5	23.6	1.5	2.2
Lane Grp Delay (d), s/veh	31.1	15.1	36.6	21.9	31.6	33.2
Lane Grp LOS	C	B	D	C	C	C
Approach Vol, veh/h	797			1176	164	
Approach Delay, s/veh	30.8			22.2	32.6	
Approach LOS	C			C	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	53.0		22.0	75.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	81.0		11.0	96.0		
Max Q Clear Time (g_c+I1), s	43.0		3.2	58.5		
Green Ext Time (p_c), s	6.0		5.0	12.4		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			26.2			
HCM 2010 LOS			C			
<b>Notes</b>						













HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy

Baseline +Project AM

3/16/2014





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	31	39	204	76	29	203	467	147	24	515	262
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	394	213	181	394	147	57	491	2852	870	39	2135	908
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.05	0.23	0.23	0.02	0.58	0.58
Sat Flow, veh/h	3408	1845	1568	3408	1269	489	3408	4073	1242	1757	3689	1568
Grp Volume(v), veh/h	113	34	42	222	0	115	221	459	209	26	560	285
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1625	1757	1845	1568
Q Serve(g_s), s	2.3	1.2	1.8	4.6	0.0	4.6	4.7	7.4	7.7	1.1	5.6	7.0
Cycle Q Clear(g_c), s	2.3	1.2	1.8	4.6	0.0	4.6	4.7	7.4	7.7	1.1	5.6	7.0
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	394	213	181	394	0	203	491	2584	1138	39	2135	908
V/C Ratio(X)	0.29	0.16	0.23	0.56	0.00	0.57	0.45	0.18	0.18	0.66	0.26	0.31
Avail Cap(c_a), veh/h	872	472	401	1055	0	544	872	2584	1138	236	2135	908
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	29.6	29.8	31.1	0.0	31.1	32.5	11.4	11.5	36.0	7.8	8.1
Incr Delay (d2), s/veh	0.4	0.3	0.6	1.3	0.0	2.5	0.6	0.1	0.3	17.4	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	0.6	0.7	2.0	0.0	2.2	2.1	3.8	3.5	0.7	2.3	2.6
Lane Grp Delay (d), s/veh	30.4	29.9	30.5	32.3	0.0	33.5	33.2	11.5	11.9	53.4	8.1	9.0
Lane Grp LOS	C	C	C	C		C	C	B	B	D	A	A
Approach Vol, veh/h		189			337			889			871	
Approach Delay, s/veh		30.4			32.7			17.0			9.7	
Approach LOS		C			C			B			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		12.6			12.6		14.7	56.0		5.7		47.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0			23.0		19.0	52.0		10.0		43.0
Max Q Clear Time (g_c+I1), s		4.3			6.6		6.7	9.7		3.1		9.0
Green Ext Time (p_c), s		1.9			2.0		4.1	6.1		0.0		6.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.6								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	216	258	587	534	416	289
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	690	317	728	4022	2643	749
Arrive On Green	0.20	0.20	0.36	1.00	0.48	0.48
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	235	280	638	580	452	314
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	6.7	19.6	19.8	0.0	5.2	14.8
Cycle Q Clear(g_c), s	6.7	19.6	19.8	0.0	5.2	14.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	690	317	728	4022	2643	749
V/C Ratio(X)	0.34	0.88	0.88	0.14	0.17	0.42
Avail Cap(c_a), veh/h	906	417	1238	4022	2643	749
HCM Platoon Ratio	1.00	1.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.93	0.93
Uniform Delay (d), s/veh	38.6	43.7	34.9	0.0	16.8	19.2
Incr Delay (d2), s/veh	0.3	15.9	3.7	0.1	0.1	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	1.4	8.2	0.0	2.4	6.0
Lane Grp Delay (d), s/veh	38.8	59.6	38.6	0.1	16.9	20.9
Lane Grp LOS	D	E	D	A	B	C
Approach Vol, veh/h	515			1218	766	
Approach Delay, s/veh	50.1			20.3	18.5	
Approach LOS	D			C	B	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			28.1	86.0	57.9	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			41.0	82.0	37.0	
Max Q Clear Time (g_c+I1), s			21.8	2.0	16.8	
Green Ext Time (p_c), s			2.3	11.4	8.5	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			25.9			
HCM 2010 LOS			C			
<b>Notes</b>						
























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	208	0	259	0	0	0	0	954	422	135	572	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	409	222	377				0	3920	1111	210	4464	0
Arrive On Green	0.12	0.00	0.12				0.00	0.94	0.94	0.12	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	226	0	282				0	1037	459	147	622	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	6.8	0.0	9.5				0.0	1.6	3.0	4.5	0.0	0.0
Cycle Q Clear(g_c), s	6.8	0.0	9.5				0.0	1.6	3.0	4.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	409	222	377				0	3920	1111	210	4464	0
V/C Ratio(X)	0.55	0.00	0.75				0.00	0.26	0.41	0.70	0.14	0.00
Avail Cap(c_a), veh/h	750	406	690				0	3920	1111	500	4464	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.80	0.80	0.94	0.94	0.00
Uniform Delay (d), s/veh	45.2	0.0	46.4				0.0	1.0	1.0	46.9	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	3.0				0.0	0.1	0.9	4.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.0	0.0	4.0				0.0	0.5	0.9	2.0	0.0	0.0
Lane Grp Delay (d), s/veh	46.4	0.0	49.4				0.0	1.1	1.9	50.8	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		508						1496			769	
Approach Delay, s/veh		48.1						1.4			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		17.1						81.3		10.7	92.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		24.0						68.0		16.0	88.0	
Max Q Clear Time (g_c+I1), s		11.5						5.0		6.5	2.0	
Green Ext Time (p_c), s		1.6						24.5		0.3	26.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.2									
HCM 2010 LOS			B									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd



























Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	263	115	5	41	315	413	87	753	16	137	346	282
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1171	605	24	603	634	539	190	2327	48	235	1445	614
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.04	0.14	0.14	0.12	0.65	0.65
Sat Flow, veh/h	3408	1762	70	1757	1845	1568	1757	5402	112	3408	3689	1568
Grp Volume(v), veh/h	286	0	130	45	342	449	95	558	277	149	376	307
Grp Sat Flow(s),veh/h/ln	1704	0	1832	1757	1845	1568	1757	1845	1825	1704	1845	1568
Q Serve(g_s), s	4.6	0.0	3.8	1.3	11.4	20.2	4.1	10.5	10.5	3.2	3.3	7.7
Cycle Q Clear(g_c), s	4.6	0.0	3.8	1.3	11.4	20.2	4.1	10.5	10.5	3.2	3.3	7.7
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	1171	0	629	603	634	539	190	1589	786	235	1445	614
V/C Ratio(X)	0.24	0.00	0.21	0.07	0.54	0.83	0.50	0.35	0.35	0.63	0.26	0.50
Avail Cap(c_a), veh/h	1171	0	629	1009	1060	901	298	1589	786	445	1445	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.79	0.79	0.79	0.97	0.97	0.97	0.99	0.99	0.99
Uniform Delay (d), s/veh	18.0	0.0	17.8	16.9	20.3	23.1	34.9	23.2	23.2	33.0	8.6	9.4
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.6	2.8	2.0	0.6	1.2	2.8	0.4	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.0	1.7	0.6	5.2	7.9	2.0	5.3	5.4	1.4	1.3	2.7
Lane Grp Delay (d), s/veh	18.1	0.0	17.9	17.0	20.8	25.9	36.9	23.8	24.4	35.7	9.1	12.3
Lane Grp LOS	B		B	B	C	C	D	C	C	D	A	B
Approach Vol, veh/h		416			836			930			832	
Approach Delay, s/veh		18.1			23.3			25.3			15.0	
Approach LOS		B			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		30.3			30.3		12.3	37.0		9.3		34.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			44.0		13.0	33.0		10.0		30.0
Max Q Clear Time (g_c+I1), s		6.6			22.2		6.1	12.5		5.2		9.7
Green Ext Time (p_c), s		4.4			4.1		0.4	5.6		0.3		3.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.9								
HCM 2010 LOS				C								
<b>Notes</b>												















HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	396	220	184	25	350	396	600	1058	52	39	150	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	372	1364	580	35	328	279	580	1550	77	53	533	227
Arrive On Green	0.21	0.37	0.00	0.02	0.18	0.00	0.33	0.44	0.44	0.03	0.14	0.14
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3486	173	1757	3689	1568
Grp Volume(v), veh/h	430	239	0	27	380	0	652	608	599	42	163	149
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1814	1757	1845	1568
Q Serve(g_s), s	25.0	5.2	0.0	1.8	21.0	0.0	39.0	32.3	32.3	2.8	4.7	10.6
Cycle Q Clear(g_c), s	25.0	5.2	0.0	1.8	21.0	0.0	39.0	32.3	32.3	2.8	4.7	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	372	1364	580	35	328	279	580	820	806	53	533	227
V/C Ratio(X)	1.16	0.18	0.00	0.77	1.16	0.00	1.12	0.74	0.74	0.79	0.31	0.66
Avail Cap(c_a), veh/h	372	1364	580	89	328	279	580	828	814	74	594	252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	25.1	0.0	57.6	48.5	0.0	39.5	27.2	27.2	56.9	45.2	47.7
Incr Delay (d2), s/veh	96.3	0.1	0.0	29.3	99.9	0.0	76.2	3.6	3.7	29.9	0.3	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	21.0	2.3	0.0	1.1	19.1	0.0	29.9	15.7	15.5	1.7	2.2	4.6
Lane Grp Delay (d), s/veh	142.9	25.1	0.0	86.9	148.4	0.0	115.7	30.8	30.8	86.7	45.5	53.0
Lane Grp LOS	F	C		F	F		F	C	C	F	D	D
Approach Vol, veh/h		669			407			1859			354	
Approach Delay, s/veh		100.8			144.3			60.6			53.6	
Approach LOS		F			F			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	29.0	47.6		6.4	25.0		43.0	56.5		7.6	21.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	25.0	40.0		6.0	21.0		39.0	53.0		5.0	19.0	
Max Q Clear Time (g_c+I1), s	27.0	7.2		3.8	23.0		41.0	34.3		4.8	12.6	
Green Ext Time (p_c), s	0.0	4.1		0.0	0.0		0.0	9.7		0.0	4.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				78.4								
HCM 2010 LOS				E								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 23: Sequoia Dr & Somersville Rd

Baseline +Project AM  
 3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	263	11	4	1448	272	87
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	349	312	748	2506	2506	1065
Arrive On Green	0.20	0.20	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1757	1568	979	3689	3689	1568
Grp Volume(v), veh/h	286	12	4	1574	296	95
Grp Sat Flow(s),veh/h/ln	1757	1568	979	1845	1845	1568
Q Serve(g_s), s	10.2	0.4	0.1	15.7	1.8	1.4
Cycle Q Clear(g_c), s	10.2	0.4	1.9	15.7	1.8	1.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	349	312	748	2506	2506	1065
V/C Ratio(X)	0.82	0.04	0.01	0.63	0.12	0.09
Avail Cap(c_a), veh/h	937	837	1232	4331	4331	1841
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	21.2	4.0	5.9	3.7	3.6
Incr Delay (d2), s/veh	4.8	0.1	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.8	0.2	0.0	5.8	0.7	0.4
Lane Grp Delay (d), s/veh	29.9	21.3	4.0	6.1	3.7	3.6
Lane Grp LOS	C	C	A	A	A	A
Approach Vol, veh/h	298			1578	391	
Approach Delay, s/veh	29.6			6.1	3.7	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				48.6	48.6	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				77.0	77.0	
Max Q Clear Time (g_c+I1), s				17.7	3.8	
Green Ext Time (p_c), s				26.9	28.9	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			8.8			
HCM 2010 LOS			A			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	9	0	7	13	1356	0	1	2	275	8	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	146	393	0	15	118	50	7	28	56	544	700	1189
Arrive On Green	0.08	0.11	0.00	0.01	0.03	0.00	0.00	0.05	0.05	0.16	0.38	0.38
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	103	10	0	8	14	0	0	0	3	299	9	43
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	1.4	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.9	0.1	0.1
Cycle Q Clear(g_c), s	1.4	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	1.9	0.1	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	146	393	0	15	118	50	7	0	85	544	700	1189
V/C Ratio(X)	0.71	0.03	0.00	0.53	0.12	0.00	0.00	0.00	0.04	0.55	0.01	0.04
Avail Cap(c_a), veh/h	444	11503	0	296	11192	4757	296	0	1182	1292	1710	2907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.6	9.5	0.0	11.7	11.2	0.0	0.0	0.0	10.7	9.2	4.6	0.5
Incr Delay (d2), s/veh	6.1	0.0	0.0	25.3	0.4	0.0	0.0	0.0	0.2	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0
Lane Grp Delay (d), s/veh	16.7	9.5	0.0	37.1	11.6	0.0	0.0	0.0	10.9	10.1	4.6	0.5
Lane Grp LOS	B	A		D	B				B	B	A	A
Approach Vol, veh/h		113			22			3			351	
Approach Delay, s/veh		16.1			20.9			10.9			8.7	
Approach LOS		B			C			B			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	6.0	6.5		4.2	4.8		0.0	5.2		7.8	13.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	74.0		4.0	72.0		4.0	17.0		9.0	22.0	
Max Q Clear Time (g_c+I1), s	3.4	2.1		2.1	2.1		0.0	2.0		3.9	2.1	
Green Ext Time (p_c), s	0.1	0.4		0.0	0.1		0.0	0.1		0.5	0.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				11.0								
HCM 2010 LOS				B								
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	214	54	50	390	204	125	421	52	63	104	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	341	1098	272	506	881	456	663	716	89	349	821	698
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	774	2857	708	1072	2292	1188	1246	1609	200	874	1845	1568
Grp Volume(v), veh/h	45	149	143	54	340	306	136	0	515	68	113	14
Grp Sat Flow(s),veh/h/ln	774	1845	1720	1072	1845	1635	1246	0	1809	874	1845	1568
Q Serve(g_s), s	2.2	2.5	2.6	1.7	6.5	6.6	3.4	0.0	10.4	3.1	1.7	0.2
Cycle Q Clear(g_c), s	8.8	2.5	2.6	4.3	6.5	6.6	5.1	0.0	10.4	13.4	1.7	0.2
Prop In Lane	1.00		0.41	1.00		0.73	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	341	709	661	506	709	628	663	0	805	349	821	698
V/C Ratio(X)	0.13	0.21	0.22	0.11	0.48	0.49	0.21	0.00	0.64	0.19	0.14	0.02
Avail Cap(c_a), veh/h	754	1692	1577	1077	1692	1500	1943	0	2663	1246	2715	2308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	9.7	9.7	11.1	10.9	10.9	9.2	0.0	10.1	15.3	7.7	7.3
Incr Delay (d2), s/veh	0.2	0.1	0.2	0.1	0.5	0.6	0.2	0.0	0.9	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	1.0	1.0	0.4	2.6	2.4	0.9	0.0	4.1	0.6	0.7	0.1
Lane Grp Delay (d), s/veh	14.4	9.8	9.9	11.2	11.4	11.5	9.3	0.0	10.9	15.6	7.8	7.3
Lane Grp LOS	B	A	A	B	B	B	A		B	B	A	A
Approach Vol, veh/h		337			700			651				195
Approach Delay, s/veh		10.4			11.4			10.6				10.5
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs		4			8			2				6
Phs Duration (G+Y+Rc), s		22.0			22.0			24.9				24.9
Change Period (Y+Rc), s		4.0			4.0			4.0				4.0
Max Green Setting (Gmax), s		43.0			43.0			69.0				69.0
Max Q Clear Time (g_c+I1), s		10.8			8.6			12.4				15.4
Green Ext Time (p_c), s		7.2			7.3			5.4				5.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.9								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	182	432	2	9	975	215	6	9	12	207	13	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	235	2138	9	17	1343	295	115	156	161	309	36	353
Arrive On Green	0.13	0.58	0.58	0.01	0.46	0.46	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1757	3671	16	1757	2931	644	222	639	659	1369	147	1443
Grp Volume(v), veh/h	198	236	236	10	665	629	30	0	0	225	0	151
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1731	1520	0	0	1369	0	1590
Q Serve(g_s), s	8.1	4.5	4.5	0.4	22.5	22.7	0.0	0.0	0.0	11.3	0.0	5.8
Cycle Q Clear(g_c), s	8.1	4.5	4.5	0.4	22.5	22.7	6.9	0.0	0.0	18.0	0.0	5.8
Prop In Lane	1.00		0.01	1.00		0.37	0.23		0.43	1.00		0.91
Lane Grp Cap(c), veh/h	235	1074	1073	17	845	793	432	0	0	309	0	389
V/C Ratio(X)	0.84	0.22	0.22	0.58	0.79	0.79	0.07	0.00	0.00	0.73	0.00	0.39
Avail Cap(c_a), veh/h	358	1254	1253	96	979	918	558	0	0	421	0	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.1	7.4	7.4	36.3	16.9	16.9	21.4	0.0	0.0	31.5	0.0	23.2
Incr Delay (d2), s/veh	10.6	0.1	0.1	27.6	3.8	4.2	0.1	0.0	0.0	4.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.2	1.8	1.8	0.3	10.3	9.8	0.4	0.0	0.0	4.4	0.0	2.3
Lane Grp Delay (d), s/veh	41.7	7.5	7.5	63.9	20.6	21.1	21.4	0.0	0.0	35.6	0.0	23.8
Lane Grp LOS	D	A	A	E	C	C	C			D		C
Approach Vol, veh/h		670			1304			30				376
Approach Delay, s/veh		17.6			21.2			21.4				30.9
Approach LOS		B			C			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	14.0	47.3		4.7	38.0			23.3				23.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	15.0	50.0		4.0	39.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	10.1	6.5		2.4	24.7			8.9				20.0
Green Ext Time (p_c), s	0.2	18.2		0.0	9.6			1.6				0.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.7								
HCM 2010 LOS				C								
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	194	50	486	11	113	78	917	1161	9	49	868	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	296	311	1598	27	282	264	1163	2390	1016	67	1589	272
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.34	0.65	0.65	0.04	0.34	0.34
Sat Flow, veh/h	1757	1845	3136	163	1673	1568	3408	3689	1568	1757	4606	789
Grp Volume(v), veh/h	211	54	528	135	0	85	997	1262	10	53	755	350
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1836	0	1568	1704	1845	1568	1757	1845	1706
Q Serve(g_s), s	9.4	2.1	8.2	5.4	0.0	3.9	22.5	15.1	0.2	2.5	13.9	14.0
Cycle Q Clear(g_c), s	9.4	2.1	8.2	5.4	0.0	3.9	22.5	15.1	0.2	2.5	13.9	14.0
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	296	311	1598	309	0	264	1163	2390	1016	67	1273	588
V/C Ratio(X)	0.71	0.17	0.33	0.44	0.00	0.32	0.86	0.53	0.01	0.79	0.59	0.60
Avail Cap(c_a), veh/h	383	403	1754	356	0	304	1612	2729	1160	192	1387	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	29.4	11.9	30.8	0.0	30.2	25.3	7.8	5.1	39.3	22.2	22.3
Incr Delay (d2), s/veh	4.3	0.3	0.1	1.0	0.0	0.7	3.6	0.2	0.0	18.0	0.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	1.0	2.9	2.6	0.0	1.6	9.9	6.0	0.1	1.4	6.4	6.1
Lane Grp Delay (d), s/veh	36.7	29.6	12.0	31.8	0.0	30.8	28.9	8.0	5.2	57.3	22.8	23.6
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		793			220			2269			1158	
Approach Delay, s/veh		19.8			31.4			17.1			24.6	
Approach LOS		B			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		17.9			17.9		32.1	57.4		7.2		32.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		39.0	61.0		9.0		31.0
Max Q Clear Time (g_c+I1), s		11.4			7.4		24.5	17.1		4.5		16.0
Green Ext Time (p_c), s		2.5			3.0		3.7	28.3		0.0		12.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.3								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr



























Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	24	0	98	0	0	0	56	507	3	0	1625	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	166	0	148	467	174	148	77	2867	1219	3	3630	62
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.04	0.78	0.78	0.00	0.67	0.67
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5426	92
Grp Volume(v), veh/h	26	0	107	0	0	0	61	551	3	0	1201	595
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	0.8	0.0	4.1	0.0	0.0	0.0	2.1	2.4	0.0	0.0	9.9	9.9
Cycle Q Clear(g_c), s	0.8	0.0	4.1	0.0	0.0	0.0	2.1	2.4	0.0	0.0	9.9	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	166	0	148	467	174	148	77	2867	1219	3	2468	1223
V/C Ratio(X)	0.16	0.00	0.72	0.00	0.00	0.00	0.79	0.19	0.00	0.00	0.49	0.49
Avail Cap(c_a), veh/h	452	0	403	1273	474	403	310	4030	1713	113	3615	1792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	27.4	0.0	0.0	0.0	29.5	1.8	1.5	0.0	5.1	5.1
Incr Delay (d2), s/veh	0.4	0.0	6.5	0.0	0.0	0.0	16.3	0.0	0.0	0.0	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	0.0	1.8	0.0	0.0	0.0	1.3	0.6	0.0	0.0	3.4	3.4
Lane Grp Delay (d), s/veh	26.3	0.0	33.9	0.0	0.0	0.0	45.8	1.8	1.5	0.0	5.2	5.4
Lane Grp LOS	C		C				D	A	A		A	A
Approach Vol, veh/h		133			0			615			1796	
Approach Delay, s/veh		32.4			0.0			6.2			5.3	
Approach LOS		C						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		9.9			9.9		6.7	52.4		0.0		45.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		11.0	68.0		4.0		61.0
Max Q Clear Time (g_c+I1), s		6.1			0.0		4.1	4.4		0.0		11.9
Green Ext Time (p_c), s		0.4			0.0		0.1	34.1		0.0		29.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			6.9									
HCM 2010 LOS			A									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Baseline +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	65	69	124	377	385	90	67	413	79	50	1527	372
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	91	216	183	439	1163	494	93	2051	382	69	1893	454
Arrive On Green	0.05	0.12	0.12	0.25	0.32	0.32	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4538	846	1757	4316	1035
Grp Volume(v), veh/h	71	75	135	410	418	98	73	363	172	54	1415	649
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1695	1757	1845	1662
Q Serve(g_s), s	4.5	4.2	9.4	25.8	9.9	5.2	4.6	6.8	7.0	3.4	39.5	40.6
Cycle Q Clear(g_c), s	4.5	4.2	9.4	25.8	9.9	5.2	4.6	6.8	7.0	3.4	39.5	40.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.50	1.00		0.62
Lane Grp Cap(c), veh/h	91	216	183	439	1163	494	93	1667	766	69	1618	729
V/C Ratio(X)	0.78	0.35	0.74	0.93	0.36	0.20	0.79	0.22	0.22	0.78	0.87	0.89
Avail Cap(c_a), veh/h	155	261	222	482	1208	513	93	1667	766	140	1665	750
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	45.9	48.2	41.5	29.9	28.3	52.9	18.8	18.9	53.8	28.9	29.2
Incr Delay (d2), s/veh	13.5	1.0	9.7	24.3	0.2	0.2	34.7	0.1	0.1	16.8	5.4	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	2.1	4.3	14.5	4.7	2.1	3.0	3.0	3.0	1.9	19.3	19.3
Lane Grp Delay (d), s/veh	66.4	46.9	58.0	65.8	30.1	28.5	87.6	18.9	19.0	70.6	34.3	41.8
Lane Grp LOS	E	D	E	E	C	C	F	B	B	E	C	D
Approach Vol, veh/h		281			926			608			2118	
Approach Delay, s/veh		57.1			45.7			27.2			37.5	
Approach LOS		E			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	9.8	17.2		32.3	39.6		10.0	55.1		8.5	53.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	16.0		31.0	37.0		6.0	48.0		9.0	51.0	
Max Q Clear Time (g_c+I1), s	6.5	11.4		27.8	11.9		6.6	9.0		5.4	42.6	
Green Ext Time (p_c), s	0.0	1.8		0.5	4.7		0.0	29.1		0.0	7.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.3								
HCM 2010 LOS				D								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd

Baseline +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	210	351	34	443	1167	137	151	314	167	273	1075	521
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	286	1246	0	562	1693	0	222	1992	564	366	2227	631
Arrive On Green	0.08	0.23	0.00	0.16	0.31	0.00	0.07	0.36	0.36	0.11	0.40	0.40
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	228	382	0	482	1268	0	164	341	182	297	1168	566
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	7.4	6.4	0.0	15.4	23.1	0.0	5.3	4.7	9.4	9.6	17.9	37.8
Cycle Q Clear(g_c), s	7.4	6.4	0.0	15.4	23.1	0.0	5.3	4.7	9.4	9.6	17.9	37.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	286	1246	0	562	1693	0	222	1992	564	366	2227	631
V/C Ratio(X)	0.80	0.31	0.00	0.86	0.75	0.00	0.74	0.17	0.32	0.81	0.52	0.90
Avail Cap(c_a), veh/h	304	1246	0	730	1925	0	243	1992	564	517	2320	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	36.2	0.0	45.5	35.0	0.0	51.5	24.5	26.0	48.9	25.4	31.3
Incr Delay (d2), s/veh	13.1	0.1	0.0	8.1	1.5	0.0	10.4	0.0	0.3	6.5	0.2	14.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.8	3.0	0.0	7.4	11.0	0.0	2.6	2.2	3.7	4.5	8.3	17.2
Lane Grp Delay (d), s/veh	63.6	36.3	0.0	53.6	36.5	0.0	61.9	24.5	26.3	55.4	25.6	46.1
Lane Grp LOS	E	D		D	D		E	C	C	E	C	D
Approach Vol, veh/h		610			1750			687			2031	
Approach Delay, s/veh		46.5			41.2			33.9			35.6	
Approach LOS		D			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.4	29.2		22.5	38.3		11.3	44.3		16.0	49.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	25.0		24.0	39.0		8.0	38.0		17.0	47.0	
Max Q Clear Time (g_c+I1), s	9.4	8.4		17.4	25.1		7.3	11.4		11.6	39.8	
Green Ext Time (p_c), s	0.1	10.5		1.0	9.2		0.0	16.7		0.5	5.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.6								
HCM 2010 LOS				D								
<b>Notes</b>												















HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	750	5	9	1159	11	6	0	28	7	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	17	2531	16	18	2525	24	208	0	63	184	0	63
Arrive On Green	0.01	0.69	0.69	0.01	0.69	0.69	0.04	0.00	0.04	0.04	0.00	0.04
Sat Flow, veh/h	1757	3663	22	1757	3648	35	1393	0	1568	1361	0	1568
Grp Volume(v), veh/h	9	410	410	10	637	635	7	0	30	8	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1841	1757	1845	1839	1393	0	1568	1361	0	1568
Q Serve(g_s), s	0.2	4.1	4.1	0.3	7.5	7.6	0.2	0.0	0.9	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.2	4.1	4.1	0.3	7.5	7.6	0.3	0.0	0.9	1.1	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	17	1275	1272	18	1277	1272	208	0	63	184	0	63
V/C Ratio(X)	0.54	0.32	0.32	0.55	0.50	0.50	0.03	0.00	0.47	0.04	0.00	0.06
Avail Cap(c_a), veh/h	227	3373	3365	227	3373	3361	661	0	573	627	0	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.9	2.9	2.9	22.9	3.4	3.4	21.6	0.0	21.8	22.4	0.0	21.5
Incr Delay (d2), s/veh	24.8	0.1	0.1	23.0	0.3	0.3	0.1	0.0	5.4	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.8	0.8	0.2	1.7	1.7	0.1	0.0	0.4	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	47.8	3.0	3.0	45.9	3.7	3.7	21.7	0.0	27.2	22.5	0.0	21.9
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		829			1282			37				12
Approach Delay, s/veh		3.5			4.0			26.2				22.3
Approach LOS		A			A			C				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	36.1		4.5	36.2			5.9				5.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	85.0		6.0	85.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	2.2	6.1		2.3	9.6			2.9				3.1
Green Ext Time (p_c), s	0.0	22.8		0.0	22.6			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.3								
HCM 2010 LOS				A								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
32: Delta Fair Blvd & Century Blvd

Baseline +Project AM  
3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			 
Volume (veh/h)	101	297	716	101	106	298
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	144	2140	1320	187	454	405
Arrive On Green	0.08	0.58	0.42	0.42	0.26	0.26
Sat Flow, veh/h	1757	3689	3163	447	1757	1568
Grp Volume(v), veh/h	110	323	454	434	115	324
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1766	1757	1568
Q Serve(g_s), s	3.0	2.0	9.4	9.4	2.6	9.6
Cycle Q Clear(g_c), s	3.0	2.0	9.4	9.4	2.6	9.6
Prop In Lane	1.00			0.25	1.00	1.00
Lane Grp Cap(c), veh/h	144	2140	770	737	454	405
V/C Ratio(X)	0.77	0.15	0.59	0.59	0.25	0.80
Avail Cap(c_a), veh/h	497	4248	1453	1391	887	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	4.8	11.1	11.1	14.6	17.2
Incr Delay (d2), s/veh	8.2	0.0	0.7	0.8	0.3	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	0.7	3.8	3.7	1.1	0.4
Lane Grp Delay (d), s/veh	30.5	4.8	11.9	11.9	14.9	20.8
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		433	888		439	
Approach Delay, s/veh		11.3	11.9		19.3	
Approach LOS		B	B		B	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	8.0	32.7	24.7			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	57.0	39.0			
Max Q Clear Time (g_c+I1), s	5.0	4.0	11.4			
Green Ext Time (p_c), s	0.2	10.7	9.3			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			13.6			
HCM 2010 LOS			B			
<b>Notes</b>						





















HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Baseline +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	42	0	102	0	0	0	802	764	0	2	238	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	223	0	141	66	166	0	917	2956	0	2	918	95
Arrive On Green	0.09	0.00	0.09	0.00	0.00	0.00	0.52	0.80	0.00	0.00	0.56	0.56
Sat Flow, veh/h	1757	0	1568	1264	1845	0	1757	3689	0	1757	3290	340
Grp Volume(v), veh/h	46	0	111	0	0	0	872	830	0	2	144	142
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1264	1845	0	1757	1845	0	1757	1845	1785
Q Serve(g_s), s	2.7	0.0	7.6	0.0	0.0	0.0	51.8	6.3	0.0	0.1	4.5	4.6
Cycle Q Clear(g_c), s	2.7	0.0	7.6	0.0	0.0	0.0	51.8	6.3	0.0	0.1	4.5	4.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.19
Lane Grp Cap(c), veh/h	223	0	141	66	166	0	917	2956	0	2	515	498
V/C Ratio(X)	0.21	0.00	0.79	0.00	0.00	0.00	0.95	0.28	0.00	1.25	0.28	0.28
Avail Cap(c_a), veh/h	322	0	228	136	269	0	1216	2956	0	64	515	498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.28	0.28	0.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	46.7	0.0	48.9	0.0	0.0	0.0	24.9	2.8	0.0	54.9	18.5	18.5
Incr Delay (d2), s/veh	0.5	0.0	9.3	0.0	0.0	0.0	4.8	0.1	0.0	425.8	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	0.0	3.4	0.0	0.0	0.0	23.3	2.2	0.0	0.2	2.1	2.0
Lane Grp Delay (d), s/veh	47.2	0.0	58.3	0.0	0.0	0.0	29.8	2.9	0.0	480.7	19.8	19.9
Lane Grp LOS	D		E				C	A		F	B	B
Approach Vol, veh/h		157			0			1702			288	
Approach Delay, s/veh		55.0			0.0			16.6			23.1	
Approach LOS		E						B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.9			13.9		61.3	92.0		3.9		34.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		76.0	88.0		4.0		16.0
Max Q Clear Time (g_c+I1), s		9.6			0.0		53.8	8.3		2.1		6.6
Green Ext Time (p_c), s		0.3			0.0		3.5	7.3		0.0		1.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.3								
HCM 2010 LOS				C								
<b>Notes</b>												



















HCM 2010 Signalized Intersection Summary  
34: Fairview Dr & Delta Fair Blvd

Baseline +Project AM  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	344	155	22	457	7	614	6	29	8	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	21	519	229	38	809	13	860	8	912	210	47	30
Arrive On Green	0.01	0.21	0.21	0.02	0.22	0.22	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1757	2427	1073	1757	3621	58	1290	14	1568	202	80	51
Grp Volume(v), veh/h	12	283	259	24	253	252	674	0	32	13	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1655	1757	1845	1834	1304	0	1568	333	0	0
Q Serve(g_s), s	0.4	9.4	9.6	0.9	8.1	8.1	0.0	0.0	0.6	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.4	9.4	9.6	0.9	8.1	8.1	30.5	0.0	0.6	30.7	0.0	0.0
Prop In Lane	1.00		0.65	1.00		0.03	0.99		1.00	0.69		0.15
Lane Grp Cap(c), veh/h	21	394	354	38	412	410	868	0	912	287	0	0
V/C Ratio(X)	0.57	0.72	0.73	0.63	0.61	0.61	0.78	0.00	0.04	0.05	0.00	0.00
Avail Cap(c_a), veh/h	107	450	403	107	450	447	1289	0	1385	721	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.3	24.0	24.1	31.9	22.9	23.0	12.1	0.0	5.9	12.5	0.0	0.0
Incr Delay (d2), s/veh	22.0	4.7	5.8	16.1	2.2	2.2	1.8	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	4.7	4.4	0.5	3.8	3.8	8.7	0.0	0.2	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	54.3	28.7	29.9	47.9	25.1	25.1	13.9	0.0	5.9	12.6	0.0	0.0
Lane Grp LOS	D	C	C	D	C	C	B		A	B		
Approach Vol, veh/h		554			529			706				13
Approach Delay, s/veh		29.8			26.2			13.5				12.6
Approach LOS		C			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.8	18.0		5.4	18.7			42.2				42.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0			58.0				58.0
Max Q Clear Time (g_c+I1), s	2.4	11.6		2.9	10.1			32.5				32.7
Green Ext Time (p_c), s	0.0	2.5		0.0	3.1			5.5				5.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.2								
HCM 2010 LOS				C								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
1: Railroad Ave & SR-4 WB OnRamp

Baseline +Project PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	175	253	199	489	771	294	172	868	293
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				238	355	295	630	1243	474	225	1591	676
Arrive On Green				0.26	0.26	0.26	0.31	0.81	0.81	0.13	0.43	0.00
Sat Flow, veh/h				922	1376	1143	3408	2548	970	1757	3689	1568
Grp Volume(v), veh/h				371	0	310	532	606	552	187	943	0
Grp Sat Flow(s),veh/h/ln				1799	0	1643	1704	1845	1673	1757	1845	1568
Q Serve(g_s), s				18.3	0.0	16.4	13.9	12.8	12.9	9.9	18.6	0.0
Cycle Q Clear(g_c), s				18.3	0.0	16.4	13.9	12.8	12.9	9.9	18.6	0.0
Prop In Lane				0.51		0.70	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h				463	0	423	630	900	817	225	1591	676
V/C Ratio(X)				0.80	0.00	0.73	0.84	0.67	0.68	0.83	0.59	0.00
Avail Cap(c_a), veh/h				719	0	657	1040	900	817	444	1591	676
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.57	0.57	0.57	1.00	1.00	0.00
Uniform Delay (d), s/veh				33.0	0.0	32.3	31.6	5.7	5.7	40.4	20.6	0.0
Incr Delay (d2), s/veh				3.6	0.0	2.5	2.0	2.3	2.6	7.7	1.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				8.7	0.0	7.0	5.6	3.4	3.2	4.9	8.7	0.0
Lane Grp Delay (d), s/veh				36.6	0.0	34.8	33.6	8.0	8.3	48.2	22.3	0.0
Lane Grp LOS				D		C	C	A	A	D	C	
Approach Vol, veh/h					681			1690			1130	
Approach Delay, s/veh					35.7			16.1			26.6	
Approach LOS					D			B			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					28.5		21.6	50.4		16.2	45.0	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					20.3		15.9	14.9		11.9	20.6	
Green Ext Time (p_c), s					4.2		1.7	19.7		0.4	14.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay											23.3	
HCM 2010 LOS											C	
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Baseline +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	599	0	839	0	0	0	0	941	148	131	662	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	738	775	1317				0	1505	236	259	1868	0
Arrive On Green	0.42	0.00	0.42				0.00	0.32	0.32	0.29	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4671	734	1757	3689	0
Grp Volume(v), veh/h	651	0	912				0	808	376	142	720	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1715	1757	1845	0
Q Serve(g_s), s	37.1	0.0	25.8				0.0	20.6	20.7	7.4	0.0	0.0
Cycle Q Clear(g_c), s	37.1	0.0	25.8				0.0	20.6	20.7	7.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.43	1.00		0.00
Lane Grp Cap(c), veh/h	738	775	1317				0	1189	553	259	1868	0
V/C Ratio(X)	0.88	0.00	0.69				0.00	0.68	0.68	0.55	0.39	0.00
Avail Cap(c_a), veh/h	922	968	1645				0	1189	553	259	1868	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.78	0.78	0.00
Uniform Delay (d), s/veh	29.0	0.0	25.8				0.0	31.9	32.0	35.3	0.0	0.0
Incr Delay (d2), s/veh	8.5	0.0	0.9				0.0	3.1	6.6	1.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	17.7	0.0	10.0				0.0	10.1	9.9	3.1	0.1	0.0
Lane Grp Delay (d), s/veh	37.5	0.0	26.7				0.0	35.1	38.6	37.2	0.5	0.0
Lane Grp LOS	D		C					D	D	D	A	
Approach Vol, veh/h		1563						1184			862	
Approach Delay, s/veh		31.2						36.2			6.5	
Approach LOS		C						D			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		49.6						39.0		20.0	59.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		57.0						35.0		16.0	55.0	
Max Q Clear Time (g_c+I1), s		39.1						22.7		9.4	2.0	
Green Ext Time (p_c), s		6.5						6.3		2.9	6.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			26.9									
HCM 2010 LOS			C									
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd













Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	225	792	184	141	352	228	163	687	213	515	858	266
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	272	797	185	146	752	320	204	798	339	513	1446	615
Arrive On Green	0.15	0.28	0.28	0.08	0.20	0.20	0.12	0.22	0.22	0.29	0.39	0.39
Sat Flow, veh/h	1757	2898	673	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	245	548	513	153	383	248	177	747	232	560	933	289
Grp Sat Flow(s),veh/h/ln	1757	1845	1726	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.4	33.0	33.0	10.0	11.1	9.9	11.9	23.9	13.2	35.0	24.7	16.5
Cycle Q Clear(g_c), s	16.4	33.0	33.0	10.0	11.1	9.9	11.9	23.9	13.2	35.0	24.7	16.5
Prop In Lane	1.00		0.39	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	272	507	475	146	752	320	204	798	339	513	1446	615
V/C Ratio(X)	0.90	1.08	1.08	1.04	0.51	0.78	0.87	0.94	0.68	1.09	0.65	0.47
Avail Cap(c_a), veh/h	293	507	475	146	752	320	234	800	340	513	1446	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.8	43.5	43.5	55.0	42.4	13.6	52.1	46.2	28.3	42.5	29.7	27.2
Incr Delay (d2), s/veh	27.8	63.2	64.7	86.7	0.6	11.4	25.0	18.1	5.6	67.3	1.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.6	24.4	23.0	8.1	5.3	4.7	6.9	13.3	5.7	25.2	11.6	6.5
Lane Grp Delay (d), s/veh	77.6	106.7	108.1	141.7	43.0	25.0	77.1	64.3	33.8	109.7	30.7	27.7
Lane Grp LOS	E	F	F	F	D	C	E	E	C	F	C	C
Approach Vol, veh/h		1306			784			1156			1782	
Approach Delay, s/veh		101.8			56.6			60.2			55.0	
Approach LOS		F			E			E			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.5	37.0		14.0	28.5		17.9	29.9		39.0	51.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	20.0	33.0		10.0	23.0		16.0	26.0		35.0	45.0	
Max Q Clear Time (g_c+I1), s	18.4	35.0		12.0	13.1		13.9	25.9		37.0	26.7	
Green Ext Time (p_c), s	0.1	0.0		0.0	6.7		0.1	0.1		0.0	9.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					68.6							
HCM 2010 LOS					E							
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 4: Railroad Ave & Buchanan Rd





























Baseline +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	57	50	3	442	107	125	35	680	1043	133	534	116
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	291	306	260	564	306	260	71	2291	974	174	2505	1065
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.04	0.62	0.62	0.10	0.68	0.68
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	62	54	3	480	116	136	38	739	1134	145	580	126
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.2	2.6	0.2	14.3	5.9	8.3	2.2	9.9	65.0	8.5	6.3	2.9
Cycle Q Clear(g_c), s	3.2	2.6	0.2	14.3	5.9	8.3	2.2	9.9	65.0	8.5	6.3	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	291	306	260	564	306	260	71	2291	974	174	2505	1065
V/C Ratio(X)	0.21	0.18	0.01	0.85	0.38	0.52	0.53	0.32	1.16	0.83	0.23	0.12
Avail Cap(c_a), veh/h	319	335	285	619	335	285	269	2291	974	185	2505	1065
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	37.5	36.5	42.4	38.9	39.9	49.2	9.4	19.8	46.3	6.4	5.9
Incr Delay (d2), s/veh	0.4	0.3	0.0	10.2	0.8	1.6	6.0	0.1	85.5	25.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	1.2	0.1	6.9	2.8	3.4	1.1	4.2	46.7	5.1	2.6	1.0
Lane Grp Delay (d), s/veh	38.1	37.8	36.5	52.6	39.7	41.5	55.2	9.5	105.4	72.1	6.4	5.9
Lane Grp LOS	D	D	D	D	D	D	E	A	F	E	A	A
Approach Vol, veh/h		119			732			1911			851	
Approach Delay, s/veh		37.9			48.5			67.3			17.6	
Approach LOS		D			D			E			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		21.3			21.3		8.3	69.0		14.4		75.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0			19.0		16.0	65.0		11.0		60.0
Max Q Clear Time (g_c+I1), s		5.2			16.3		4.2	67.0		10.5		8.3
Green Ext Time (p_c), s		2.9			1.0		0.0	0.0		0.0		29.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				50.8								
HCM 2010 LOS				D								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	99	26	44	1659	809	170
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	150	134	61	2946	2086	439
Arrive On Green	0.09	0.09	0.03	0.80	0.71	0.71
Sat Flow, veh/h	1757	1568	1757	3689	2957	622
Grp Volume(v), veh/h	108	28	48	1803	548	516
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1735
Q Serve(g_s), s	4.1	1.1	1.9	13.3	8.6	8.6
Cycle Q Clear(g_c), s	4.1	1.1	1.9	13.3	8.6	8.6
Prop In Lane	1.00	1.00	1.00			0.36
Lane Grp Cap(c), veh/h	150	134	61	2946	1301	1224
V/C Ratio(X)	0.72	0.21	0.78	0.61	0.42	0.42
Avail Cap(c_a), veh/h	408	364	153	3536	1500	1411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	29.3	33.0	2.7	4.3	4.3
Incr Delay (d2), s/veh	6.3	0.8	19.1	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	0.0	1.1	3.3	3.0	2.8
Lane Grp Delay (d), s/veh	37.0	30.1	52.1	3.0	4.5	4.5
Lane Grp LOS	D	C	D	A	A	A
Approach Vol, veh/h	136			1851	1064	
Approach Delay, s/veh	35.6			4.2	4.5	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			6.4	59.0	52.6	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			6.0	66.0	56.0	
Max Q Clear Time (g_c+I1), s			3.9	15.3	10.6	
Green Ext Time (p_c), s			0.0	39.7	36.4	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			5.7			
HCM 2010 LOS			A			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Baseline +Project PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	95	1087	177	175	294	111	83	253	272	240	419	125
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	131	1288	547	217	1469	624	115	664	282	294	771	229
Arrive On Green	0.07	0.35	0.35	0.12	0.40	0.40	0.07	0.18	0.18	0.17	0.28	0.28
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2735	811
Grp Volume(v), veh/h	103	1182	192	190	320	121	90	275	296	261	306	285
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1702
Q Serve(g_s), s	5.1	27.3	8.1	9.5	5.1	4.5	4.5	5.9	16.0	12.9	12.7	12.9
Cycle Q Clear(g_c), s	5.1	27.3	8.1	9.5	5.1	4.5	4.5	5.9	16.0	12.9	12.7	12.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	131	1288	547	217	1469	624	115	664	282	294	520	480
V/C Ratio(X)	0.79	0.92	0.35	0.87	0.22	0.19	0.78	0.41	1.05	0.89	0.59	0.59
Avail Cap(c_a), veh/h	217	1327	564	217	1469	624	198	664	282	296	520	480
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	27.7	21.5	38.3	17.6	17.5	40.9	32.3	36.5	36.2	27.5	27.6
Incr Delay (d2), s/veh	9.9	10.2	0.4	30.2	0.1	0.1	10.9	0.4	67.1	25.8	1.7	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.6	14.1	3.1	6.0	2.3	1.7	2.4	2.7	11.5	7.8	6.0	5.7
Lane Grp Delay (d), s/veh	50.4	37.9	21.9	68.5	17.7	17.6	51.8	32.7	103.6	62.0	29.2	29.5
Lane Grp LOS	D	D	C	E	B	B	D	C	F	E	C	C
Approach Vol, veh/h		1477			631			661			852	
Approach Delay, s/veh		36.7			33.0			67.1			39.4	
Approach LOS		D			C			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.6	35.0		15.0	39.4		9.8	20.0		18.9	29.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	32.0		11.0	32.0		10.0	16.0		15.0	21.0	
Max Q Clear Time (g_c+I1), s	7.1	29.3		11.5	7.1		6.5	18.0		14.9	14.9	
Green Ext Time (p_c), s	0.1	1.7		0.0	13.9		0.1	0.0		0.0	3.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				42.2								
HCM 2010 LOS				D								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Baseline +Project PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	1073	28	22	605	94	16	39	8	144	76	87
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	99	1251	32	29	1215	1033	41	68	15	180	99	113
Arrive On Green	0.06	0.70	0.70	0.02	0.66	0.66	0.02	0.05	0.05	0.10	0.13	0.13
Sat Flow, veh/h	1757	1790	46	1757	1845	1568	1757	1473	316	1757	786	900
Grp Volume(v), veh/h	78	0	1196	24	658	102	17	0	51	157	0	178
Grp Sat Flow(s),veh/h/ln	1757	0	1837	1757	1845	1568	1757	0	1789	1757	0	1686
Q Serve(g_s), s	5.1	0.0	66.1	1.6	22.2	2.8	1.1	0.0	3.3	10.3	0.0	12.1
Cycle Q Clear(g_c), s	5.1	0.0	66.1	1.6	22.2	2.8	1.1	0.0	3.3	10.3	0.0	12.1
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	99	0	1283	29	1215	1033	41	0	83	180	0	211
V/C Ratio(X)	0.79	0.00	0.93	0.81	0.54	0.10	0.42	0.00	0.62	0.87	0.00	0.84
Avail Cap(c_a), veh/h	180	0	1283	60	1215	1033	75	0	244	180	0	330
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.25	0.00	0.25	0.68	0.68	0.68	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.7	0.0	15.3	57.5	10.6	7.3	56.6	0.0	55.0	52.0	0.0	50.2
Incr Delay (d2), s/veh	3.5	0.0	4.3	29.3	1.2	0.1	6.7	0.0	7.3	34.7	0.0	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	0.0	27.1	1.0	9.4	1.0	0.6	0.0	1.7	6.4	0.0	5.9
Lane Grp Delay (d), s/veh	58.2	0.0	19.6	86.8	11.8	7.4	63.3	0.0	62.2	86.7	0.0	61.1
Lane Grp LOS	E		B	F	B	A	E		E	F		E
Approach Vol, veh/h		1274			784			68				335
Approach Delay, s/veh		22.0			13.5			62.5				73.1
Approach LOS		C			B			E				E
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	10.6	86.0		6.0	81.3		6.7	9.4		16.0		18.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	82.0		4.0	74.0		5.0	16.0		12.0		23.0
Max Q Clear Time (g_c+I1), s	7.1	68.1		3.6	24.2		3.1	5.3		12.3		14.1
Green Ext Time (p_c), s	0.1	8.5		0.0	5.6		0.0	0.1		0.0		0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave























Baseline +Project PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	29	659	23	606	260	82	40	24	238	71	59	9
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	47	1357	47	1033	2433	1034	328	344	292	328	290	45
Arrive On Green	0.03	0.38	0.38	0.30	0.66	0.66	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3544	124	3408	3689	1568	1757	1845	1568	1757	1558	243
Grp Volume(v), veh/h	32	373	368	659	283	89	43	26	259	77	0	74
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.7	14.7	14.7	15.7	2.7	1.9	1.9	1.1	15.1	3.5	0.0	3.3
Cycle Q Clear(g_c), s	1.7	14.7	14.7	15.7	2.7	1.9	1.9	1.1	15.1	3.5	0.0	3.3
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	47	706	698	1033	2433	1034	328	344	292	328	0	336
V/C Ratio(X)	0.69	0.53	0.53	0.64	0.12	0.09	0.13	0.08	0.89	0.24	0.00	0.22
Avail Cap(c_a), veh/h	112	706	698	1160	2433	1034	374	392	334	328	0	336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.4	22.4	22.4	28.3	5.9	5.8	31.9	31.6	37.3	32.5	0.0	32.5
Incr Delay (d2), s/veh	16.3	2.8	2.8	0.8	0.1	0.1	0.2	0.1	21.8	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	7.3	7.2	6.8	1.1	0.7	0.9	0.5	7.7	1.6	0.0	1.5
Lane Grp Delay (d), s/veh	61.7	25.2	25.3	29.1	6.0	5.9	32.1	31.7	59.1	32.9	0.0	32.8
Lane Grp LOS	E	C	C	C	A	A	C	C	E	C		C
Approach Vol, veh/h		773			1031			328				151
Approach Delay, s/veh		26.8			20.8			53.4				32.8
Approach LOS		C			C			D				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.5	40.0		32.5	66.0			21.5				21.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	36.0		32.0	62.0			20.0				16.0
Max Q Clear Time (g_c+I1), s	3.7	16.7		17.7	4.7			17.1				5.5
Green Ext Time (p_c), s	0.7	4.6		2.3	2.3			0.4				1.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.3								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd

Baseline +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	304	288	349	86	159	17	454	564	209	17	179	262
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	451	544	463	172	701	72	859	1078	399	29	679	289
Arrive On Green	0.13	0.30	0.30	0.05	0.21	0.21	0.25	0.42	0.42	0.02	0.18	0.18
Sat Flow, veh/h	3408	1845	1568	3408	3291	338	3408	2571	951	1757	3689	1568
Grp Volume(v), veh/h	330	313	379	93	96	95	493	440	400	18	195	285
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1785	1704	1845	1677	1757	1845	1568
Q Serve(g_s), s	6.8	10.6	16.5	2.0	3.2	3.2	9.3	13.3	13.3	0.7	3.3	9.3
Cycle Q Clear(g_c), s	6.8	10.6	16.5	2.0	3.2	3.2	9.3	13.3	13.3	0.7	3.3	9.3
Prop In Lane	1.00		1.00	1.00		0.19	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	451	544	463	172	393	380	859	774	703	29	679	289
V/C Ratio(X)	0.73	0.57	0.82	0.54	0.24	0.25	0.57	0.57	0.57	0.61	0.29	0.99
Avail Cap(c_a), veh/h	931	932	792	326	604	585	1349	1385	1259	120	1561	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	21.9	24.0	34.0	23.9	24.0	24.0	16.2	16.2	35.8	25.7	14.8
Incr Delay (d2), s/veh	2.3	1.0	3.6	2.7	0.3	0.3	0.6	0.7	0.7	18.8	0.2	21.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.0	4.8	6.6	0.9	1.4	1.4	3.9	5.9	5.4	0.5	1.5	5.1
Lane Grp Delay (d), s/veh	32.8	22.9	27.6	36.6	24.2	24.3	24.6	16.9	16.9	54.6	26.0	36.5
Lane Grp LOS	C	C	C	D	C	C	C	B	B	D	C	D
Approach Vol, veh/h		1022			284			1333			498	
Approach Delay, s/veh		27.9			28.3			19.7			33.0	
Approach LOS		C			C			B			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.7	25.6		7.7	19.6		22.5	34.7		5.2	17.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	20.0	37.0		7.0	24.0		29.0	55.0		5.0	31.0	
Max Q Clear Time (g_c+I1), s	8.8	18.5		4.0	5.2		11.3	15.3		2.7	11.3	
Green Ext Time (p_c), s	0.9	3.2		0.4	1.3		7.2	9.3		0.0	2.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.3								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

























Baseline +Project PM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	781	0	478	0	0	0	0	661	369	127	489	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1311	0	603				0	1502	639	339	2003	0
Arrive On Green	0.38	0.00	0.38				0.00	0.41	0.41	0.10	0.54	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	849	0	520				0	718	401	138	532	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	22.6	0.0	33.7				0.0	15.8	22.5	4.2	8.5	0.0
Cycle Q Clear(g_c), s	22.6	0.0	33.7				0.0	15.8	22.5	4.2	8.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1311	0	603				0	1502	639	339	2003	0
V/C Ratio(X)	0.65	0.00	0.86				0.00	0.48	0.63	0.41	0.27	0.00
Avail Cap(c_a), veh/h	1604	0	738				0	1502	639	339	2003	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.90	0.90	0.00
Uniform Delay (d), s/veh	27.9	0.0	31.3				0.0	24.1	26.1	46.7	13.5	0.0
Incr Delay (d2), s/veh	0.7	0.0	8.8				0.0	1.1	4.6	0.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.7	0.0	14.6				0.0	7.5	9.6	1.9	3.8	0.0
Lane Grp Delay (d), s/veh	28.5	0.0	40.1				0.0	25.2	30.7	47.4	13.8	0.0
Lane Grp LOS	C		D					C	C	D	B	
Approach Vol, veh/h		1369						1119			670	
Approach Delay, s/veh		32.9						27.2			20.7	
Approach LOS		C						C			C	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		46.5						49.0		15.0	64.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		52.0						45.0		11.0	60.0	
Max Q Clear Time (g_c+I1), s		35.7						24.5		6.2	10.5	
Green Ext Time (p_c), s		6.8						6.6		1.7	4.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.3									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd













Baseline +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	518	1067	253	209	393	135	216	454	149	238	398	121
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	668	1547	657	298	1145	487	273	854	363	337	646	274
Arrive On Green	0.20	0.42	0.42	0.09	0.31	0.31	0.16	0.23	0.23	0.10	0.17	0.17
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	563	1160	275	227	427	147	235	493	162	259	433	132
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	15.6	26.1	12.1	6.4	8.8	7.0	12.8	11.6	8.7	7.3	10.8	7.4
Cycle Q Clear(g_c), s	15.6	26.1	12.1	6.4	8.8	7.0	12.8	11.6	8.7	7.3	10.8	7.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	668	1547	657	298	1145	487	273	854	363	337	646	274
V/C Ratio(X)	0.84	0.75	0.42	0.76	0.37	0.30	0.86	0.58	0.45	0.77	0.67	0.48
Avail Cap(c_a), veh/h	974	1807	768	383	1167	496	430	1129	480	522	790	336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	24.1	20.0	43.7	26.3	25.7	40.4	33.4	32.3	43.1	37.8	36.4
Incr Delay (d2), s/veh	4.6	1.5	0.4	6.6	0.2	0.3	10.2	0.6	0.9	3.7	1.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.1	11.9	4.7	3.0	4.1	2.8	6.5	5.5	3.5	3.3	5.1	3.0
Lane Grp Delay (d), s/veh	42.5	25.6	20.5	50.4	26.6	26.1	50.6	34.0	33.2	46.8	39.4	37.7
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	D	D
Approach Vol, veh/h		1998			801			890			824	
Approach Delay, s/veh		29.7			33.2			38.2			41.5	
Approach LOS		C			C			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	23.2	45.1		12.6	34.4		19.2	26.7		13.7	21.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	48.0		11.0	31.0		24.0	30.0		15.0	21.0	
Max Q Clear Time (g_c+I1), s	17.6	28.1		8.4	10.8		14.8	13.6		9.3	12.8	
Green Ext Time (p_c), s	1.6	13.0		0.2	13.1		0.5	6.7		0.4	4.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				34.1								
HCM 2010 LOS				C								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

Baseline +Project PM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	139	1027	506	262	437	265
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	177	1204	960	816	501	447
Arrive On Green	0.10	0.65	0.52	0.52	0.29	0.29
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	151	1116	550	285	475	288
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	10.9	68.5	26.2	13.7	34.1	20.7
Cycle Q Clear(g_c), s	10.9	68.5	26.2	13.7	34.1	20.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	177	1204	960	816	501	447
V/C Ratio(X)	0.85	0.93	0.57	0.35	0.95	0.64
Avail Cap(c_a), veh/h	259	1204	960	816	519	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.79	0.79	1.00	1.00
Uniform Delay (d), s/veh	56.9	19.7	21.1	18.1	45.1	40.3
Incr Delay (d2), s/veh	10.7	9.2	2.0	0.9	26.6	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.4	31.3	12.0	5.3	19.0	0.4
Lane Grp Delay (d), s/veh	67.6	28.9	23.1	19.0	71.6	43.2
Lane Grp LOS	E	C	C	B	E	D
Approach Vol, veh/h		1267	835		763	
Approach Delay, s/veh		33.5	21.7		60.9	
Approach LOS		C	C		E	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	17.0	88.0	71.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	19.0	84.0	61.0			
Max Q Clear Time (g_c+I1), s	12.9	70.5	28.2			
Green Ext Time (p_c), s	0.2	10.2	19.1			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			37.4			
HCM 2010 LOS			D			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
13: Ventura Dr & Buchanan Rd

Baseline +Project PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	1328	168	39	677	11	118	21	56	182	95	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	53	1341	1140	53	1316	21	162	64	169	184	219	36
Arrive On Green	0.03	0.73	0.73	0.03	0.73	0.73	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1757	1845	1568	1757	1810	30	1254	448	1187	1296	1545	255
Grp Volume(v), veh/h	7	1443	183	42	0	748	128	0	84	198	0	120
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1839	1254	0	1635	1296	0	1800
Q Serve(g_s), s	0.5	87.0	4.3	2.8	0.0	22.4	9.7	0.0	5.6	11.4	0.0	7.3
Cycle Q Clear(g_c), s	0.5	87.0	4.3	2.8	0.0	22.4	17.0	0.0	5.6	17.0	0.0	7.3
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.73	1.00		0.14
Lane Grp Cap(c), veh/h	53	1341	1140	53	0	1338	162	0	232	184	0	256
V/C Ratio(X)	0.13	1.08	0.16	0.79	0.00	0.56	0.79	0.00	0.36	1.08	0.00	0.47
Avail Cap(c_a), veh/h	59	1341	1140	59	0	1338	162	0	232	184	0	256
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.24	0.24	0.24	0.87	0.00	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.5	16.3	5.0	57.6	0.0	7.5	56.0	0.0	46.4	56.0	0.0	47.2
Incr Delay (d2), s/veh	0.3	38.2	0.1	41.4	0.0	1.5	23.0	0.0	0.9	87.9	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	46.7	1.4	1.9	0.0	8.9	5.0	0.0	2.4	10.2	0.0	3.5
Lane Grp Delay (d), s/veh	56.7	54.6	5.1	99.0	0.0	9.0	79.0	0.0	47.4	143.8	0.0	48.5
Lane Grp LOS	E	F	A	F		A	E		D	F		D
Approach Vol, veh/h		1633			790			212				318
Approach Delay, s/veh		49.0			13.8			66.5				107.9
Approach LOS		D			B			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	7.6	91.0		7.6	91.0			21.0				21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	87.0		4.0	87.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	2.5	89.0		4.8	24.4			19.0				19.0
Green Ext Time (p_c), s	1.4	0.0		0.0	6.3			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				47.2								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 15: Tuscany Meadows Dr & Buchanan Rd






















Baseline +Project PM  
 3/14/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1543	77	94	766	45	55
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1485	1262	73	1622	95	85
Arrive On Green	0.80	0.80	0.08	1.00	0.05	0.05
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1677	84	102	833	49	60
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	97.0	1.3	5.0	0.0	3.3	4.5
Cycle Q Clear(g_c), s	97.0	1.3	5.0	0.0	3.3	4.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1485	1262	73	1622	95	85
V/C Ratio(X)	1.13	0.07	1.40	0.51	0.51	0.71
Avail Cap(c_a), veh/h	1485	1262	73	1622	233	208
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(l)	0.09	0.09	0.80	0.80	1.00	1.00
Uniform Delay (d), s/veh	11.8	2.4	55.3	0.0	55.5	56.1
Incr Delay (d2), s/veh	59.3	0.0	233.2	0.9	4.3	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	55.8	0.4	6.9	0.4	1.6	2.1
Lane Grp Delay (d), s/veh	71.0	2.4	288.5	0.9	59.7	66.3
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1761			935	109	
Approach Delay, s/veh	67.8			32.3	63.3	
Approach LOS	E			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	101.0		9.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	97.0		5.0	106.0		
Max Q Clear Time (g_c+I1), s	99.0		7.0	2.0		
Green Ext Time (p_c), s	0.0		0.0	83.6		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			55.8			
HCM 2010 LOS			E			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

Baseline +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	71	0	0	0	0	58	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	19	40	0	136	286	0	19	0	101	19	119	0
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	77	0	0	0	0	63	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	19	40	0	136	286	0	19	0	101	19	119	0
V/C Ratio(X)	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00
Avail Cap(c_a), veh/h	754	6330	0	5275	15824	0	754	0	4371	754	5143	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	6.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0	10.4	0.0	0.0	0.0
Lane Grp LOS	A						B					
Approach Vol, veh/h	0			77			63			0		
Approach Delay, s/veh	0.0			7.8			10.4			0.0		
Approach LOS				A			B					
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.7	4.7		0.0	4.6		0.0	4.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		28.0	40.0		4.0	26.0		4.0	26.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.4	0.0		0.0	2.4		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0		0.0	0.3		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				8.9								
HCM 2010 LOS				A								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 17: Proposed Apartments & Buchanan Rd

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1634	66	80	876	36	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1515	1288	59	1639	78	70
Arrive On Green	1.00	1.00	0.03	0.89	0.04	0.04
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1776	72	87	952	39	47
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	98.0	0.0	4.0	14.2	2.6	3.5
Cycle Q Clear(g_c), s	98.0	0.0	4.0	14.2	2.6	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1515	1288	59	1639	78	70
V/C Ratio(X)	1.17	0.06	1.48	0.58	0.50	0.67
Avail Cap(c_a), veh/h	1515	1288	59	1639	236	210
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	57.7	1.5	55.7	56.1
Incr Delay (d2), s/veh	78.2	0.0	285.8	1.5	4.8	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	32.9	0.0	6.5	3.3	1.3	1.6
Lane Grp Delay (d), s/veh	78.2	0.0	343.5	3.0	60.5	66.8
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1848			1039	86	
Approach Delay, s/veh	75.2			31.6	63.9	
Approach LOS	E			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	102.0		8.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	98.0		4.0	106.0		
Max Q Clear Time (g_c+I1), s	100.0		6.0	16.2		
Green Ext Time (p_c), s	0.0		0.0	9.2		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			59.6			
HCM 2010 LOS			E			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy













Baseline +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	348	128	240	202	65	23	409	518	122	25	772	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	698	378	321	698	267	94	790	2788	644	38	1896	415
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.39	1.00	1.00	0.02	0.43	0.43
Sat Flow, veh/h	3408	1845	1568	3408	1304	459	3408	4352	1005	1757	4400	964
Grp Volume(v), veh/h	378	139	261	220	0	96	445	475	221	27	702	322
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1764	1704	1845	1667	1757	1845	1675
Q Serve(g_s), s	9.0	5.9	14.4	5.0	0.0	4.1	9.3	0.0	0.0	1.4	12.1	12.2
Cycle Q Clear(g_c), s	9.0	5.9	14.4	5.0	0.0	4.1	9.3	0.0	0.0	1.4	12.1	12.2
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.60	1.00		0.58
Lane Grp Cap(c), veh/h	698	378	321	698	0	361	790	2364	1068	38	1590	722
V/C Ratio(X)	0.54	0.37	0.81	0.32	0.00	0.27	0.56	0.20	0.21	0.71	0.44	0.45
Avail Cap(c_a), veh/h	828	448	381	698	0	361	941	2364	1068	116	1590	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	30.9	34.3	30.6	0.0	30.3	24.2	0.0	0.0	44.0	18.1	18.1
Incr Delay (d2), s/veh	0.7	0.6	10.9	0.3	0.0	0.4	0.6	0.2	0.4	21.0	0.9	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.9	2.8	6.6	2.1	0.0	1.9	3.5	0.1	0.1	0.8	5.6	5.3
Lane Grp Delay (d), s/veh	32.8	31.5	45.2	30.8	0.0	30.7	24.8	0.2	0.4	65.0	19.0	20.1
Lane Grp LOS	C	C	D	C		C	C	A	A	E	B	C
Approach Vol, veh/h		778			316			1141			1051	
Approach Delay, s/veh		36.8			30.8			9.8			20.5	
Approach LOS		D			C			A			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		22.5			22.5		25.0	62.0		6.0		43.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		22.0			18.0		25.0	58.0		6.0		39.0
Max Q Clear Time (g_c+I1), s		16.4			7.0		11.3	2.0		3.4		14.2
Green Ext Time (p_c), s		2.2			3.6		5.4	7.7		0.0		7.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Baseline +Project PM  
 3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	349	444	297	606	925	285
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	1148	528	398	3273	2429	688
Arrive On Green	0.34	0.34	0.16	0.79	0.44	0.44
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	379	483	323	659	1005	310
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	9.3	32.9	10.2	3.4	13.9	15.4
Cycle Q Clear(g_c), s	9.3	32.9	10.2	3.4	13.9	15.4
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1148	528	398	3273	2429	688
V/C Ratio(X)	0.33	0.91	0.81	0.20	0.41	0.45
Avail Cap(c_a), veh/h	1405	646	672	3273	2429	688
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.82	0.82
Uniform Delay (d), s/veh	27.6	35.5	45.9	5.2	21.5	21.9
Incr Delay (d2), s/veh	0.2	15.7	3.8	0.1	0.4	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.0	2.3	4.6	1.3	6.4	6.3
Lane Grp Delay (d), s/veh	27.8	51.1	49.8	5.4	21.9	23.6
Lane Grp LOS	C	D	D	A	C	C
Approach Vol, veh/h	862			982	1315	
Approach Delay, s/veh	40.9			20.0	22.3	
Approach LOS	D			B	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			17.0	70.0	53.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			22.0	66.0	40.0	
Max Q Clear Time (g_c+I1), s			12.2	5.4	17.4	
Green Ext Time (p_c), s			0.8	22.4	14.0	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			26.6			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps
























Baseline +Project PM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	251	395	449	0	0	0	0	771	652	439	1015	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	892	483	820				0	2652	751	536	3711	0
Arrive On Green	0.26	0.26	0.26				0.00	0.64	0.64	0.16	0.67	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	273	429	488				0	838	709	477	1103	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.6	26.4	16.0				0.0	8.1	48.5	16.2	9.7	0.0
Cycle Q Clear(g_c), s	7.6	26.4	16.0				0.0	8.1	48.5	16.2	9.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	892	483	820				0	2652	751	536	3711	0
V/C Ratio(X)	0.31	0.89	0.59				0.00	0.32	0.94	0.89	0.30	0.00
Avail Cap(c_a), veh/h	955	517	878				0	2652	751	579	3711	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.75	0.75	0.87	0.87	0.00
Uniform Delay (d), s/veh	34.9	41.9	38.0				0.0	12.6	19.9	48.6	8.0	0.0
Incr Delay (d2), s/veh	0.2	16.5	1.0				0.0	0.2	17.6	13.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	14.7	6.5				0.0	3.4	20.3	8.2	4.0	0.0
Lane Grp Delay (d), s/veh	35.1	58.3	39.0				0.0	12.8	37.5	62.0	8.2	0.0
Lane Grp LOS	D	E	D					B	D	E	A	
Approach Vol, veh/h		1190						1547			1580	
Approach Delay, s/veh		45.1						24.2			24.4	
Approach LOS		D						C			C	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		34.8						60.5		22.5	83.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		33.0						55.0		20.0	79.0	
Max Q Clear Time (g_c+I1), s		28.4						50.5		18.2	11.7	
Green Ext Time (p_c), s		2.5						4.2		0.4	36.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			30.0									
HCM 2010 LOS			C									
<b>Notes</b>												





























HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

Baseline +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	492	431	36	49	131	375	52	703	25	392	727	270
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1162	573	48	599	629	534	69	1889	67	528	1738	739
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.01	0.12	0.12	0.21	0.63	0.63
Sat Flow, veh/h	3408	1680	140	1757	1845	1568	1757	5314	187	3408	3689	1568
Grp Volume(v), veh/h	535	0	507	53	142	408	57	530	261	426	790	293
Grp Sat Flow(s),veh/h/ln	1704	0	1820	1757	1845	1568	1757	1845	1812	1704	1845	1568
Q Serve(g_s), s	9.9	0.0	20.5	1.7	4.4	18.7	2.6	10.7	10.8	9.6	9.0	7.5
Cycle Q Clear(g_c), s	9.9	0.0	20.5	1.7	4.4	18.7	2.6	10.7	10.8	9.6	9.0	7.5
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	1162	0	620	599	629	534	69	1312	644	528	1738	739
V/C Ratio(X)	0.46	0.00	0.82	0.09	0.23	0.76	0.83	0.40	0.41	0.81	0.45	0.40
Avail Cap(c_a), veh/h	1690	0	903	599	629	534	131	1312	644	761	1738	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	0.96	0.96	0.96	0.97	0.97	0.97	0.92	0.92	0.92
Uniform Delay (d), s/veh	20.8	0.0	24.3	18.1	19.0	23.7	39.5	27.7	27.7	30.9	9.6	9.4
Incr Delay (d2), s/veh	0.3	0.0	3.9	0.1	0.2	6.2	20.6	0.9	1.8	3.9	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.1	0.0	9.8	0.7	2.0	8.0	1.6	5.5	5.6	4.2	3.4	2.7
Lane Grp Delay (d), s/veh	21.1	0.0	28.2	18.1	19.2	29.9	60.1	28.6	29.5	34.8	10.4	10.8
Lane Grp LOS	C		C	B	B	C	E	C	C	C	B	B
Approach Vol, veh/h		1042			603			848			1509	
Approach Delay, s/veh		24.5			26.3			31.0			17.4	
Approach LOS		C			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		31.5			31.5		7.2	32.7		16.5		42.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		40.0			20.0		6.0	26.0		18.0		38.0
Max Q Clear Time (g_c+I1), s		22.5			20.7		4.6	12.8		11.6		11.0
Green Ext Time (p_c), s		5.0			0.0		0.0	4.4		0.9		7.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.5								
HCM 2010 LOS				C								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Baseline +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	377	458	752	47	222	118	310	324	31	241	670	379
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	440	1334	567	65	274	233	367	958	92	296	918	390
Arrive On Green	0.25	0.36	0.00	0.04	0.15	0.00	0.21	0.29	0.29	0.17	0.25	0.25
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3315	318	1757	3689	1568
Grp Volume(v), veh/h	410	498	0	51	241	0	337	195	191	262	728	352
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1789	1757	1845	1568
Q Serve(g_s), s	25.4	11.1	0.0	3.2	14.3	0.0	20.9	9.4	9.5	16.2	20.6	24.2
Cycle Q Clear(g_c), s	25.4	11.1	0.0	3.2	14.3	0.0	20.9	9.4	9.5	16.2	20.6	24.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	440	1334	567	65	274	233	367	533	517	296	918	390
V/C Ratio(X)	0.93	0.37	0.00	0.78	0.88	0.00	0.92	0.37	0.37	0.89	0.79	0.90
Avail Cap(c_a), veh/h	489	1334	567	142	298	253	410	533	517	442	961	408
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	26.2	0.0	53.2	46.5	0.0	43.1	31.5	31.5	45.3	39.1	40.5
Incr Delay (d2), s/veh	23.6	0.2	0.0	17.8	23.6	0.0	24.1	0.4	0.4	13.5	4.4	22.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	13.9	5.0	0.0	1.8	8.6	0.0	11.9	4.4	4.4	8.5	10.2	12.1
Lane Grp Delay (d), s/veh	64.4	26.4	0.0	70.9	70.1	0.0	67.2	31.9	31.9	58.7	43.6	62.7
Lane Grp LOS	E	C		E	E		E	C	C	E	D	E
Approach Vol, veh/h		908			292			723			1342	
Approach Delay, s/veh		43.6			70.2			48.4			51.6	
Approach LOS		D			E			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	31.9	44.3		8.1	20.5		27.3	36.2		22.8	31.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	31.0	40.0		9.0	18.0		26.0	27.0		28.0	29.0	
Max Q Clear Time (g_c+I1), s	27.4	13.1		5.2	16.3		22.9	11.5		18.2	26.2	
Green Ext Time (p_c), s	0.5	4.8		0.0	0.3		0.3	7.8		0.5	1.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				50.3								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 23: Sequoia Dr & Somersville Rd

Baseline +Project PM  
 3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	143	26	39	522	1226	243
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	212	189	310	2749	2749	1168
Arrive On Green	0.12	0.12	0.75	0.75	0.75	0.75
Sat Flow, veh/h	1757	1568	314	3689	3689	1568
Grp Volume(v), veh/h	155	28	42	567	1333	264
Grp Sat Flow(s),veh/h/ln	1757	1568	314	1845	1845	1568
Q Serve(g_s), s	5.1	1.0	3.7	2.8	8.6	3.1
Cycle Q Clear(g_c), s	5.1	1.0	12.3	2.8	8.6	3.1
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	212	189	310	2749	2749	1168
V/C Ratio(X)	0.73	0.15	0.14	0.21	0.48	0.23
Avail Cap(c_a), veh/h	826	737	519	5203	5203	2211
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	23.4	5.5	2.3	3.0	2.3
Incr Delay (d2), s/veh	4.8	0.4	0.2	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	0.4	0.2	0.8	2.6	0.8
Lane Grp Delay (d), s/veh	30.1	23.8	5.7	2.3	3.2	2.4
Lane Grp LOS	C	C	A	A	A	A
Approach Vol, veh/h	183			609	1597	
Approach Delay, s/veh	29.1			2.6	3.0	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				48.4	48.4	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				84.0	84.0	
Max Q Clear Time (g_c+I1), s				14.3	10.6	
Green Ext Time (p_c), s				30.1	30.7	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			4.9			
HCM 2010 LOS			A			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

Baseline +Project PM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	69	16	0	7	13	365	0	6	4	1151	5	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	96	296	0	15	127	54	4	75	43	1646	1182	2010
Arrive On Green	0.05	0.08	0.00	0.01	0.03	0.00	0.00	0.07	0.07	0.48	0.64	0.64
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	1103	630	3408	1845	3136
Grp Volume(v), veh/h	75	17	0	8	14	0	0	0	11	1251	5	98
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1733	1704	1845	1568
Q Serve(g_s), s	1.9	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.3	13.3	0.0	0.2
Cycle Q Clear(g_c), s	1.9	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.3	13.3	0.0	0.2
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	96	296	0	15	127	54	4	0	118	1646	1182	2010
V/C Ratio(X)	0.79	0.06	0.00	0.54	0.11	0.00	0.00	0.00	0.09	0.76	0.00	0.05
Avail Cap(c_a), veh/h	396	2409	0	158	1911	812	158	0	625	4221	2783	4731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	18.9	0.0	21.9	20.8	0.0	0.0	0.0	19.4	9.4	2.9	0.4
Incr Delay (d2), s/veh	13.1	0.1	0.0	27.0	0.4	0.0	0.0	0.0	0.3	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.1	4.5	0.0	0.1
Lane Grp Delay (d), s/veh	33.9	18.9	0.0	48.9	21.2	0.0	0.0	0.0	19.7	10.1	2.9	0.4
Lane Grp LOS	C	B		D	C				B	B	A	A
Approach Vol, veh/h		92			22			11			1354	
Approach Delay, s/veh		31.1			31.2			19.7			9.4	
Approach LOS		C			C			B			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	6.4	7.6		4.4	5.5		0.0	7.0		25.4	32.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	29.0		4.0	23.0		4.0	16.0		55.0	67.0	
Max Q Clear Time (g_c+I1), s	3.9	2.2		2.2	2.2		0.0	2.3		15.3	2.2	
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0		0.0	0.3		6.1	0.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				11.1								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 25: Buchanan Rd & Delta Fair Blvd




















Baseline +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	403	149	91	230	73	82	251	25	253	414	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	456	996	365	332	1046	323	396	790	78	521	882	749
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1037	2578	945	808	2707	835	884	1652	163	1064	1845	1568
Grp Volume(v), veh/h	71	312	288	99	168	161	89	0	300	275	450	52
Grp Sat Flow(s),veh/h/ln	1037	1845	1678	808	1845	1697	884	0	1816	1064	1845	1568
Q Serve(g_s), s	2.9	7.4	7.5	6.1	3.6	3.8	4.6	0.0	6.1	12.8	9.9	1.1
Cycle Q Clear(g_c), s	6.7	7.4	7.5	13.6	3.6	3.8	14.5	0.0	6.1	18.9	9.9	1.1
Prop In Lane	1.00		0.56	1.00		0.49	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	456	713	648	332	713	656	396	0	868	521	882	749
V/C Ratio(X)	0.16	0.44	0.44	0.30	0.24	0.24	0.22	0.00	0.35	0.53	0.51	0.07
Avail Cap(c_a), veh/h	847	1409	1281	636	1409	1296	978	0	2065	1222	2097	1783
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	13.4	13.4	18.4	12.2	12.3	15.6	0.0	9.6	15.5	10.6	8.3
Incr Delay (d2), s/veh	0.2	0.4	0.5	0.5	0.2	0.2	0.3	0.0	0.2	0.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	3.2	3.0	1.2	1.6	1.5	0.9	0.0	2.4	3.2	4.0	0.4
Lane Grp Delay (d), s/veh	14.7	13.8	13.9	18.9	12.4	12.4	15.9	0.0	9.9	16.4	11.1	8.3
Lane Grp LOS	B	B	B	B	B	B	B		A	B	B	A
Approach Vol, veh/h		671			428			389			777	
Approach Delay, s/veh		13.9			13.9			11.2			12.8	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		26.8			26.8			32.2			32.2	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		45.0			45.0			67.0			67.0	
Max Q Clear Time (g_c+I1), s		9.5			15.6			16.5			20.9	
Green Ext Time (p_c), s		7.4			7.2			7.3			7.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				13.1								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd
























Baseline +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	106	1065	7	25	586	113	4	17	7	225	19	123
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	149	1918	13	43	1394	269	93	286	112	441	53	339
Arrive On Green	0.08	0.52	0.52	0.02	0.46	0.46	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1757	3660	25	1757	3007	580	92	1167	458	1366	217	1384
Grp Volume(v), veh/h	115	584	582	27	390	370	30	0	0	245	0	155
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1742	1716	0	0	1366	0	1600
Q Serve(g_s), s	3.7	12.8	12.8	0.9	8.4	8.4	0.0	0.0	0.0	9.8	0.0	4.7
Cycle Q Clear(g_c), s	3.7	12.8	12.8	0.9	8.4	8.4	0.8	0.0	0.0	10.5	0.0	4.7
Prop In Lane	1.00		0.01	1.00		0.33	0.13		0.27	1.00		0.86
Lane Grp Cap(c), veh/h	149	967	965	43	855	808	491	0	0	441	0	392
V/C Ratio(X)	0.77	0.60	0.60	0.63	0.46	0.46	0.06	0.00	0.00	0.56	0.00	0.39
Avail Cap(c_a), veh/h	362	1332	1329	151	1110	1048	966	0	0	834	0	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	9.6	9.6	28.1	10.6	10.6	16.9	0.0	0.0	20.9	0.0	18.3
Incr Delay (d2), s/veh	8.1	0.6	0.6	14.4	0.4	0.4	0.1	0.0	0.0	1.1	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	5.0	5.0	0.5	3.5	3.3	0.3	0.0	0.0	3.3	0.0	1.8
Lane Grp Delay (d), s/veh	34.2	10.2	10.2	42.5	11.0	11.0	16.9	0.0	0.0	22.0	0.0	19.0
Lane Grp LOS	C	B	B	D	B	B	B			C		B
Approach Vol, veh/h		1281			787			30				400
Approach Delay, s/veh		12.4			12.1			16.9				20.8
Approach LOS		B			B			B				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	8.9	34.5		5.4	31.0			18.3				18.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	12.0	42.0		5.0	35.0			31.0				31.0
Max Q Clear Time (g_c+I1), s	5.7	14.8		2.9	10.4			2.8				12.5
Green Ext Time (p_c), s	0.1	15.7		0.0	14.8			1.9				1.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				13.7								
HCM 2010 LOS				B								
<b>Notes</b>												































HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

Baseline +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	148	123	1056	12	60	70	723	770	9	73	1165	239
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	1	1	0	2	2	1	1	3	0
Cap, veh/h	318	334	1411	318	140	164	917	2307	981	102	1847	379
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.27	0.63	0.63	0.06	0.41	0.41
Sat Flow, veh/h	1757	1845	3136	1757	777	908	3408	3689	1568	1757	4457	915
Grp Volume(v), veh/h	161	134	1148	13	0	141	786	837	10	79	1048	478
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1684	1704	1845	1568	1757	1845	1683
Q Serve(g_s), s	7.3	5.7	16.0	0.5	0.0	6.6	19.4	9.7	0.2	3.9	20.5	20.6
Cycle Q Clear(g_c), s	7.3	5.7	16.0	0.5	0.0	6.6	19.4	9.7	0.2	3.9	20.5	20.6
Prop In Lane	1.00		1.00	1.00		0.54	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	318	334	1411	318	0	305	917	2307	981	102	1529	697
V/C Ratio(X)	0.51	0.40	0.81	0.04	0.00	0.46	0.86	0.36	0.01	0.77	0.69	0.69
Avail Cap(c_a), veh/h	318	334	1411	318	0	305	1233	2503	1064	238	1668	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	32.0	21.1	29.9	0.0	32.4	30.7	8.0	6.2	41.1	21.2	21.2
Incr Delay (d2), s/veh	1.3	0.8	3.8	0.1	0.0	1.1	4.7	0.1	0.0	11.8	1.1	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	2.7	11.2	0.2	0.0	2.9	8.8	4.0	0.1	2.1	9.2	8.7
Lane Grp Delay (d), s/veh	34.0	32.8	24.9	29.9	0.0	33.5	35.4	8.1	6.2	52.9	22.2	23.5
Lane Grp LOS	C	C	C	C		C	D	A	A	D	C	C
Approach Vol, veh/h		1443			154			1633			1605	
Approach Delay, s/veh		26.6			33.2			21.3			24.1	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		20.0			20.0		27.8	59.3		9.1		40.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		32.0	60.0		12.0		40.0
Max Q Clear Time (g_c+I1), s		18.0			8.6		21.4	11.7		5.9		22.6
Green Ext Time (p_c), s		0.0			4.4		2.4	29.7		0.1		14.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				24.2								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 28: Kirker Pass Rd & Myrtle Dr

Baseline +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 	 		  	 
Volume (veh/h)	51	0	43	2	0	1	50	1973	3	0	683	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	96	0	85	270	100	85	68	3074	1306	2	4021	54
Arrive On Green	0.05	0.00	0.05	0.05	0.00	0.05	0.04	0.83	0.83	0.00	0.74	0.74
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5448	73
Grp Volume(v), veh/h	55	0	47	2	0	1	54	2145	3	0	502	250
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1832
Q Serve(g_s), s	2.2	0.0	2.1	0.0	0.0	0.0	2.2	16.5	0.0	0.0	2.9	2.9
Cycle Q Clear(g_c), s	2.2	0.0	2.1	0.0	0.0	0.0	2.2	16.5	0.0	0.0	2.9	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	96	0	85	270	100	85	68	3074	1306	2	2723	1352
V/C Ratio(X)	0.58	0.00	0.55	0.01	0.00	0.01	0.79	0.70	0.00	0.00	0.18	0.18
Avail Cap(c_a), veh/h	395	0	353	1115	415	353	222	3527	1499	99	3268	1623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	0.0	32.8	31.8	0.0	31.8	33.9	2.4	1.0	0.0	2.8	2.8
Incr Delay (d2), s/veh	5.4	0.0	5.4	0.0	0.0	0.1	18.4	0.5	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.0	0.9	0.0	0.0	0.0	1.3	3.5	0.0	0.0	0.9	0.9
Lane Grp Delay (d), s/veh	38.2	0.0	38.2	31.8	0.0	31.9	52.3	2.9	1.0	0.0	2.9	2.9
Lane Grp LOS	D		D	C		C	D	A	A		A	A
Approach Vol, veh/h		102			3			2202			752	
Approach Delay, s/veh		38.2			31.8			4.1			2.9	
Approach LOS		D			C			A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		7.9			7.9		6.8	63.3		0.0		56.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		9.0	68.0		4.0		63.0
Max Q Clear Time (g_c+I1), s		4.2			2.0		4.2	18.5		0.0		4.9
Green Ext Time (p_c), s		0.3			0.3		0.0	40.8		0.0		46.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				5.0								
HCM 2010 LOS				A								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Baseline +Project PM























3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	292	299	162	203	131	42	146	1361	363	58	489	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	354	419	222	256	472	201	192	1974	523	81	1957	239
Arrive On Green	0.20	0.18	0.18	0.15	0.13	0.13	0.11	0.47	0.47	0.05	0.40	0.40
Sat Flow, veh/h	1757	2273	1204	1757	3689	1568	1757	4219	1118	1757	4838	591
Grp Volume(v), veh/h	317	262	239	221	142	46	159	1292	582	63	404	194
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1647	1757	1845	1740
Q Serve(g_s), s	18.0	13.8	14.3	12.6	3.6	2.7	9.1	29.3	29.7	3.6	7.5	7.6
Cycle Q Clear(g_c), s	18.0	13.8	14.3	12.6	3.6	2.7	9.1	29.3	29.7	3.6	7.5	7.6
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.68	1.00		0.34
Lane Grp Cap(c), veh/h	354	340	301	256	472	201	192	1726	771	81	1492	704
V/C Ratio(X)	0.89	0.77	0.79	0.86	0.30	0.23	0.83	0.75	0.76	0.78	0.27	0.28
Avail Cap(c_a), veh/h	498	433	383	361	577	245	327	1877	838	120	1492	704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	39.7	39.8	42.7	40.4	40.1	44.6	22.3	22.4	48.3	20.4	20.4
Incr Delay (d2), s/veh	14.2	6.5	8.6	14.3	0.4	0.6	8.7	1.6	3.6	17.1	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.4	7.1	6.7	6.7	1.7	1.1	4.6	13.5	12.7	2.0	3.4	3.3
Lane Grp Delay (d), s/veh	53.9	46.1	48.5	57.0	40.8	40.6	53.3	23.8	26.0	65.4	20.5	20.6
Lane Grp LOS	D	D	D	E	D	D	D	C	C	E	C	C
Approach Vol, veh/h	818				409			2033			661	
Approach Delay, s/veh	49.8				49.5			26.8			24.8	
Approach LOS	D				D			C			C	
<b>Timer</b>												
Assigned Phs	7	4			3	8			5	2	1	6
Phs Duration (G+Y+Rc), s	24.6	22.8			18.9	17.1			15.2	51.8	8.7	45.4
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0			4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	29.0	24.0			21.0	16.0			19.0	52.0	7.0	40.0
Max Q Clear Time (g_c+I1), s	20.0	16.3			14.6	5.6			11.1	31.7	5.6	9.6
Green Ext Time (p_c), s	0.7	2.5			0.3	3.1			0.2	16.1	0.0	22.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					33.6							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd

Baseline +Project PM

3/14/2014












												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	605	865	27	229	405	146	133	1521	543	256	425	214
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	743	1406	0	314	710	0	204	2271	643	340	2491	706
Arrive On Green	0.22	0.25	0.00	0.09	0.13	0.00	0.06	0.41	0.41	0.10	0.45	0.45
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	658	940	0	249	440	0	145	1653	590	278	462	233
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	20.8	17.0	0.0	8.0	8.4	0.0	4.7	28.0	39.6	8.9	5.6	10.7
Cycle Q Clear(g_c), s	20.8	17.0	0.0	8.0	8.4	0.0	4.7	28.0	39.6	8.9	5.6	10.7
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	743	1406	0	314	710	0	204	2271	643	340	2491	706
V/C Ratio(X)	0.89	0.67	0.00	0.79	0.62	0.00	0.71	0.73	0.92	0.82	0.19	0.33
Avail Cap(c_a), veh/h	887	1540	0	428	795	0	275	2285	647	398	2491	706
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	37.3	0.0	49.5	46.0	0.0	51.4	27.6	31.1	49.2	18.4	19.8
Incr Delay (d2), s/veh	9.4	1.0	0.0	7.0	1.2	0.0	5.4	1.2	18.0	11.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.1	8.1	0.0	3.8	4.1	0.0	2.2	13.1	18.6	4.5	2.6	4.1
Lane Grp Delay (d), s/veh	51.6	38.3	0.0	56.5	47.2	0.0	56.8	28.8	49.0	60.2	18.4	20.1
Lane Grp LOS	D	D		E	D		E	C	D	E	B	C
Approach Vol, veh/h		1598			689			2388			973	
Approach Delay, s/veh		43.8			50.6			35.5			30.7	
Approach LOS		D			D			D			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	28.3	32.3		14.3	18.3		10.7	49.7		15.1	54.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	29.0	31.0		14.0	16.0		9.0	46.0		13.0	50.0	
Max Q Clear Time (g_c+I1), s	22.8	19.0		10.0	10.4		6.7	41.6		10.9	12.7	
Green Ext Time (p_c), s	1.4	7.1		0.3	3.9		0.1	4.1		0.2	28.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.9								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	1499	13	29	841	35	18	0	28	37	0	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	37	2678	23	46	2597	108	178	0	111	174	0	111
Arrive On Green	0.02	0.73	0.73	0.03	0.74	0.74	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1757	3652	31	1757	3517	146	1367	0	1568	1361	0	1568
Grp Volume(v), veh/h	24	822	821	32	479	473	20	0	30	40	0	25
Grp Sat Flow(s),veh/h/ln	1757	1845	1839	1757	1845	1819	1367	0	1568	1361	0	1568
Q Serve(g_s), s	1.0	15.2	15.2	1.3	6.5	6.5	1.0	0.0	1.3	2.0	0.0	1.1
Cycle Q Clear(g_c), s	1.0	15.2	15.2	1.3	6.5	6.5	2.1	0.0	1.3	3.3	0.0	1.1
Prop In Lane	1.00		0.02	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	1352	1348	46	1362	1343	178	0	111	174	0	111
V/C Ratio(X)	0.64	0.61	0.61	0.69	0.35	0.35	0.11	0.00	0.27	0.23	0.00	0.22
Avail Cap(c_a), veh/h	149	2164	2158	199	2216	2185	410	0	377	404	0	377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.4	4.5	4.6	34.2	3.3	3.3	32.0	0.0	31.1	32.7	0.0	31.0
Incr Delay (d2), s/veh	16.9	0.4	0.4	16.7	0.2	0.2	0.3	0.0	1.3	0.7	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	4.3	4.3	0.8	1.8	1.8	0.3	0.0	0.5	0.7	0.0	0.4
Lane Grp Delay (d), s/veh	51.3	5.0	5.0	50.8	3.4	3.4	32.3	0.0	32.4	33.4	0.0	32.0
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		1667			984			50				65
Approach Delay, s/veh		5.7			5.0			32.4				32.9
Approach LOS		A			A			C				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.5	55.9		5.9	56.2			9.0				9.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	83.0		8.0	85.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	3.0	17.2		3.3	8.5			4.1				5.3
Green Ext Time (p_c), s	0.0	34.6		0.0	37.0			0.3				0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				6.5								
HCM 2010 LOS				A								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
32: Delta Fair Blvd & Century Blvd

Baseline +Project PM  
3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	381	1200	441	164	181	265
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	476	2465	872	322	378	338
Arrive On Green	0.27	0.67	0.34	0.34	0.22	0.22
Sat Flow, veh/h	1757	3689	2572	949	1757	1568
Grp Volume(v), veh/h	414	1304	343	314	197	288
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1677	1757	1568
Q Serve(g_s), s	15.4	12.5	10.4	10.5	6.8	12.1
Cycle Q Clear(g_c), s	15.4	12.5	10.4	10.5	6.8	12.1
Prop In Lane	1.00			0.57	1.00	1.00
Lane Grp Cap(c), veh/h	476	2465	625	569	378	338
V/C Ratio(X)	0.87	0.53	0.55	0.55	0.52	0.85
Avail Cap(c_a), veh/h	844	3437	725	659	460	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	5.8	18.4	18.5	23.8	25.9
Incr Delay (d2), s/veh	5.0	0.2	0.8	0.8	1.1	13.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.2	4.4	4.6	4.2	3.0	1.3
Lane Grp Delay (d), s/veh	28.9	6.0	19.2	19.3	24.9	39.5
Lane Grp LOS	C	A	B	B	C	D
Approach Vol, veh/h		1718	657		485	
Approach Delay, s/veh		11.5	19.2		33.6	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	22.6	49.9	27.3			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	33.0	64.0	27.0			
Max Q Clear Time (g_c+I1), s	17.4	14.5	12.5			
Green Ext Time (p_c), s	1.2	23.6	10.8			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			17.1			
HCM 2010 LOS			B			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr





















Baseline +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	118	8	524	17	1	2	233	527	13	19	660	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	577	9	573	65	204	408	285	1855	45	16	1238	88
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.16	0.52	0.52	0.02	0.73	0.73
Sat Flow, veh/h	1394	24	1547	823	550	1100	1757	3586	88	1757	3405	242
Grp Volume(v), veh/h	128	0	579	18	0	3	253	295	292	21	388	380
Grp Sat Flow(s),veh/h/ln	1394	0	1572	823	0	1650	1757	1845	1829	1757	1845	1802
Q Serve(g_s), s	7.4	0.0	42.6	0.4	0.0	0.1	16.4	10.6	10.7	1.0	11.5	11.5
Cycle Q Clear(g_c), s	7.5	0.0	42.6	43.0	0.0	0.1	16.4	10.6	10.7	1.0	11.5	11.5
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.05	1.00		0.13
Lane Grp Cap(c), veh/h	577	0	582	65	0	612	285	954	946	16	671	655
V/C Ratio(X)	0.22	0.00	0.99	0.28	0.00	0.00	0.89	0.31	0.31	1.35	0.58	0.58
Avail Cap(c_a), veh/h	577	0	582	65	0	612	409	954	946	76	671	655
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	0.73	0.73	0.73	0.81	0.81	0.81
Uniform Delay (d), s/veh	25.4	0.0	36.4	58.0	0.0	23.0	47.6	16.1	16.1	57.0	11.6	11.6
Incr Delay (d2), s/veh	0.2	0.0	35.7	2.3	0.0	0.0	11.9	0.6	0.6	213.2	2.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.6	0.0	22.8	0.6	0.0	0.1	8.4	5.0	5.0	1.4	3.9	3.8
Lane Grp Delay (d), s/veh	25.6	0.0	72.1	60.3	0.0	23.0	59.4	16.7	16.7	270.2	14.6	14.6
Lane Grp LOS	C		E	E		C	E	B	B	F	B	B
Approach Vol, veh/h	707		21				840			789		
Approach Delay, s/veh	63.7		54.9				29.6			21.4		
Approach LOS	E		D				C			C		
<b>Timer</b>												
Assigned Phs	4		8				5		2		1	6
Phs Duration (G+Y+Rc), s	47.0		47.0				22.8		64.0		5.0	46.2
Change Period (Y+Rc), s	4.0		4.0				4.0		4.0		4.0	4.0
Max Green Setting (Gmax), s	43.0		43.0				27.0		60.0		5.0	38.0
Max Q Clear Time (g_c+I1), s	44.6		45.0				18.4		12.7		3.0	13.5
Green Ext Time (p_c), s	0.0		0.0				0.5		4.0		0.0	5.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			37.3									
HCM 2010 LOS			D									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

Baseline +Project PM

3/14/2014



















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	848	537	117	351	9	179	18	31	14	10	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	27	1076	660	159	2066	54	306	23	416	82	55	20
Arrive On Green	0.02	0.50	0.50	0.09	0.58	0.58	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1757	2144	1314	1757	3579	94	847	87	1568	76	206	76
Grp Volume(v), veh/h	17	789	717	127	197	195	215	0	34	33	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1613	1757	1845	1828	934	0	1568	359	0	0
Q Serve(g_s), s	0.8	31.4	33.6	6.0	4.3	4.3	0.0	0.0	1.4	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.8	31.4	33.6	6.0	4.3	4.3	19.9	0.0	1.4	20.3	0.0	0.0
Prop In Lane	1.00		0.81	1.00		0.05	0.91		1.00	0.45		0.21
Lane Grp Cap(c), veh/h	27	926	810	159	1065	1055	329	0	416	157	0	0
V/C Ratio(X)	0.62	0.85	0.89	0.80	0.18	0.19	0.65	0.00	0.08	0.21	0.00	0.00
Avail Cap(c_a), veh/h	83	962	841	229	1115	1105	339	0	427	169	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.3	18.3	18.8	37.6	8.4	8.4	30.1	0.0	23.3	25.1	0.0	0.0
Incr Delay (d2), s/veh	20.8	7.2	10.9	11.9	0.1	0.1	4.3	0.0	0.1	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	15.5	15.2	3.2	1.8	1.8	4.8	0.0	0.5	0.6	0.0	0.0
Lane Grp Delay (d), s/veh	62.0	25.5	29.7	49.5	8.5	8.5	34.4	0.0	23.4	25.7	0.0	0.0
Lane Grp LOS	E	C	C	D	A	A	C		C	C		
Approach Vol, veh/h		1523			519			249				33
Approach Delay, s/veh		27.9			18.6			32.9				25.7
Approach LOS		C			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.3	46.4		11.6	52.7			26.4				26.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	44.0		11.0	51.0			23.0				23.0
Max Q Clear Time (g_c+I1), s	2.8	35.6		8.0	6.3			21.9				22.3
Green Ext Time (p_c), s	0.0	6.7		0.1	22.0			0.2				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				26.3								
HCM 2010 LOS				C								
<b>Notes</b>												

# HCM 2010 Signalized Intersection Summary

## 1: Railroad Ave & SR-4 WB OnRamp

No Bypass Cumulative AM













3/14/2014

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	0	0	0	166	323	194	715	809	155	268	821	324	
Number				3	8	18	5	2	12	1	6	16	
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	
Lanes				0	2	0	2	2	0	1	2	1	
Cap, veh/h				215	433	275	838	1324	253	323	1393	592	
Arrive On Green				0.27	0.27	0.27	0.41	0.73	0.73	0.18	0.38	0.00	
Sat Flow, veh/h				806	1626	1034	3408	3012	576	1757	3689	1568	
Grp Volume(v), veh/h				403	0	339	777	538	509	291	892	0	
Grp Sat Flow(s),veh/h/ln				1804	0	1662	1704	1845	1743	1757	1845	1568	
Q Serve(g_s), s				22.9	0.0	20.4	23.6	16.4	16.4	17.6	21.6	0.0	
Cycle Q Clear(g_c), s				22.9	0.0	20.4	23.6	16.4	16.4	17.6	21.6	0.0	
Prop In Lane				0.45		0.62	1.00		0.33	1.00		1.00	
Lane Grp Cap(c), veh/h				480	0	442	838	811	766	323	1393	592	
V/C Ratio(X)				0.84	0.00	0.77	0.93	0.66	0.66	0.90	0.64	0.00	
Avail Cap(c_a), veh/h				631	0	582	910	811	766	388	1393	592	
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	
Upstream Filter(l)				1.00	0.00	1.00	0.59	0.59	0.59	1.00	1.00	0.00	
Uniform Delay (d), s/veh				37.7	0.0	36.7	31.1	10.3	10.3	43.4	27.8	0.0	
Incr Delay (d2), s/veh				7.6	0.0	4.4	9.7	2.6	2.7	21.0	2.3	0.0	
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q (50%), veh/ln				11.4	0.0	9.1	10.2	5.4	5.1	9.8	10.4	0.0	
Lane Grp Delay (d), s/veh				45.3	0.0	41.2	40.8	12.8	13.0	64.4	30.0	0.0	
Lane Grp LOS				D		D	D	B	B	E	C		
Approach Vol, veh/h					742			1824			1183		
Approach Delay, s/veh					43.4			24.8			38.5		
Approach LOS					D			C			D		
<b>Timer</b>													
Assigned Phs					8		5	2		1	6		
Phs Duration (G+Y+Rc), s					32.9		30.7	51.7		24.0	45.0		
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0		
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0		
Max Q Clear Time (g_c+I1), s					24.9		25.6	18.4		19.6	23.6		
Green Ext Time (p_c), s					4.0		1.1	16.5		0.4	12.1		
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay													32.8
HCM 2010 LOS													C
<b>Notes</b>													

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

No Bypass Cumulative AM
























3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷	↶↷					↶↷↸		↶	↷	
Volume (veh/h)	329	0	473	0	0	0	0	1040	290	281	672	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	417	438	745				0	1608	448	473	2549	0
Arrive On Green	0.24	0.00	0.24				0.00	0.39	0.39	0.54	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4167	1162	1757	3689	0
Grp Volume(v), veh/h	358	0	514				0	1000	445	305	730	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1640	1757	1845	0
Q Serve(g_s), s	21.8	0.0	16.7				0.0	25.5	25.5	13.7	0.0	0.0
Cycle Q Clear(g_c), s	21.8	0.0	16.7				0.0	25.5	25.5	13.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.71	1.00		0.00
Lane Grp Cap(c), veh/h	417	438	745				0	1423	633	473	2549	0
V/C Ratio(X)	0.86	0.00	0.69				0.00	0.70	0.70	0.65	0.29	0.00
Avail Cap(c_a), veh/h	552	579	985				0	1423	633	473	2549	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.68	0.68	0.00
Uniform Delay (d), s/veh	40.7	0.0	38.8				0.0	28.8	28.8	22.0	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.0	1.3				0.0	2.9	6.4	2.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.8	0.0	6.8				0.0	12.4	11.6	5.2	0.1	0.0
Lane Grp Delay (d), s/veh	50.8	0.0	40.1				0.0	31.8	35.3	24.0	0.2	0.0
Lane Grp LOS	D		D					C	D	C	A	
Approach Vol, veh/h		872						1445			1035	
Approach Delay, s/veh		44.5						32.9			7.2	
Approach LOS		D						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		30.5						47.0		34.0	81.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		35.0						43.0		30.0	77.0	
Max Q Clear Time (g_c+I1), s		23.8						27.5		15.7	2.0	
Green Ext Time (p_c), s		2.7						9.0		5.2	7.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.0									
HCM 2010 LOS			C									
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd




























No Bypass Cumulative AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	466	1	93	550	280	116	790	66	139	347	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	339	1269	3	128	830	353	158	1088	463	208	1195	508
Arrive On Green	0.19	0.34	0.34	0.07	0.22	0.22	0.09	0.29	0.29	0.12	0.32	0.32
Sat Flow, veh/h	1757	3681	7	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	299	254	254	101	598	304	126	859	72	151	377	297
Grp Sat Flow(s),veh/h/ln	1757	1845	1843	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	15.7	9.9	9.9	5.4	14.2	13.1	6.7	20.3	2.5	7.9	7.3	15.0
Cycle Q Clear(g_c), s	15.7	9.9	9.9	5.4	14.2	13.1	6.7	20.3	2.5	7.9	7.3	15.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	636	636	128	830	353	158	1088	463	208	1195	508
V/C Ratio(X)	0.88	0.40	0.40	0.79	0.72	0.86	0.80	0.79	0.16	0.72	0.32	0.58
Avail Cap(c_a), veh/h	499	757	757	240	971	413	296	1476	627	259	1398	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	23.6	23.6	43.3	34.1	19.3	42.4	30.8	14.9	40.4	24.2	26.8
Incr Delay (d2), s/veh	12.0	0.4	0.4	10.1	2.2	15.1	8.9	2.1	0.2	7.4	0.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.1	4.6	4.6	2.8	6.8	6.4	3.4	9.6	1.2	4.0	3.4	5.9
Lane Grp Delay (d), s/veh	49.3	24.1	24.1	53.4	36.2	34.4	51.3	32.9	15.1	47.8	24.3	27.9
Lane Grp LOS	D	C	C	D	D	C	D	C	B	D	C	C
Approach Vol, veh/h		807			1003			1057			825	
Approach Delay, s/veh		33.4			37.4			33.9			29.9	
Approach LOS		C			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.3	36.8		10.9	25.4		12.5	32.0		15.3	34.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	27.0	39.0		13.0	25.0		16.0	38.0		14.0	36.0	
Max Q Clear Time (g_c+I1), s	17.7	11.9		7.4	16.2		8.7	22.3		9.9	17.0	
Green Ext Time (p_c), s	0.6	9.7		0.1	5.1		0.2	5.7		1.6	3.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				33.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd













No Bypass Cumulative AM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	94	102	30	1044	57	107	8	486	451	89	567	73
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	708	744	632	1374	744	632	90	1373	583	125	1447	615
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.05	0.37	0.37	0.07	0.39	0.39
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	102	111	33	1135	62	116	9	528	490	97	616	79
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	2.9	3.0	1.0	23.3	1.6	3.7	0.4	8.2	22.3	4.2	9.5	2.5
Cycle Q Clear(g_c), s	2.9	3.0	1.0	23.3	1.6	3.7	0.4	8.2	22.3	4.2	9.5	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	708	744	632	1374	744	632	90	1373	583	125	1447	615
V/C Ratio(X)	0.14	0.15	0.05	0.83	0.08	0.18	0.10	0.38	0.84	0.78	0.43	0.13
Avail Cap(c_a), veh/h	708	744	632	2268	1227	1043	360	1558	662	270	1447	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	14.8	14.2	20.9	14.4	15.0	35.4	18.0	22.4	35.7	17.3	15.2
Incr Delay (d2), s/veh	0.1	0.1	0.0	1.3	0.0	0.1	0.5	0.2	8.6	9.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	1.3	0.4	9.1	0.7	1.4	0.2	3.7	9.8	2.2	4.2	1.0
Lane Grp Delay (d), s/veh	14.9	14.9	14.3	22.2	14.5	15.2	35.8	18.2	31.0	45.5	17.5	15.3
Lane Grp LOS	B	B	B	C	B	B	D	B	C	D	B	B
Approach Vol, veh/h		246			1313			1027			792	
Approach Delay, s/veh		14.8			21.2			24.4			20.7	
Approach LOS		B			C			C			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		35.5			35.5		8.0	33.1		9.6		34.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			52.0		16.0	33.0		12.0		29.0
Max Q Clear Time (g_c+I1), s		5.0			25.3		2.4	24.3		6.2		11.5
Green Ext Time (p_c), s		5.3			6.2		0.0	4.8		0.1		9.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

























No Bypass Cumulative AM  
3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	177	44	14	767	1580	59
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	243	217	25	2773	2411	89
Arrive On Green	0.14	0.14	0.01	0.75	0.68	0.68
Sat Flow, veh/h	1757	1568	1757	3689	3535	131
Grp Volume(v), veh/h	192	48	15	834	892	889
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1822
Q Serve(g_s), s	7.7	2.0	0.6	5.3	21.6	22.0
Cycle Q Clear(g_c), s	7.7	2.0	0.6	5.3	21.6	22.0
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	243	217	25	2773	1258	1243
V/C Ratio(X)	0.79	0.22	0.59	0.30	0.71	0.72
Avail Cap(c_a), veh/h	435	389	97	3252	1423	1405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	27.8	35.6	2.9	7.1	7.2
Incr Delay (d2), s/veh	5.7	0.5	20.2	0.1	1.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	0.0	0.4	1.8	8.4	8.7
Lane Grp Delay (d), s/veh	36.0	28.3	55.8	3.0	8.5	8.7
Lane Grp LOS	D	C	E	A	A	A
Approach Vol, veh/h	240			849	1781	
Approach Delay, s/veh	34.4			3.9	8.6	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			5.0	58.6	53.5	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			4.0	64.0	56.0	
Max Q Clear Time (g_c+I1), s			2.6	7.3	24.0	
Green Ext Time (p_c), s			0.0	39.2	25.5	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			9.4			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd






















No Bypass Cumulative AM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	159	595	123	115	503	199	209	657	241	249	314	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	212	885	376	158	771	327	273	1034	440	317	804	273
Arrive On Green	0.12	0.24	0.24	0.09	0.21	0.21	0.16	0.28	0.28	0.18	0.31	0.31
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2635	896
Grp Volume(v), veh/h	173	647	134	125	547	216	227	714	262	271	237	222
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1686
Q Serve(g_s), s	7.3	12.3	5.4	5.3	10.5	9.6	9.6	13.2	11.0	11.4	7.8	8.0
Cycle Q Clear(g_c), s	7.3	12.3	5.4	5.3	10.5	9.6	9.6	13.2	11.0	11.4	7.8	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	212	885	376	158	771	327	273	1034	440	317	563	515
V/C Ratio(X)	0.82	0.73	0.36	0.79	0.71	0.66	0.83	0.69	0.60	0.86	0.42	0.43
Avail Cap(c_a), veh/h	276	968	411	207	823	350	461	1258	535	438	605	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.7	26.7	24.1	34.0	28.0	27.7	31.2	24.5	23.7	30.3	21.1	21.2
Incr Delay (d2), s/veh	13.4	2.6	0.6	14.3	2.7	4.2	6.4	1.2	1.3	11.5	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.0	5.8	2.1	3.0	5.1	4.1	4.6	6.0	4.3	6.0	3.5	3.3
Lane Grp Delay (d), s/veh	46.1	29.3	24.7	48.3	30.7	31.8	37.6	25.7	25.0	41.8	21.6	21.8
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		954			888			1203			730	
Approach Delay, s/veh		31.7			33.4			27.8			29.2	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.2	22.3		10.8	19.9		15.9	25.4		17.8	27.3	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	20.0		9.0	17.0		20.0	26.0		19.0	25.0	
Max Q Clear Time (g_c+I1), s	9.3	14.3		7.3	12.5		11.6	15.2		13.4	10.0	
Green Ext Time (p_c), s	0.1	4.0		0.0	3.2		0.4	6.2		0.4	7.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

No Bypass Cumulative AM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	502	5	2	999	102	103	110	3	143	36	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	136	1174	11	54	1101	936	136	208	5	150	34	165
Arrive On Green	0.08	0.64	0.64	0.03	0.60	0.60	0.08	0.12	0.12	0.09	0.12	0.12
Sat Flow, veh/h	1757	1825	17	1757	1845	1568	1757	1792	45	1757	275	1334
Grp Volume(v), veh/h	138	0	551	2	1086	111	112	0	123	155	0	228
Grp Sat Flow(s),veh/h/ln	1757	0	1842	1757	1845	1568	1757	0	1837	1757	0	1609
Q Serve(g_s), s	10.0	0.0	19.6	0.1	74.4	2.5	8.1	0.0	8.2	11.0	0.0	16.0
Cycle Q Clear(g_c), s	10.0	0.0	19.6	0.1	74.4	2.5	8.1	0.0	8.2	11.0	0.0	16.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.02	1.00		0.83
Lane Grp Cap(c), veh/h	136	0	1185	54	1101	936	136	0	214	150	0	200
V/C Ratio(X)	1.01	0.00	0.47	0.04	0.99	0.12	0.82	0.00	0.58	1.03	0.00	1.14
Avail Cap(c_a), veh/h	136	0	1185	54	1101	936	150	0	228	150	0	200
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.00	0.74	0.31	0.31	0.31	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.5	0.0	11.7	60.6	25.5	4.5	58.6	0.0	54.0	59.0	0.0	56.5
Incr Delay (d2), s/veh	69.8	0.0	1.0	0.1	12.1	0.1	27.4	0.0	3.1	83.0	0.0	107.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.1	0.0	8.6	0.1	35.7	1.4	4.7	0.0	4.1	8.5	0.0	12.7
Lane Grp Delay (d), s/veh	129.3	0.0	12.7	60.7	37.6	4.6	86.1	0.0	57.1	142.0	0.0	163.8
Lane Grp LOS	F		B	E	D	A	F		E	F		F
Approach Vol, veh/h		689			1199			235				383
Approach Delay, s/veh		36.0			34.6			70.9				155.0
Approach LOS		D			C			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	14.0	87.0		8.0	81.0		14.0	19.0		15.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	10.0	83.0		4.0	77.0		11.0	16.0		11.0		16.0
Max Q Clear Time (g_c+I1), s	12.0	21.6		2.1	76.4		10.1	10.2		13.0		18.0
Green Ext Time (p_c), s	0.0	4.0		0.1	0.4		0.1	0.5		0.0		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				56.8								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 8: SR-4 WB Ramps & California Ave

No Bypass Cumulative AM























3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	300	24	704	370	150	23	55	93	85	104	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	65	1042	83	1502	2628	1117	190	199	170	190	169	25
Arrive On Green	0.04	0.31	0.31	0.44	0.71	0.71	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1757	3374	268	3408	3689	1568	1757	1845	1568	1757	1567	236
Grp Volume(v), veh/h	39	177	175	765	402	163	25	60	101	92	0	130
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1803
Q Serve(g_s), s	1.8	6.2	6.3	13.6	3.0	2.8	1.1	2.5	5.2	4.2	0.0	5.8
Cycle Q Clear(g_c), s	1.8	6.2	6.3	13.6	3.0	2.8	1.1	2.5	5.2	4.2	0.0	5.8
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	65	569	555	1502	2628	1117	190	199	170	190	0	195
V/C Ratio(X)	0.60	0.31	0.31	0.51	0.15	0.15	0.13	0.30	0.60	0.48	0.00	0.67
Avail Cap(c_a), veh/h	167	569	555	1700	2628	1117	375	394	335	375	0	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.55	0.55	0.55	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.9	22.3	22.3	17.0	3.9	3.9	34.0	34.6	35.8	35.3	0.0	36.1
Incr Delay (d2), s/veh	8.6	1.4	1.5	0.1	0.1	0.2	0.3	0.8	3.3	1.9	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	3.0	3.0	5.6	1.1	1.0	0.5	1.2	2.2	1.9	0.0	2.9
Lane Grp Delay (d), s/veh	48.6	23.7	23.8	17.1	4.0	4.0	34.3	35.5	39.1	37.3	0.0	40.0
Lane Grp LOS	D	C	C	B	A	A	C	D	D	D		D
Approach Vol, veh/h		391			1330			186			222	
Approach Delay, s/veh		26.2			11.6			37.3			38.9	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8			4	
Phs Duration (G+Y+Rc), s	7.1	30.0		41.1	64.0			13.1			13.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	8.0	26.0		42.0	60.0			18.0			18.0	
Max Q Clear Time (g_c+I1), s	3.8	8.3		15.6	5.0			7.2			7.8	
Green Ext Time (p_c), s	1.4	1.9		3.2	3.6			1.3			1.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 9: Loveridge Rd & California Ave/N Park Blvd

No Bypass Cumulative AM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	66	297	49	151	3	615	329	97	8	240	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	190	386	328	109	670	12	859	1579	457	16	1219	518
Arrive On Green	0.06	0.21	0.21	0.03	0.19	0.19	0.25	0.57	0.57	0.01	0.33	0.33
Sat Flow, veh/h	3408	1845	1568	3408	3612	66	3408	2753	796	1757	3689	1568
Grp Volume(v), veh/h	124	72	323	53	84	83	668	238	225	9	261	621
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1704	1757	1845	1568
Q Serve(g_s), s	3.2	2.9	18.6	1.4	3.5	3.5	16.6	5.7	5.9	0.5	4.6	23.5
Cycle Q Clear(g_c), s	3.2	2.9	18.6	1.4	3.5	3.5	16.6	5.7	5.9	0.5	4.6	23.5
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	190	386	328	109	342	340	859	1058	977	16	1219	518
V/C Ratio(X)	0.65	0.19	0.98	0.49	0.24	0.25	0.78	0.23	0.23	0.57	0.21	1.20
Avail Cap(c_a), veh/h	263	386	328	150	342	340	1127	1565	1446	77	2073	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	29.5	35.7	43.2	31.5	31.5	31.6	9.5	9.5	44.8	21.9	18.7
Incr Delay (d2), s/veh	3.8	0.2	45.2	3.3	0.4	0.4	2.6	0.1	0.1	28.8	0.1	99.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	1.4	11.4	0.7	1.7	1.7	7.3	2.4	2.3	0.3	2.1	23.0
Lane Grp Delay (d), s/veh	45.8	29.8	80.9	46.5	31.9	31.9	34.2	9.6	9.6	73.6	22.0	118.2
Lane Grp LOS	D	C	F	D	C	C	C	A	A	E	C	F
Approach Vol, veh/h		519			220			1131			891	
Approach Delay, s/veh		65.4			35.4			24.1			89.5	
Approach LOS		E			D			C			F	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	9.1	23.0		6.9	20.8		26.9	56.1		4.8	34.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	7.0	19.0		4.0	16.0		30.0	77.0		4.0	51.0	
Max Q Clear Time (g_c+I1), s	5.2	20.6		3.4	5.5		18.6	7.9		2.5	25.5	
Green Ext Time (p_c), s	0.1	0.0		0.0	0.7		4.3	6.4		0.0	4.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			53.9									
HCM 2010 LOS			D									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

No Bypass Cumulative AM

3/14/2014

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	456	0	400	0	0	0	0	721	220	141	526	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1098	0	505				0	1854	788	217	2227	0
Arrive On Green	0.32	0.00	0.32				0.00	0.50	0.50	0.06	0.60	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	496	0	435				0	784	239	153	572	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	12.4	0.0	28.0				0.0	14.5	9.6	4.7	7.8	0.0
Cycle Q Clear(g_c), s	12.4	0.0	28.0				0.0	14.5	9.6	4.7	7.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1098	0	505				0	1854	788	217	2227	0
V/C Ratio(X)	0.45	0.00	0.86				0.00	0.42	0.30	0.70	0.26	0.00
Avail Cap(c_a), veh/h	1487	0	684				0	1854	788	380	2227	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	29.0	0.0	34.2				0.0	16.9	15.7	49.4	10.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	8.4				0.0	0.7	1.0	3.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	12.2				0.0	6.6	3.9	2.2	3.4	0.0
Lane Grp Delay (d), s/veh	29.2	0.0	42.6				0.0	17.6	16.7	53.2	10.3	0.0
Lane Grp LOS	C		D					B	B	D	B	
Approach Vol, veh/h		931						1023			725	
Approach Delay, s/veh		35.5						17.4			19.3	
Approach LOS		D						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		38.7						58.1		10.9	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						49.0		12.0	65.0	
Max Q Clear Time (g_c+I1), s		30.0						16.5		6.7	9.8	
Green Ext Time (p_c), s		4.7						13.3		0.2	15.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.2									
HCM 2010 LOS			C									
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

No Bypass Cumulative AM













3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	201	259	168	193	739	197	224	615	151	198	382	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	307	1220	519	297	1209	514	290	1098	467	304	819	348
Arrive On Green	0.09	0.33	0.33	0.09	0.33	0.33	0.16	0.30	0.30	0.09	0.22	0.22
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	218	282	183	210	803	214	243	668	164	215	415	185
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.1	4.5	7.3	4.9	15.3	8.7	11.0	12.7	6.7	5.0	8.1	8.5
Cycle Q Clear(g_c), s	5.1	4.5	7.3	4.9	15.3	8.7	11.0	12.7	6.7	5.0	8.1	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1220	519	297	1209	514	290	1098	467	304	819	348
V/C Ratio(X)	0.71	0.23	0.35	0.71	0.66	0.42	0.84	0.61	0.35	0.71	0.51	0.53
Avail Cap(c_a), veh/h	540	1800	765	499	1755	746	578	1755	746	540	1125	478
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	19.9	20.8	36.4	23.7	21.5	33.2	24.7	22.6	36.3	28.0	28.1
Incr Delay (d2), s/veh	3.0	0.1	0.4	3.1	0.6	0.5	6.4	0.5	0.5	3.0	0.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	2.0	2.8	2.2	7.0	3.4	5.3	5.8	2.6	2.3	3.7	3.4
Lane Grp Delay (d), s/veh	39.3	20.0	21.2	39.5	24.3	22.0	39.6	25.2	23.0	39.3	28.4	29.4
Lane Grp LOS	D	B	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		683			1227			1075			815	
Approach Delay, s/veh		26.5			26.5			28.2			31.5	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.4	31.1		11.2	30.9		17.5	28.4		11.3	22.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	40.0		12.0	39.0		27.0	39.0		13.0	25.0	
Max Q Clear Time (g_c+I1), s	7.1	9.3		6.9	17.3		13.0	14.7		7.0	10.5	
Green Ext Time (p_c), s	0.4	11.0		0.3	9.5		0.6	9.7		0.3	7.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.0									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

No Bypass Cumulative AM






















3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	295	427	1044	311	197	208
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	311	1504	1121	953	216	193
Arrive On Green	0.18	0.82	0.61	0.61	0.12	0.12
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	321	464	1135	338	214	226
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	23.0	8.1	79.0	14.0	15.8	16.0
Cycle Q Clear(g_c), s	23.0	8.1	79.0	14.0	15.8	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	311	1504	1121	953	216	193
V/C Ratio(X)	1.03	0.31	1.01	0.35	0.99	1.17
Avail Cap(c_a), veh/h	311	1504	1121	953	216	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.22	0.22	1.00	1.00
Uniform Delay (d), s/veh	53.5	3.0	25.5	12.8	56.9	57.0
Incr Delay (d2), s/veh	55.2	0.4	15.8	0.2	58.1	118.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.0	2.8	38.2	5.0	10.7	19.4
Lane Grp Delay (d), s/veh	108.7	3.4	41.3	13.0	115.0	175.5
Lane Grp LOS	F	A	F	B	F	F
Approach Vol, veh/h		785	1473		440	
Approach Delay, s/veh		46.4	34.8		146.1	
Approach LOS		D	C		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	27.0	110.0	83.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	23.0	106.0	79.0			
Max Q Clear Time (g_c+I1), s	25.0	10.1	81.0			
Green Ext Time (p_c), s	0.0	4.2	0.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			56.3			
HCM 2010 LOS			E			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

No Bypass Cumulative AM





















3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	522	110	37	1093	12	274	118	78	15	11	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	9	1190	1012	51	1218	13	343	231	153	192	134	235
Arrive On Green	0.01	0.65	0.65	0.03	0.67	0.67	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1757	1845	1568	1757	1821	20	1357	1036	688	1152	603	1055
Grp Volume(v), veh/h	11	567	120	40	0	1201	298	0	213	16	0	33
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1841	1357	0	1723	1152	0	1658
Q Serve(g_s), s	0.6	18.4	3.4	2.6	0.0	72.4	24.2	0.0	12.8	1.5	0.0	1.8
Cycle Q Clear(g_c), s	0.6	18.4	3.4	2.6	0.0	72.4	26.0	0.0	12.8	14.2	0.0	1.8
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.40	1.00		0.64
Lane Grp Cap(c), veh/h	9	1190	1012	51	0	1232	343	0	384	192	0	370
V/C Ratio(X)	1.19	0.48	0.12	0.79	0.00	0.98	0.87	0.00	0.55	0.08	0.00	0.09
Avail Cap(c_a), veh/h	60	1190	1012	105	0	1232	343	0	384	192	0	370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	0.49	0.00	0.49	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	10.6	7.9	56.3	0.0	18.4	46.9	0.0	40.2	46.5	0.0	35.9
Incr Delay (d2), s/veh	187.4	1.1	0.2	12.1	0.0	12.9	20.5	0.0	1.7	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	7.8	1.2	1.4	0.0	33.1	10.9	0.0	5.8	0.4	0.0	0.8
Lane Grp Delay (d), s/veh	245.4	11.7	8.1	68.4	0.0	31.3	67.4	0.0	41.9	46.7	0.0	36.0
Lane Grp LOS	F	B	A	E		C	E		D	D		D
Approach Vol, veh/h		698			1241			511				49
Approach Delay, s/veh		14.8			32.5			56.8				39.5
Approach LOS		B			C			E				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.6	79.2		7.4	82.0			30.0				30.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	75.0		7.0	78.0			26.0				26.0
Max Q Clear Time (g_c+I1), s	2.6	20.4		4.6	74.4			28.0				16.2
Green Ext Time (p_c), s	0.0	4.6		0.0	2.7			0.0				1.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				32.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

No Bypass Cumulative AM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	230	0	0	77	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	29	61	0	29	61	0	29	625	0	29	625	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.34	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	1845	0	1757	1845	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	250	0	0	84	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	1845	0	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	29	61	0	29	61	0	29	625	0	29	625	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.13	0.00
Avail Cap(c_a), veh/h	1162	9758	0	1162	9758	0	1162	15247	0	1162	15247	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.5	0.0
Lane Grp LOS								A			A	
Approach Vol, veh/h		0			0			250			84	
Approach Delay, s/veh		0.0			0.0			1.9			1.5	
Approach LOS								A			A	
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7	4	
Phs Duration (G+Y+Rc), s	0.0	0.0		0.0	0.0		0.0	6.0		0.0	6.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0		4.0	50.0		4.0	50.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0		0.0	2.6		0.0	2.2	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	2.1		0.0	2.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			1.8									
HCM 2010 LOS			A									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

No Bypass Cumulative AM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	25	0	0	0	0	67	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	20	41	0	51	107	0	20	0	116	20	137	0
Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	27	0	0	0	0	73	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	20	41	0	51	107	0	20	0	116	20	137	0
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00
Avail Cap(c_a), veh/h	788	6617	0	4530	14475	0	788	0	5449	788	6410	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	9.5	0.0	0.0	0.0
Lane Grp LOS				B				A				
Approach Vol, veh/h	0			27				73				
Approach Delay, s/veh	0.0			12.5				9.5				
Approach LOS				B				A				
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.3	4.3		0.0	4.7		0.0	4.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		23.0	35.0		4.0	31.0		4.0	31.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.1	0.0		0.0	2.4		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	0.4		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy

No Bypass Cumulative AM













3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	34	40	221	83	32	216	482	154	26	555	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	406	220	187	406	151	59	595	2866	886	41	2047	870
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.06	0.23	0.23	0.02	0.55	0.55
Sat Flow, veh/h	3408	1845	1568	3408	1266	492	3408	4058	1254	1757	3689	1568
Grp Volume(v), veh/h	124	37	43	240	0	125	235	475	216	28	603	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1623	1757	1845	1568
Q Serve(g_s), s	2.6	1.4	2.0	5.3	0.0	5.3	5.3	8.2	8.5	1.3	6.9	8.8
Cycle Q Clear(g_c), s	2.6	1.4	2.0	5.3	0.0	5.3	5.3	8.2	8.5	1.3	6.9	8.8
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	406	220	187	406	0	209	595	2606	1146	41	2047	870
V/C Ratio(X)	0.31	0.17	0.23	0.59	0.00	0.60	0.39	0.18	0.19	0.69	0.29	0.36
Avail Cap(c_a), veh/h	774	419	356	946	0	488	860	2606	1146	177	2047	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	31.4	31.6	33.1	0.0	33.1	33.3	12.1	12.2	38.4	9.4	9.8
Incr Delay (d2), s/veh	0.4	0.4	0.6	1.4	0.0	2.7	0.4	0.1	0.4	18.5	0.4	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.7	0.8	2.3	0.0	2.5	2.4	4.2	3.9	0.8	3.0	3.4
Lane Grp Delay (d), s/veh	32.3	31.7	32.2	34.5	0.0	35.8	33.7	12.2	12.5	56.9	9.8	11.0
Lane Grp LOS	C	C	C	C		D	C	B	B	E	A	B
Approach Vol, veh/h		204			365			926			943	
Approach Delay, s/veh		32.2			34.9			17.7			11.6	
Approach LOS		C			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		13.4			13.4		17.8	60.0		5.8	48.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		18.0			22.0		20.0	56.0		8.0	44.0	
Max Q Clear Time (g_c+I1), s		4.6			7.3		7.3	10.5		3.3	10.8	
Green Ext Time (p_c), s		2.0			2.1		4.5	6.5		0.0	7.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.1								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

No Bypass Cumulative AM

3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	236	266	562	542	442	316
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	709	326	699	3994	2664	755
Arrive On Green	0.21	0.21	0.34	1.00	0.48	0.48
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	257	289	611	589	480	343
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	7.3	20.3	19.1	0.0	5.6	16.5
Cycle Q Clear(g_c), s	7.3	20.3	19.1	0.0	5.6	16.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	709	326	699	3994	2664	755
V/C Ratio(X)	0.36	0.89	0.87	0.15	0.18	0.45
Avail Cap(c_a), veh/h	900	414	1170	3994	2664	755
HCM Platoon Ratio	1.00	1.00	1.67	1.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.94	0.94	0.92	0.92
Uniform Delay (d), s/veh	38.6	43.7	36.0	0.0	16.7	19.6
Incr Delay (d2), s/veh	0.3	17.0	4.0	0.1	0.1	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.2	1.5	8.0	0.0	2.5	6.7
Lane Grp Delay (d), s/veh	38.9	60.7	39.9	0.1	16.9	21.4
Lane Grp LOS	D	E	D	A	B	C
Approach Vol, veh/h	546			1200	823	
Approach Delay, s/veh	50.4			20.4	18.7	
Approach LOS	D			C	B	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			27.3	86.0	58.7	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			39.0	82.0	39.0	
Max Q Clear Time (g_c+I1), s			21.1	2.0	18.5	
Green Ext Time (p_c), s			2.2	12.2	9.0	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			26.2			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

No Bypass Cumulative AM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	228	0	258	0	0	0	0	922	408	148	596	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	412	223	379				0	3884	1100	226	4456	0
Arrive On Green	0.12	0.00	0.12				0.00	1.00	1.00	0.13	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	248	0	280				0	1002	443	161	648	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.5	0.0	9.3				0.0	0.0	0.0	4.9	0.0	0.0
Cycle Q Clear(g_c), s	7.5	0.0	9.3				0.0	0.0	0.0	4.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	412	223	379				0	3884	1100	226	4456	0
V/C Ratio(X)	0.60	0.00	0.74				0.00	0.26	0.40	0.71	0.15	0.00
Avail Cap(c_a), veh/h	789	427	726				0	3884	1100	536	4456	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	0.78	0.78	0.94	0.94	0.00
Uniform Delay (d), s/veh	45.0	0.0	45.9				0.0	0.0	0.0	45.9	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	2.8				0.0	0.1	0.9	3.9	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	0.0	3.9				0.0	0.0	0.3	2.2	0.0	0.0
Lane Grp Delay (d), s/veh	46.5	0.0	48.7				0.0	0.1	0.9	49.8	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		528						1445			809	
Approach Delay, s/veh		47.6						0.3			10.0	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		17.1						79.8		11.2		91.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		25.0						66.0		17.0		87.0
Max Q Clear Time (g_c+I1), s		11.3						2.0		6.9		2.0
Green Ext Time (p_c), s		1.7						24.2		0.3		25.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.1									
HCM 2010 LOS			B									
<b>Notes</b>												


























# HCM 2010 Signalized Intersection Summary

## 21: Somersville Rd & Delta Fair Blvd

No Bypass Cumulative AM

3/14/2014
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	288	126	3	43	345	452	89	649	11	150	324	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1260	665	15	650	682	580	195	2198	37	249	1355	576
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.04	0.13	0.13	0.12	0.61	0.61
Sat Flow, veh/h	3408	1798	39	1757	1845	1568	1757	5426	92	3408	3689	1568
Grp Volume(v), veh/h	313	0	140	47	375	491	97	479	238	163	352	335
Grp Sat Flow(s),veh/h/ln	1704	0	1838	1757	1845	1568	1757	1845	1828	1704	1845	1568
Q Serve(g_s), s	5.0	0.0	4.1	1.4	12.7	22.7	4.3	9.3	9.3	3.6	3.5	10.1
Cycle Q Clear(g_c), s	5.0	0.0	4.1	1.4	12.7	22.7	4.3	9.3	9.3	3.6	3.5	10.1
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	1260	0	680	650	682	580	195	1495	741	249	1355	576
V/C Ratio(X)	0.25	0.00	0.21	0.07	0.55	0.85	0.50	0.32	0.32	0.65	0.26	0.58
Avail Cap(c_a), veh/h	1260	0	680	1001	1051	893	289	1495	741	432	1355	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(l)	1.00	0.00	1.00	0.74	0.74	0.74	0.98	0.98	0.98	0.99	0.99	0.99
Uniform Delay (d), s/veh	17.3	0.0	17.0	16.1	19.7	22.8	35.9	24.4	24.4	33.7	10.3	11.6
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.5	3.6	1.9	0.6	1.1	2.9	0.5	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.1	0.0	1.8	0.6	5.6	9.0	2.1	4.7	4.8	1.6	1.4	3.5
Lane Grp Delay (d), s/veh	17.4	0.0	17.1	16.1	20.2	26.4	37.8	24.9	25.5	36.6	10.8	15.8
Lane Grp LOS	B		B	B	C	C	D	C	C	D	B	B
Approach Vol, veh/h		453			913			814			850	
Approach Delay, s/veh		17.3			23.3			26.6			17.7	
Approach LOS		B			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		33.2			33.2		12.8	36.0		9.8		33.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			45.0		13.0	32.0		10.0		29.0
Max Q Clear Time (g_c+I1), s		7.0			24.7		6.3	11.3		5.6		12.1
Green Ext Time (p_c), s		4.6			4.5		0.5	4.7		0.3		3.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.7								
HCM 2010 LOS				C								
<b>Notes</b>												

# HCM 2010 Signalized Intersection Summary

## 22: Somersville Rd & Buchanan Rd

No Bypass Cumulative AM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	291	202	152	15	372	433	532	1028	21	43	121	107
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	315	1430	608	24	410	348	585	1541	32	60	476	202
Arrive On Green	0.18	0.39	0.00	0.01	0.22	0.00	0.33	0.43	0.43	0.03	0.13	0.13
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3602	74	1757	3689	1568
Grp Volume(v), veh/h	316	220	0	16	404	0	578	572	568	47	132	116
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1832	1757	1845	1568
Q Serve(g_s), s	21.0	4.5	0.0	1.1	25.5	0.0	38.3	30.1	30.1	3.1	3.8	8.1
Cycle Q Clear(g_c), s	21.0	4.5	0.0	1.1	25.5	0.0	38.3	30.1	30.1	3.1	3.8	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	315	1430	608	24	410	348	585	789	783	60	476	202
V/C Ratio(X)	1.00	0.15	0.00	0.66	0.99	0.00	0.99	0.72	0.73	0.78	0.28	0.57
Avail Cap(c_a), veh/h	315	1430	608	75	410	348	585	803	798	90	567	241
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	23.4	0.0	57.5	45.4	0.0	38.8	27.8	27.8	56.1	46.1	48.0
Incr Delay (d2), s/veh	51.4	0.0	0.0	26.2	40.7	0.0	34.0	3.2	3.2	22.0	0.3	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	13.9	2.0	0.0	0.7	16.8	0.0	22.7	14.7	14.6	1.8	1.8	3.4
Lane Grp Delay (d), s/veh	99.5	23.4	0.0	83.6	86.1	0.0	72.8	31.0	31.0	78.1	46.4	50.5
Lane Grp LOS	F	C		F	F		E	C	C	E	D	D
Approach Vol, veh/h		536			420			1718			295	
Approach Delay, s/veh		68.3			86.0			45.1			53.1	
Approach LOS		E			F			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	25.0	49.4		5.6	30.0		43.0	54.1		8.0	19.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	21.0	42.0		5.0	26.0		39.0	51.0		6.0	18.0	
Max Q Clear Time (g_c+I1), s	23.0	6.5		3.1	27.5		40.3	32.1		5.1	10.1	
Green Ext Time (p_c), s	0.0	4.2		0.0	0.0		0.0	8.9		0.0	4.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			55.8									
HCM 2010 LOS			E									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd






















No Bypass Cumulative AM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	10	0	11	14	1475	0	1	2	280	9	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	155	415	0	23	137	58	7	31	61	540	699	1189
Arrive On Green	0.09	0.11	0.00	0.01	0.04	0.00	0.00	0.06	0.06	0.16	0.38	0.38
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	113	11	0	12	15	0	0	0	3	304	10	48
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	1.5	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	2.0	0.1	0.1
Cycle Q Clear(g_c), s	1.5	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	2.0	0.1	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	155	415	0	23	137	58	7	0	92	540	699	1189
V/C Ratio(X)	0.73	0.03	0.00	0.53	0.11	0.00	0.00	0.00	0.03	0.56	0.01	0.04
Avail Cap(c_a), veh/h	435	11124	0	290	10819	4598	290	0	1295	1126	1752	2979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.8	9.6	0.0	11.9	11.3	0.0	0.0	0.0	10.8	9.4	4.7	0.5
Incr Delay (d2), s/veh	6.5	0.0	0.0	18.2	0.3	0.0	0.0	0.0	0.1	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0
Lane Grp Delay (d), s/veh	17.3	9.6	0.0	30.0	11.6	0.0	0.0	0.0	11.0	10.3	4.7	0.5
Lane Grp LOS	B	A		C	B				B	B	A	A
Approach Vol, veh/h		124			27			3			362	
Approach Delay, s/veh		16.6			19.8			11.0			8.9	
Approach LOS		B			B			B			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	6.1	6.7		4.3	4.9		0.0	5.3		7.8	13.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	73.0		4.0	71.0		4.0	19.0		8.0	23.0	
Max Q Clear Time (g_c+I1), s	3.5	2.1		2.2	2.1		0.0	2.0		4.0	2.1	
Green Ext Time (p_c), s	0.1	0.4		0.0	0.1		0.0	0.1		0.4	0.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				11.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

No Bypass Cumulative AM  
3/14/2014























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	175	59	55	413	223	137	461	57	69	114	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	299	984	321	496	836	447	681	762	94	338	873	742
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	742	2666	870	1110	2265	1211	1238	1610	199	836	1845	1568
Grp Volume(v), veh/h	27	130	124	60	365	326	149	0	563	75	124	10
Grp Sat Flow(s),veh/h/ln	742	1845	1691	1110	1845	1631	1238	0	1809	836	1845	1568
Q Serve(g_s), s	1.5	2.4	2.5	2.0	7.9	8.0	3.9	0.0	12.1	3.8	1.9	0.2
Cycle Q Clear(g_c), s	9.5	2.4	2.5	4.5	7.9	8.0	5.9	0.0	12.1	15.9	1.9	0.2
Prop In Lane	1.00		0.51	1.00		0.74	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	299	681	624	496	681	602	681	0	856	338	873	742
V/C Ratio(X)	0.09	0.19	0.20	0.12	0.54	0.54	0.22	0.00	0.66	0.22	0.14	0.01
Avail Cap(c_a), veh/h	653	1561	1431	1025	1561	1380	1776	0	2456	1077	2504	2129
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	10.9	10.9	12.5	12.6	12.6	9.2	0.0	10.2	16.3	7.6	7.1
Incr Delay (d2), s/veh	0.1	0.1	0.2	0.1	0.7	0.8	0.2	0.0	0.9	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	1.0	1.0	0.5	3.4	3.0	1.1	0.0	4.7	0.8	0.7	0.1
Lane Grp Delay (d), s/veh	16.5	11.0	11.1	12.6	13.3	13.4	9.4	0.0	11.1	16.6	7.6	7.1
Lane Grp LOS	B	B	B	B	B	B	A		B	B	A	A
Approach Vol, veh/h		281			751			712			209	
Approach Delay, s/veh		11.6			13.3			10.7			10.8	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		22.8			22.8			28.1			28.1	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		43.0			43.0			69.0			69.0	
Max Q Clear Time (g_c+I1), s		11.5			10.0			14.1			17.9	
Green Ext Time (p_c), s		7.2			7.3			6.2			6.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				11.8								
HCM 2010 LOS				B								
<b>Notes</b>												

# HCM 2010 Signalized Intersection Summary

## 26: James Donlon Blvd & Contra Loma Blvd

No Bypass Cumulative AM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 				
Volume (veh/h)	194	457	2	10	1062	235	7	10	13	226	14	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	247	2114	9	19	1308	287	123	167	175	345	40	398
Arrive On Green	0.14	0.58	0.58	0.01	0.45	0.45	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1757	3672	15	1757	2933	643	259	605	637	1367	145	1444
Grp Volume(v), veh/h	211	250	249	11	722	687	33	0	0	246	0	164
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1731	1500	0	0	1367	0	1590
Q Serve(g_s), s	10.2	5.8	5.8	0.5	31.1	31.7	0.0	0.0	0.0	15.4	0.0	7.3
Cycle Q Clear(g_c), s	10.2	5.8	5.8	0.5	31.1	31.7	7.3	0.0	0.0	22.7	0.0	7.3
Prop In Lane	1.00		0.01	1.00		0.37	0.24		0.42	1.00		0.91
Lane Grp Cap(c), veh/h	247	1062	1061	19	823	772	465	0	0	345	0	438
V/C Ratio(X)	0.85	0.24	0.24	0.58	0.88	0.89	0.07	0.00	0.00	0.71	0.00	0.37
Avail Cap(c_a), veh/h	282	1062	1061	81	847	795	465	0	0	345	0	438
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.5	9.1	9.1	42.9	22.0	22.2	23.3	0.0	0.0	34.7	0.0	25.5
Incr Delay (d2), s/veh	19.8	0.1	0.1	25.4	10.2	11.9	0.1	0.0	0.0	6.8	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.9	2.4	2.4	0.4	16.2	15.7	0.5	0.0	0.0	6.0	0.0	2.9
Lane Grp Delay (d), s/veh	56.3	9.2	9.2	68.3	32.2	34.0	23.4	0.0	0.0	41.4	0.0	26.0
Lane Grp LOS	E	A	A	E	C	C	C			D		C
Approach Vol, veh/h		710			1420			33				410
Approach Delay, s/veh		23.2			33.4			23.4				35.2
Approach LOS		C			C			C				D
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	16.2	54.1		4.9	42.8			28.0				28.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	14.0	50.0		4.0	40.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	12.2	7.8		2.5	33.7			9.3				24.7
Green Ext Time (p_c), s	0.1	20.5		0.0	5.1			1.7				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
27: Lone Tree Way & James Donlon Blvd

No Bypass Cumulative AM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	208	55	521	12	124	85	1000	1270	10	54	950	162	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	
Lanes	1	1	2	0	1	1	2	2	1	1	3	0	
Cap, veh/h	294	308	1661	27	280	262	1236	2415	1026	75	1545	263	
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.36	0.65	0.65	0.04	0.33	0.33	
Sat Flow, veh/h	1757	1845	3136	161	1675	1568	3408	3689	1568	1757	4611	784	
Grp Volume(v), veh/h	226	60	566	148	0	92	1087	1380	11	59	826	383	
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1837	0	1568	1704	1845	1568	1757	1845	1706	
Q Serve(g_s), s	10.9	2.5	9.2	6.5	0.0	4.6	26.5	18.3	0.2	2.9	17.0	17.1	
Cycle Q Clear(g_c), s	10.9	2.5	9.2	6.5	0.0	4.6	26.5	18.3	0.2	2.9	17.0	17.1	
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.46	
Lane Grp Cap(c), veh/h	294	308	1661	307	0	262	1236	2415	1026	75	1236	572	
V/C Ratio(X)	0.77	0.19	0.34	0.48	0.00	0.35	0.88	0.57	0.01	0.78	0.67	0.67	
Avail Cap(c_a), veh/h	337	354	1738	332	0	283	1538	2622	1115	159	1290	597	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	35.3	31.8	12.0	33.4	0.0	32.7	26.4	8.4	5.3	42.0	25.3	25.3	
Incr Delay (d2), s/veh	9.1	0.3	0.1	1.2	0.0	0.8	5.2	0.3	0.0	15.9	1.3	2.7	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q (50%), veh/ln	5.5	1.2	3.3	3.1	0.0	1.9	11.9	7.4	0.1	1.6	7.9	7.6	
Lane Grp Delay (d), s/veh	44.4	32.1	12.1	34.6	0.0	33.5	31.7	8.7	5.3	57.9	26.5	28.0	
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C	
Approach Vol, veh/h	852						2478		1268				
Approach Delay, s/veh	22.1						18.8		28.4				
Approach LOS	C						B		C				
<b>Timer</b>													
Assigned Phs	4		8				5		2		1		6
Phs Duration (G+Y+Rc), s	18.8		18.8				36.1		62.0		7.8		33.7
Change Period (Y+Rc), s	4.0		4.0				4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s	17.0		16.0				40.0		63.0		8.0		31.0
Max Q Clear Time (g_c+I1), s	12.9		8.5				28.5		20.3		4.9		19.1
Green Ext Time (p_c), s	1.9		3.0				3.7		30.8		0.0		10.6
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			22.6										
HCM 2010 LOS			C										
<b>Notes</b>													

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr

No Bypass Cumulative AM























3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	26	0	107	0	0	0	61	524	3	0	1677	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	177	0	158	500	186	158	84	2870	1220	3	3624	68
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.05	0.78	0.78	0.00	0.67	0.67
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5415	101
Grp Volume(v), veh/h	28	0	116	0	0	0	66	570	3	0	1242	615
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1827
Q Serve(g_s), s	1.0	0.0	4.7	0.0	0.0	0.0	2.5	2.7	0.0	0.0	11.1	11.1
Cycle Q Clear(g_c), s	1.0	0.0	4.7	0.0	0.0	0.0	2.5	2.7	0.0	0.0	11.1	11.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	177	0	158	500	186	158	84	2870	1220	3	2469	1223
V/C Ratio(X)	0.16	0.00	0.73	0.00	0.00	0.00	0.78	0.20	0.00	0.00	0.50	0.50
Avail Cap(c_a), veh/h	426	0	381	1202	448	381	266	3806	1617	107	3470	1718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	0.0	28.8	0.0	0.0	0.0	31.0	1.9	1.6	0.0	5.4	5.4
Incr Delay (d2), s/veh	0.4	0.0	6.4	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	0.0	2.1	0.0	0.0	0.0	1.4	0.7	0.0	0.0	3.8	3.9
Lane Grp Delay (d), s/veh	27.5	0.0	35.2	0.0	0.0	0.0	45.7	2.0	1.6	0.0	5.6	5.8
Lane Grp LOS	C		D				D	A	A		A	A
Approach Vol, veh/h		144			0			639			1857	
Approach Delay, s/veh		33.7			0.0			6.5			5.6	
Approach LOS		C						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2			1	6
Phs Duration (G+Y+Rc), s		10.6			10.6		7.2	55.3			0.0	48.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0			16.0		10.0	68.0			4.0	62.0
Max Q Clear Time (g_c+I1), s		6.7			0.0		4.5	4.7			0.0	13.1
Green Ext Time (p_c), s		0.4			0.0		0.0	36.0			0.0	31.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				7.4								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

No Bypass Cumulative AM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	68	75	136	412	421	98	73	425	86	55	1581	396
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	94	209	178	468	1202	511	91	1975	387	77	1853	455
Arrive On Green	0.05	0.11	0.11	0.27	0.33	0.33	0.05	0.44	0.44	0.04	0.43	0.43
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4497	881	1757	4294	1054
Grp Volume(v), veh/h	74	82	148	448	458	107	79	377	178	60	1471	677
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1689	1757	1845	1659
Q Serve(g_s), s	4.8	4.8	10.8	29.2	11.1	5.7	5.2	7.4	7.7	3.9	43.9	45.6
Cycle Q Clear(g_c), s	4.8	4.8	10.8	29.2	11.1	5.7	5.2	7.4	7.7	3.9	43.9	45.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		0.64
Lane Grp Cap(c), veh/h	94	209	178	468	1202	511	91	1620	742	77	1592	716
V/C Ratio(X)	0.78	0.39	0.83	0.96	0.38	0.21	0.87	0.23	0.24	0.78	0.92	0.95
Avail Cap(c_a), veh/h	151	253	215	468	1202	511	91	1620	742	136	1616	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	47.9	50.5	42.1	30.2	28.4	54.8	20.4	20.5	55.1	31.3	31.8
Incr Delay (d2), s/veh	13.2	1.2	20.3	31.0	0.2	0.2	55.4	0.1	0.2	15.4	9.3	21.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.6	2.4	5.4	17.2	5.2	2.3	3.8	3.4	3.3	2.1	22.3	23.2
Lane Grp Delay (d), s/veh	67.6	49.1	70.8	73.0	30.4	28.6	110.2	20.5	20.6	70.5	40.6	52.7
Lane Grp LOS	E	D	E	E	C	C	F	C	C	E	D	D
Approach Vol, veh/h		304			1013			634			2208	
Approach Delay, s/veh		64.2			49.1			31.7			45.1	
Approach LOS		E			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.3	17.2		35.0	41.9		10.0	55.1		9.1	54.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	16.0		31.0	37.0		6.0	48.0		9.0	51.0	
Max Q Clear Time (g_c+I1), s	6.8	12.8		31.2	13.1		7.2	9.7		5.9	47.6	
Green Ext Time (p_c), s	0.0	0.4		0.0	5.1		0.0	29.9		0.0	2.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				45.4								
HCM 2010 LOS				D								
<b>Notes</b>												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	225	384	37	485	1277	146	165	325	183	288	1115	553
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	301	1257	0	606	1751	0	234	1914	542	379	2149	609
Arrive On Green	0.09	0.23	0.00	0.18	0.32	0.00	0.07	0.35	0.35	0.11	0.39	0.39
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	245	417	0	527	1388	0	179	353	199	313	1212	601
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	8.2	7.3	0.0	17.4	26.5	0.0	6.0	5.2	11.0	10.4	19.9	44.0
Cycle Q Clear(g_c), s	8.2	7.3	0.0	17.4	26.5	0.0	6.0	5.2	11.0	10.4	19.9	44.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	301	1257	0	606	1751	0	234	1914	542	379	2149	609
V/C Ratio(X)	0.81	0.33	0.00	0.87	0.79	0.00	0.76	0.18	0.37	0.83	0.56	0.99
Avail Cap(c_a), veh/h	324	1257	0	765	1910	0	235	1914	542	500	2149	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	37.4	0.0	46.3	36.1	0.0	53.0	26.5	28.4	50.4	27.7	35.1
Incr Delay (d2), s/veh	13.8	0.2	0.0	8.9	2.2	0.0	13.8	0.0	0.4	8.4	0.3	33.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.2	3.5	0.0	8.4	12.8	0.0	3.1	2.4	4.4	5.0	9.2	22.8
Lane Grp Delay (d), s/veh	65.6	37.6	0.0	55.2	38.3	0.0	66.8	26.5	28.8	58.8	28.1	68.2
Lane Grp LOS	E	D		E	D		E	C	C	E	C	E
Approach Vol, veh/h		662			1915			731			2126	
Approach Delay, s/veh		48.0			43.0			37.0			43.9	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	14.2	30.3		24.6	40.7		12.0	44.1		16.9	49.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	25.0		26.0	40.0		8.0	36.0		17.0	45.0	
Max Q Clear Time (g_c+I1), s	10.2	9.3		19.4	28.5		8.0	13.0		12.4	46.0	
Green Ext Time (p_c), s	0.1	10.9		1.2	8.1		0.0	15.8		0.5	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				43.2								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 31: Un Rd & Buchanan Rd















No Bypass Cumulative AM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	590	5	10	1090	12	7	0	31	8	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	18	2372	18	20	2367	26	236	0	71	210	0	71
Arrive On Green	0.01	0.65	0.65	0.01	0.65	0.65	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1757	3656	29	1757	3642	40	1393	0	1568	1356	0	1568
Grp Volume(v), veh/h	10	323	323	11	600	598	8	0	34	9	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1838	1393	0	1568	1356	0	1568
Q Serve(g_s), s	0.2	3.0	3.0	0.3	6.9	6.9	0.2	0.0	0.9	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.2	3.0	3.0	0.3	6.9	6.9	0.3	0.0	0.9	1.1	0.0	0.1
Prop In Lane	1.00		0.02	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1197	1194	20	1199	1194	236	0	71	210	0	71
V/C Ratio(X)	0.54	0.27	0.27	0.54	0.50	0.50	0.03	0.00	0.48	0.04	0.00	0.06
Avail Cap(c_a), veh/h	302	3799	3789	302	3799	3785	754	0	654	713	0	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.1	3.0	3.1	20.1	3.7	3.7	18.8	0.0	19.0	19.5	0.0	18.6
Incr Delay (d2), s/veh	22.5	0.1	0.1	20.9	0.3	0.3	0.1	0.0	4.9	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.7	0.7	0.2	1.4	1.4	0.1	0.0	0.4	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	42.6	3.2	3.2	41.0	4.0	4.0	18.8	0.0	23.9	19.6	0.0	19.0
Lane Grp LOS	D	A	A	D	A	A	B		C	B		B
Approach Vol, veh/h		656			1209			42				13
Approach Delay, s/veh		3.8			4.4			22.9				19.4
Approach LOS		A			A			C				B
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	30.5		4.5	30.5			5.9				5.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	7.0	84.0		7.0	84.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	2.2	5.0		2.3	8.9			2.9				3.1
Green Ext Time (p_c), s	0.0	17.7		0.0	17.6			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.7								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd

No Bypass Cumulative AM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			 
Volume (veh/h)	110	321	770	80	106	326
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	157	2136	1366	142	479	428
Arrive On Green	0.09	0.58	0.42	0.42	0.27	0.27
Sat Flow, veh/h	1757	3689	3287	342	1757	1568
Grp Volume(v), veh/h	120	349	470	454	115	354
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1784	1757	1568
Q Serve(g_s), s	3.6	2.4	10.8	10.8	2.7	11.4
Cycle Q Clear(g_c), s	3.6	2.4	10.8	10.8	2.7	11.4
Prop In Lane	1.00			0.19	1.00	1.00
Lane Grp Cap(c), veh/h	157	2136	767	742	479	428
V/C Ratio(X)	0.77	0.16	0.61	0.61	0.24	0.83
Avail Cap(c_a), veh/h	456	3897	1333	1289	814	726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	5.3	12.4	12.4	15.3	18.4
Incr Delay (d2), s/veh	7.6	0.0	0.8	0.8	0.3	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.8	4.5	4.3	1.2	9.6
Lane Grp Delay (d), s/veh	31.6	5.3	13.2	13.2	15.5	22.6
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		469	924		469	
Approach Delay, s/veh		12.0	13.2		20.8	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	8.8	35.2	26.4			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	57.0	39.0			
Max Q Clear Time (g_c+I1), s	5.6	4.4	12.8			
Green Ext Time (p_c), s	0.2	11.5	9.7			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			14.8			
HCM 2010 LOS			B			
<b>Notes</b>						

### HCM 2010 Signalized Intersection Summary 33: Somersville Rd & Fairview Dr

No Bypass Cumulative AM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	92	0	0	0	814	628	0	2	194	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	212	0	130	66	153	0	930	2977	0	2	883	120
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.53	0.81	0.00	0.00	0.56	0.56
Sat Flow, veh/h	1757	0	1568	1277	1845	0	1757	3689	0	1757	3182	431
Grp Volume(v), veh/h	50	0	100	0	0	0	885	683	0	2	121	119
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1277	1845	0	1757	1845	0	1757	1845	1769
Q Serve(g_s), s	2.9	0.0	6.8	0.0	0.0	0.0	52.1	4.8	0.0	0.1	3.7	3.8
Cycle Q Clear(g_c), s	2.9	0.0	6.8	0.0	0.0	0.0	52.1	4.8	0.0	0.1	3.7	3.8
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.24
Lane Grp Cap(c), veh/h	212	0	130	66	153	0	930	2977	0	2	512	491
V/C Ratio(X)	0.24	0.00	0.77	0.00	0.00	0.00	0.95	0.23	0.00	1.24	0.24	0.24
Avail Cap(c_a), veh/h	324	0	230	147	271	0	1224	2977	0	64	512	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.38	0.38	0.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	47.2	0.0	49.0	0.0	0.0	0.0	24.3	2.5	0.0	54.5	18.3	18.4
Incr Delay (d2), s/veh	0.6	0.0	9.1	0.0	0.0	0.0	6.3	0.1	0.0	421.1	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	0.0	3.1	0.0	0.0	0.0	23.8	1.7	0.0	0.2	1.7	1.7
Lane Grp Delay (d), s/veh	47.8	0.0	58.1	0.0	0.0	0.0	30.7	2.6	0.0	475.6	19.4	19.5
Lane Grp LOS	D		E				C	A		F	B	B
Approach Vol, veh/h		150			0			1568			242	
Approach Delay, s/veh		54.6			0.0			18.4			23.2	
Approach LOS		D						B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.1			13.1		61.7	92.0		4.0		34.3
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		76.0	88.0		4.0		16.0
Max Q Clear Time (g_c+I1), s		8.8			0.0		54.1	6.8		2.1		5.8
Green Ext Time (p_c), s		0.3			0.0		3.6	5.7		0.0		0.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					21.8							
HCM 2010 LOS					C							
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

No Bypass Cumulative AM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	376	150	24	500	8	608	7	32	9	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	23	574	226	41	861	14	856	9	885	216	43	27
Arrive On Green	0.01	0.23	0.23	0.02	0.24	0.24	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1757	2521	993	1757	3619	60	1321	16	1568	215	77	49
Grp Volume(v), veh/h	13	298	274	26	277	275	669	0	35	14	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1669	1757	1845	1834	1337	0	1568	340	0	0
Q Serve(g_s), s	0.5	9.7	9.9	1.0	8.7	8.8	0.0	0.0	0.6	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.5	9.7	9.9	1.0	8.7	8.8	29.0	0.0	0.6	29.3	0.0	0.0
Prop In Lane	1.00		0.59	1.00		0.03	0.99		1.00	0.71		0.14
Lane Grp Cap(c), veh/h	23	420	380	41	439	436	865	0	885	287	0	0
V/C Ratio(X)	0.57	0.71	0.72	0.64	0.63	0.63	0.77	0.00	0.04	0.05	0.00	0.00
Avail Cap(c_a), veh/h	108	482	436	108	482	479	1301	0	1374	733	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.9	23.1	23.2	31.5	22.2	22.2	12.5	0.0	6.3	12.4	0.0	0.0
Incr Delay (d2), s/veh	21.0	4.1	4.9	15.7	2.3	2.3	1.7	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	4.8	4.5	0.6	4.1	4.1	8.6	0.0	0.2	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	52.9	27.2	28.1	47.2	24.5	24.5	14.1	0.0	6.3	12.5	0.0	0.0
Lane Grp LOS	D	C	C	D	C	C	B		A	B		
Approach Vol, veh/h		585			578			704				14
Approach Delay, s/veh		28.2			25.5			13.7				12.5
Approach LOS		C			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.8	18.8		5.5	19.5			40.7				40.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	17.0		4.0	17.0			57.0				57.0
Max Q Clear Time (g_c+I1), s	2.5	11.9		3.0	10.8			31.0				31.3
Green Ext Time (p_c), s	0.0	2.9		0.0	3.4			5.5				5.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.9								
HCM 2010 LOS				C								
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Cumulative PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↕↕	↕↕		↕	↕↕	↕
Volume (veh/h)	0	0	0	141	262	58	509	762	392	258	796	321
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				202	397	91	653	1140	582	320	1790	761
Arrive On Green				0.19	0.19	0.19	0.32	0.83	0.83	0.18	0.49	0.00
Sat Flow, veh/h				1039	2047	468	3408	2305	1177	1757	3689	1568
Grp Volume(v), veh/h				264	0	237	553	661	593	280	865	0
Grp Sat Flow(s),veh/h/ln				1793	0	1762	1704	1845	1637	1757	1845	1568
Q Serve(g_s), s				12.9	0.0	11.6	14.1	14.4	14.8	14.4	14.7	0.0
Cycle Q Clear(g_c), s				12.9	0.0	11.6	14.1	14.4	14.8	14.4	14.7	0.0
Prop In Lane				0.58		0.27	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h				348	0	342	653	913	810	320	1790	761
V/C Ratio(X)				0.76	0.00	0.69	0.85	0.72	0.73	0.88	0.48	0.00
Avail Cap(c_a), veh/h				733	0	720	1063	913	810	454	1790	761
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.66	0.66	0.66	1.00	1.00	0.00
Uniform Delay (d), s/veh				35.4	0.0	34.9	30.3	5.3	5.4	37.0	16.1	0.0
Incr Delay (d2), s/veh				3.4	0.0	2.5	2.4	3.3	3.9	12.9	0.9	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				6.1	0.0	5.4	5.6	3.7	3.4	7.6	6.6	0.0
Lane Grp Delay (d), s/veh				38.8	0.0	37.4	32.7	8.7	9.2	49.9	17.0	0.0
Lane Grp LOS				D		D	C	A	A	D	B	
Approach Vol, veh/h					501			1807			1145	
Approach Delay, s/veh					38.1			16.2			25.1	
Approach LOS					D			B			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					22.0		21.8	50.0		20.9	49.1	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s					14.9		16.1	16.8		16.4	16.7	
Green Ext Time (p_c), s					3.1		1.8	19.2		0.5	16.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay											22.3	
HCM 2010 LOS											C	
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Cumulative PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	575	0	823	0	0	0	0	943	122	83	591	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	722	758	1289				0	1715	222	204	1888	0
Arrive On Green	0.41	0.00	0.41				0.00	0.36	0.36	0.23	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4802	622	1757	3689	0
Grp Volume(v), veh/h	625	0	895				0	787	371	90	642	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1735	1757	1845	0
Q Serve(g_s), s	33.7	0.0	24.4				0.0	18.1	18.1	4.5	0.0	0.0
Cycle Q Clear(g_c), s	33.7	0.0	24.4				0.0	18.1	18.1	4.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.36	1.00		0.00
Lane Grp Cap(c), veh/h	722	758	1289				0	1318	620	204	1888	0
V/C Ratio(X)	0.87	0.00	0.69				0.00	0.60	0.60	0.44	0.34	0.00
Avail Cap(c_a), veh/h	1001	1051	1786				0	1318	620	204	1888	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	27.9	0.0	25.1				0.0	27.2	27.2	36.9	0.0	0.0
Incr Delay (d2), s/veh	6.0	0.0	0.7				0.0	2.0	4.2	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.6	0.0	9.4				0.0	8.7	8.6	2.0	0.1	0.0
Lane Grp Delay (d), s/veh	33.9	0.0	25.8				0.0	29.2	31.5	38.2	0.4	0.0
Lane Grp LOS	C		C					C	C	D	A	
Approach Vol, veh/h		1520						1158			732	
Approach Delay, s/veh		29.1						29.9			5.1	
Approach LOS		C						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		46.6						41.0		16.0	57.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		59.0						37.0		12.0	53.0	
Max Q Clear Time (g_c+I1), s		35.7						20.1		6.5	2.0	
Green Ext Time (p_c), s		6.9						7.4		2.2	5.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.2									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd




























Cumulative PM  
3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	226	832	165	104	317	222	68	593	148	492	902	281
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	273	904	179	118	789	335	94	717	305	531	1634	694
Arrive On Green	0.16	0.30	0.30	0.07	0.21	0.21	0.05	0.19	0.19	0.30	0.44	0.44
Sat Flow, veh/h	1757	2993	592	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	246	557	526	113	345	241	74	645	161	535	980	305
Grp Sat Flow(s),veh/h/ln	1757	1845	1740	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.4	36.0	36.0	7.6	9.7	9.0	5.0	20.3	9.2	36.0	24.0	16.0
Cycle Q Clear(g_c), s	16.4	36.0	36.0	7.6	9.7	9.0	5.0	20.3	9.2	36.0	24.0	16.0
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	557	526	118	789	335	94	717	305	531	1634	694
V/C Ratio(X)	0.90	1.00	1.00	0.96	0.44	0.72	0.79	0.90	0.53	1.01	0.60	0.44
Avail Cap(c_a), veh/h	295	557	526	118	789	335	147	743	316	531	1634	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	41.6	41.6	55.4	40.6	12.2	55.7	46.9	29.9	41.6	25.2	23.0
Incr Delay (d2), s/veh	27.6	38.0	39.4	69.6	0.4	7.2	13.5	13.6	1.5	41.1	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.5	22.9	21.8	5.8	4.6	4.0	2.6	10.9	3.8	22.3	11.2	6.3
Lane Grp Delay (d), s/veh	77.0	79.6	80.9	125.0	41.0	19.5	69.2	60.5	31.4	82.7	25.8	23.4
Lane Grp LOS	E	E	F	F	D	B	E	E	C	F	C	C
Approach Vol, veh/h		1329			699			880			1820	
Approach Delay, s/veh		79.7			47.2			55.9			42.1	
Approach LOS		E			D			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.5	40.0		12.0	29.5		10.4	27.2		40.0	56.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	20.0	36.0		8.0	24.0		10.0	24.0		36.0	50.0	
Max Q Clear Time (g_c+I1), s	18.4	38.0		9.6	11.7		7.0	22.3		38.0	26.0	
Green Ext Time (p_c), s	0.1	0.0		0.0	7.9		0.0	0.8		0.0	11.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			56.0									
HCM 2010 LOS			E									
<b>Notes</b>												















HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Cumulative PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	62	55	3	429	117	118	38	744	1049	112	584	127
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	280	294	250	543	294	250	74	2370	1007	149	2528	1074
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.04	0.64	0.64	0.08	0.69	0.69
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	67	60	3	466	127	128	41	809	1140	122	635	138
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.5	3.0	0.2	14.1	6.6	7.9	2.4	10.6	68.0	7.2	6.9	3.2
Cycle Q Clear(g_c), s	3.5	3.0	0.2	14.1	6.6	7.9	2.4	10.6	68.0	7.2	6.9	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	294	250	543	294	250	74	2370	1007	149	2528	1074
V/C Ratio(X)	0.24	0.20	0.01	0.86	0.43	0.51	0.55	0.34	1.13	0.82	0.25	0.13
Avail Cap(c_a), veh/h	299	314	267	580	314	267	266	2370	1007	166	2528	1074
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	38.7	37.5	43.3	40.2	40.7	49.7	8.7	18.9	47.6	6.3	5.8
Incr Delay (d2), s/veh	0.4	0.3	0.0	11.8	1.0	1.6	6.3	0.1	71.9	24.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	1.4	0.1	6.8	3.1	3.3	1.2	4.4	44.2	4.3	2.8	1.1
Lane Grp Delay (d), s/veh	39.3	39.0	37.5	55.1	41.2	42.4	56.0	8.8	90.9	72.0	6.4	5.8
Lane Grp LOS	D	D	D	E	D	D	E	A	F	E	A	A
Approach Vol, veh/h		130			721			1990			895	
Approach Delay, s/veh		39.1			50.4			56.8			15.2	
Approach LOS		D			D			E			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		20.9			20.9		8.5	72.0		13.0		76.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			18.0		16.0	68.0		10.0		62.0
Max Q Clear Time (g_c+I1), s		5.5			16.1		4.4	70.0		9.2		8.9
Green Ext Time (p_c), s		2.9			0.8		0.0	0.0		0.0		32.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				45.0								
HCM 2010 LOS				D								
<b>Notes</b>												





























HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

Cumulative PM  
3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	108	28	48	1723	830	186
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	160	143	65	2941	2056	460
Arrive On Green	0.09	0.09	0.04	0.80	0.70	0.70
Sat Flow, veh/h	1757	1568	1757	3689	2920	654
Grp Volume(v), veh/h	117	30	52	1873	570	534
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1729
Q Serve(g_s), s	4.6	1.3	2.1	15.0	9.5	9.5
Cycle Q Clear(g_c), s	4.6	1.3	2.1	15.0	9.5	9.5
Prop In Lane	1.00	1.00	1.00			0.38
Lane Grp Cap(c), veh/h	160	143	65	2941	1299	1218
V/C Ratio(X)	0.73	0.21	0.80	0.64	0.44	0.44
Avail Cap(c_a), veh/h	393	351	172	3403	1418	1329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	30.1	34.2	3.0	4.5	4.5
Incr Delay (d2), s/veh	6.3	0.7	19.4	0.3	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	0.0	1.3	4.3	3.4	3.2
Lane Grp Delay (d), s/veh	38.0	30.9	53.6	3.3	4.8	4.8
Lane Grp LOS	D	C	D	A	A	A
Approach Vol, veh/h	147			1925	1104	
Approach Delay, s/veh	36.5			4.7	4.8	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			6.7	61.0	54.4	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			7.0	66.0	55.0	
Max Q Clear Time (g_c+I1), s			4.1	17.0	11.5	
Green Ext Time (p_c), s			0.0	40.1	36.3	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			6.2			
HCM 2010 LOS			A			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Cumulative PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	104	1121	177	191	283	121	84	277	298	263	458	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	143	1299	552	216	1453	617	116	659	280	294	766	228
Arrive On Green	0.08	0.35	0.35	0.12	0.39	0.39	0.07	0.18	0.18	0.17	0.28	0.28
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2733	813
Grp Volume(v), veh/h	113	1218	192	208	308	132	91	301	324	286	335	312
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1701
Q Serve(g_s), s	5.7	28.6	8.1	10.5	4.9	5.0	4.6	6.5	16.0	14.5	14.3	14.5
Cycle Q Clear(g_c), s	5.7	28.6	8.1	10.5	4.9	5.0	4.6	6.5	16.0	14.5	14.3	14.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	143	1299	552	216	1453	617	116	659	280	294	517	477
V/C Ratio(X)	0.79	0.94	0.35	0.96	0.21	0.21	0.79	0.46	1.16	0.97	0.65	0.65
Avail Cap(c_a), veh/h	235	1319	560	216	1453	617	137	659	280	294	517	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	28.0	21.4	39.1	18.0	18.0	41.2	32.9	36.8	37.1	28.3	28.4
Incr Delay (d2), s/veh	9.4	12.6	0.4	50.8	0.1	0.2	22.0	0.5	102.9	44.6	2.8	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	15.1	3.2	7.7	2.2	1.9	2.8	3.1	14.3	10.1	6.9	6.6
Lane Grp Delay (d), s/veh	49.8	40.6	21.8	89.9	18.0	18.1	63.2	33.4	139.6	81.6	31.1	31.6
Lane Grp LOS	D	D	C	F	B	B	E	C	F	F	C	C
Approach Vol, veh/h		1523			648			716			933	
Approach Delay, s/veh		38.9			41.1			85.2			46.8	
Approach LOS		D			D			F			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.3	35.5		15.0	39.3		9.9	20.0		19.0	29.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	32.0		11.0	31.0		7.0	16.0		15.0	24.0	
Max Q Clear Time (g_c+I1), s	7.7	30.6		12.5	7.0		6.6	18.0		16.5	16.5	
Green Ext Time (p_c), s	0.1	1.0		0.0	13.9		0.0	0.0		0.0	4.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				49.9								
HCM 2010 LOS				D								
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Cumulative PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	1049	31	24	588	99	18	43	9	146	83	95
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	109	1238	37	32	1201	1021	30	73	16	179	105	121
Arrive On Green	0.06	0.69	0.69	0.02	0.65	0.65	0.02	0.05	0.05	0.10	0.13	0.13
Sat Flow, veh/h	1757	1782	53	1757	1845	1568	1757	1475	314	1757	786	900
Grp Volume(v), veh/h	86	0	1174	26	639	108	20	0	57	159	0	193
Grp Sat Flow(s),veh/h/ln	1757	0	1835	1757	1845	1568	1757	0	1789	1757	0	1686
Q Serve(g_s), s	5.7	0.0	64.0	1.7	21.8	3.0	1.3	0.0	3.7	10.6	0.0	13.2
Cycle Q Clear(g_c), s	5.7	0.0	64.0	1.7	21.8	3.0	1.3	0.0	3.7	10.6	0.0	13.2
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	109	0	1275	32	1201	1021	30	0	89	179	0	226
V/C Ratio(X)	0.79	0.00	0.92	0.81	0.53	0.11	0.66	0.00	0.64	0.89	0.00	0.85
Avail Cap(c_a), veh/h	179	0	1275	60	1201	1021	74	0	243	179	0	329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.27	0.00	0.27	0.63	0.63	0.63	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.6	0.0	15.3	57.7	11.0	7.7	57.6	0.0	55.1	52.4	0.0	50.0
Incr Delay (d2), s/veh	3.6	0.0	4.0	24.6	1.1	0.1	21.7	0.0	7.5	38.1	0.0	13.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	0.0	26.5	1.0	9.2	1.1	0.8	0.0	1.9	6.7	0.0	6.6
Lane Grp Delay (d), s/veh	58.2	0.0	19.3	82.3	12.0	7.8	79.3	0.0	62.6	90.5	0.0	63.6
Lane Grp LOS	E		B	F	B	A	E		E	F		E
Approach Vol, veh/h		1260			773			77				352
Approach Delay, s/veh		21.9			13.8			66.9				75.8
Approach LOS		C			B			E				E
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	11.3	86.0		6.2	80.9		6.0	9.9		16.0		19.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	82.0		4.0	74.0		5.0	16.0		12.0		23.0
Max Q Clear Time (g_c+I1), s	7.7	66.0		3.7	23.8		3.3	5.7		12.6		15.2
Green Ext Time (p_c), s	0.1	9.1		0.0	5.4		0.0	0.2		0.0		0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.5								
HCM 2010 LOS				C								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

Cumulative PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 						 	
Volume (veh/h)	32	721	25	638	284	90	44	26	268	78	65	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	51	1324	46	1018	2373	1009	357	375	319	357	317	49
Arrive On Green	0.03	0.37	0.37	0.30	0.64	0.64	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1757	3546	122	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	35	408	403	693	309	98	48	28	291	85	0	82
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.9	17.1	17.1	17.3	3.1	2.3	2.2	1.2	17.5	3.9	0.0	3.7
Cycle Q Clear(g_c), s	1.9	17.1	17.1	17.3	3.1	2.3	2.2	1.2	17.5	3.9	0.0	3.7
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	51	689	681	1018	2373	1009	357	375	319	357	0	366
V/C Ratio(X)	0.69	0.59	0.59	0.68	0.13	0.10	0.13	0.07	0.91	0.24	0.00	0.22
Avail Cap(c_a), veh/h	109	689	681	1132	2373	1009	365	383	325	357	0	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.4	24.3	24.3	29.7	6.7	6.5	31.5	31.1	37.6	32.1	0.0	32.1
Incr Delay (d2), s/veh	15.1	3.7	3.8	1.2	0.1	0.2	0.2	0.1	28.6	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	8.5	8.4	7.5	1.3	0.8	1.0	0.6	9.4	1.8	0.0	1.7
Lane Grp Delay (d), s/veh	61.5	28.0	28.0	30.9	6.8	6.7	31.6	31.1	66.2	32.5	0.0	32.4
Lane Grp LOS	E	C	C	C	A	A	C	C	E	C		C
Approach Vol, veh/h		846			1100			367				167
Approach Delay, s/veh		29.4			22.0			59.0				32.4
Approach LOS		C			C			E				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.8	40.0		32.8	66.0			23.6				23.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	36.0		32.0	62.0			20.0				16.0
Max Q Clear Time (g_c+I1), s	3.9	19.1		19.3	5.1			19.5				5.9
Green Ext Time (p_c), s	0.7	4.8		2.4	2.6			0.1				1.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd

Cumulative PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	333	315	390	94	164	19	482	617	213	19	196	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	473	586	498	179	750	87	847	1087	376	33	681	289
Arrive On Green	0.14	0.32	0.32	0.05	0.23	0.23	0.25	0.41	0.41	0.02	0.18	0.18
Sat Flow, veh/h	3408	1845	1568	3408	3245	378	3408	2623	907	1757	3689	1568
Grp Volume(v), veh/h	362	342	424	102	100	99	524	472	431	21	213	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1778	1704	1845	1685	1757	1845	1568
Q Serve(g_s), s	8.3	12.6	20.6	2.4	3.6	3.7	11.1	16.4	16.4	1.0	4.1	10.6
Cycle Q Clear(g_c), s	8.3	12.6	20.6	2.4	3.6	3.7	11.1	16.4	16.4	1.0	4.1	10.6
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	473	586	498	179	427	411	847	764	698	33	681	289
V/C Ratio(X)	0.76	0.58	0.85	0.57	0.23	0.24	0.62	0.62	0.62	0.64	0.31	1.08
Avail Cap(c_a), veh/h	881	840	714	294	522	503	1174	1249	1140	108	1453	617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	23.2	25.9	37.6	25.4	25.4	27.1	18.7	18.7	39.6	28.7	16.7
Incr Delay (d2), s/veh	2.6	0.9	6.8	2.8	0.3	0.3	0.7	0.8	0.9	19.2	0.3	49.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	5.9	8.7	1.1	1.7	1.7	4.7	7.4	6.8	0.6	1.9	7.9
Lane Grp Delay (d), s/veh	36.3	24.2	32.8	40.4	25.7	25.7	27.9	19.5	19.6	58.8	28.9	65.7
Lane Grp LOS	D	C	C	D	C	C	C	B	B	E	C	F
Approach Vol, veh/h		1128			301			1427			546	
Approach Delay, s/veh		31.3			30.7			22.6			51.1	
Approach LOS		C			C			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	15.3	29.8		8.3	22.8		24.2	37.7		5.5	19.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	21.0	37.0		7.0	23.0		28.0	55.0		5.0	32.0	
Max Q Clear Time (g_c+I1), s	10.3	22.6		4.4	5.7		13.1	18.4		3.0	12.6	
Green Ext Time (p_c), s	1.0	3.3		0.4	1.3		7.1	10.1		0.0	2.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.8								
HCM 2010 LOS				C								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Cumulative PM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	839	0	499	0	0	0	0	708	409	139	543	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1359	0	625				0	1490	633	306	1953	0
Arrive On Green	0.40	0.00	0.40				0.00	0.40	0.40	0.09	0.53	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	912	0	542				0	770	445	151	590	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	24.5	0.0	35.4				0.0	17.5	26.3	4.7	10.0	0.0
Cycle Q Clear(g_c), s	24.5	0.0	35.4				0.0	17.5	26.3	4.7	10.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1359	0	625				0	1490	633	306	1953	0
V/C Ratio(X)	0.67	0.00	0.87				0.00	0.52	0.70	0.49	0.30	0.00
Avail Cap(c_a), veh/h	1621	0	746				0	1490	633	306	1953	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.88	0.88	0.00
Uniform Delay (d), s/veh	27.5	0.0	30.8				0.0	25.0	27.7	48.3	14.7	0.0
Incr Delay (d2), s/veh	0.8	0.0	9.3				0.0	1.3	6.4	1.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.4	0.0	15.3				0.0	8.3	11.4	2.1	4.5	0.0
Lane Grp Delay (d), s/veh	28.3	0.0	40.0				0.0	26.3	34.1	49.4	15.0	0.0
Lane Grp LOS	C		D					C	C	D	B	
Approach Vol, veh/h		1454						1215			741	
Approach Delay, s/veh		32.7						29.2			22.0	
Approach LOS		C						C			C	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		48.5						49.0		14.0	63.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		53.0						45.0		10.0	59.0	
Max Q Clear Time (g_c+I1), s		37.4						28.3		6.7	12.0	
Green Ext Time (p_c), s		7.1						6.6		1.4	5.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			29.1									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd













Cumulative PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	567	1167	208	234	430	148	198	487	166	260	419	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	717	1594	678	321	1165	495	248	798	339	353	658	280
Arrive On Green	0.21	0.43	0.43	0.09	0.32	0.32	0.14	0.22	0.22	0.10	0.18	0.18
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	616	1268	226	254	467	161	215	529	180	283	455	143
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	18.1	30.9	9.9	7.6	10.3	8.1	12.5	13.6	10.6	8.4	12.0	8.6
Cycle Q Clear(g_c), s	18.1	30.9	9.9	7.6	10.3	8.1	12.5	13.6	10.6	8.4	12.0	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	717	1594	678	321	1165	495	248	798	339	353	658	280
V/C Ratio(X)	0.86	0.80	0.33	0.79	0.40	0.33	0.87	0.66	0.53	0.80	0.69	0.51
Avail Cap(c_a), veh/h	983	1774	754	393	1165	495	338	993	422	459	780	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	25.5	19.6	46.1	27.9	27.1	43.7	37.3	36.1	45.6	40.0	38.6
Incr Delay (d2), s/veh	5.8	2.4	0.3	8.7	0.2	0.4	15.9	1.2	1.3	7.6	2.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.4	14.6	3.8	3.7	4.8	3.2	6.7	6.5	4.3	4.1	5.9	3.5
Lane Grp Delay (d), s/veh	45.4	27.9	19.9	54.8	28.1	27.5	59.5	38.5	37.4	53.1	42.1	40.1
Lane Grp LOS	D	C	B	D	C	C	E	D	D	D	D	D
Approach Vol, veh/h		2110			882			924			881	
Approach Delay, s/veh		32.2			35.7			43.2			45.3	
Approach LOS		C			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	25.9	48.9		13.8	36.8		18.7	26.5		14.8	22.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	30.0	50.0		12.0	32.0		20.0	28.0		14.0	22.0	
Max Q Clear Time (g_c+I1), s	20.1	32.9		9.6	12.3		14.5	15.6		10.4	14.0	
Green Ext Time (p_c), s	1.8	12.0		0.2	13.7		0.3	6.1		0.3	4.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				37.3								
HCM 2010 LOS				D								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

Cumulative PM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	152	987	476	241	448	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	192	1185	926	787	518	462
Arrive On Green	0.11	0.64	0.50	0.50	0.29	0.29
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	165	1073	517	262	487	315
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	11.8	63.4	24.8	12.8	34.5	22.6
Cycle Q Clear(g_c), s	11.8	63.4	24.8	12.8	34.5	22.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	192	1185	926	787	518	462
V/C Ratio(X)	0.86	0.91	0.56	0.33	0.94	0.68
Avail Cap(c_a), veh/h	289	1185	926	787	551	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.76	0.76	1.00	1.00
Uniform Delay (d), s/veh	55.8	19.5	22.0	19.0	43.9	39.7
Incr Delay (d2), s/veh	8.8	6.8	1.9	0.9	23.8	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.7	28.5	11.4	5.0	19.1	0.5
Lane Grp Delay (d), s/veh	64.6	26.3	23.9	19.9	67.7	43.3
Lane Grp LOS	E	C	C	B	E	D
Approach Vol, veh/h		1238	779		802	
Approach Delay, s/veh		31.4	22.5		58.1	
Approach LOS		C	C		E	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	18.0	86.0	68.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	21.0	82.0	57.0			
Max Q Clear Time (g_c+I1), s	13.8	65.4	26.8			
Green Ext Time (p_c), s	0.2	11.4	16.9			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			36.5			
HCM 2010 LOS			D			
<b>Notes</b>						

**HCM 2010 Signalized Intersection Summary**  
**13: Ventura Dr & Buchanan Rd**

**Cumulative PM**  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑	↗	↵	↗		↵	↗		↵	↗	
Volume (veh/h)	7	1171	260	70	578	12	175	23	76	199	104	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	59	1245	1058	88	1246	26	195	66	218	207	267	47
Arrive On Green	0.03	0.68	0.68	0.05	0.69	0.69	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1757	1845	1568	1757	1801	37	1239	376	1248	1268	1527	270
Grp Volume(v), veh/h	8	1273	283	76	0	641	190	0	108	216	0	133
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1838	1239	0	1624	1268	0	1797
Q Serve(g_s), s	0.5	81.0	8.6	5.2	0.0	19.8	13.1	0.0	7.1	13.9	0.0	7.9
Cycle Q Clear(g_c), s	0.5	81.0	8.6	5.2	0.0	19.8	21.0	0.0	7.1	21.0	0.0	7.9
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.77	1.00		0.15
Lane Grp Cap(c), veh/h	59	1245	1058	88	0	1271	195	0	284	207	0	314
V/C Ratio(X)	0.14	1.02	0.27	0.87	0.00	0.50	0.97	0.00	0.38	1.04	0.00	0.42
Avail Cap(c_a), veh/h	59	1245	1058	88	0	1271	195	0	284	207	0	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.28	0.28	0.28	0.89	0.00	0.89	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	19.5	7.7	56.6	0.0	8.8	55.3	0.0	43.7	55.0	0.0	44.1
Incr Delay (d2), s/veh	0.3	19.6	0.2	50.5	0.0	1.3	56.6	0.0	0.8	73.8	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	38.6	2.9	3.5	0.0	7.9	9.0	0.0	3.0	10.7	0.0	3.7
Lane Grp Delay (d), s/veh	56.6	39.1	7.9	107.1	0.0	10.0	111.9	0.0	44.6	128.9	0.0	45.0
Lane Grp LOS	E	F	A	F		B	F		D	F		D
Approach Vol, veh/h		1564			717			298				349
Approach Delay, s/veh		33.5			20.3			87.5				96.9
Approach LOS		C			C			F				F
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	8.0	85.0		10.0	87.0			25.0				25.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	81.0		6.0	83.0			21.0				21.0
Max Q Clear Time (g_c+I1), s	2.5	83.0		7.2	21.8			23.0				23.0
Green Ext Time (p_c), s	1.3	0.0		0.0	5.0			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			43.3									
HCM 2010 LOS			D									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

Cumulative PM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	128	0	0	216	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	27	57	0	27	57	0	27	697	0	27	697	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.38	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	1845	0	1757	1845	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	139	0	0	235	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	1845	0	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	27	57	0	27	57	0	27	697	0	27	697	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.34	0.00
Avail Cap(c_a), veh/h	1093	9179	0	1093	9179	0	1093	14341	0	1093	14341	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.7	0.0
Lane Grp LOS								A			A	
Approach Vol, veh/h		0			0			139			235	
Approach Delay, s/veh		0.0			0.0			1.5			1.7	
Approach LOS								A			A	
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7	4	
Phs Duration (G+Y+Rc), s	0.0	0.0		0.0	0.0		0.0	6.4		0.0	6.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0		4.0	50.0		4.0	50.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0		0.0	2.3		0.0	2.6	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	2.4		0.0	2.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				1.6								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr























Cumulative PM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	58	0	0	0	0	34	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	20	41	0	114	239	0	20	0	62	20	72	0
Arrive On Green	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	63	0	0	0	0	37	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	20	41	0	114	239	0	20	0	62	20	72	0
V/C Ratio(X)	0.00	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00
Avail Cap(c_a), veh/h	787	6611	0	6099	17766	0	787	0	4039	787	4751	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.1	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0	13.3	0.0	0.0	0.0
Lane Grp LOS	A						B					
Approach Vol, veh/h	0			63			37			0		
Approach Delay, s/veh	0.0			8.2			13.3			0.0		
Approach LOS	A			B			B			A		
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.6	4.6		0.0	4.4		0.0	4.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		31.0	43.0		4.0	23.0		4.0	23.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.3	0.0		0.0	2.2		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0		0.0	0.1		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				10.1								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy







Cumulative PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	381	140	256	214	71	25	444	551	130	27	817	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	718	389	330	718	275	96	813	2773	640	40	1840	417
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.40	1.00	1.00	0.02	0.42	0.42
Sat Flow, veh/h	3408	1845	1568	3408	1306	458	3408	4352	1004	1757	4370	989
Grp Volume(v), veh/h	414	152	278	233	0	104	483	506	234	29	749	341
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1764	1704	1845	1667	1757	1845	1670
Q Serve(g_s), s	10.1	6.6	15.8	5.4	0.0	4.6	10.3	0.0	0.0	1.5	13.7	13.8
Cycle Q Clear(g_c), s	10.1	6.6	15.8	5.4	0.0	4.6	10.3	0.0	0.0	1.5	13.7	13.8
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.60	1.00		0.59
Lane Grp Cap(c), veh/h	718	389	330	718	0	371	813	2350	1062	40	1554	703
V/C Ratio(X)	0.58	0.39	0.84	0.32	0.00	0.28	0.59	0.22	0.22	0.73	0.48	0.48
Avail Cap(c_a), veh/h	846	458	389	718	0	371	957	2350	1062	114	1554	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	31.4	35.1	31.0	0.0	30.7	24.3	0.0	0.0	45.0	19.5	19.5
Incr Delay (d2), s/veh	0.7	0.6	13.5	0.3	0.0	0.4	0.7	0.2	0.4	22.0	1.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.4	3.2	7.4	2.3	0.0	2.1	4.0	0.1	0.1	0.9	6.3	6.1
Lane Grp Delay (d), s/veh	33.6	32.1	48.5	31.2	0.0	31.1	25.0	0.2	0.4	67.0	20.5	21.9
Lane Grp LOS	C	C	D	C		C	C	A	A	E	C	C
Approach Vol, veh/h	844				337			1223			1119	
Approach Delay, s/veh	38.2				31.2			10.0			22.2	
Approach LOS	D				C			B			C	
<b>Timer</b>												
Assigned Phs	4				8			5	2			6
Phs Duration (G+Y+Rc), s	23.5				23.5			26.1	63.0			43.0
Change Period (Y+Rc), s	4.0				4.0			4.0	4.0			4.0
Max Green Setting (Gmax), s	23.0				16.0			26.0	59.0			39.0
Max Q Clear Time (g_c+I1), s	17.8				7.4			12.3	2.0			15.8
Green Ext Time (p_c), s	1.8				3.4			5.8	8.5			8.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			22.7									
HCM 2010 LOS			C									
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Cumulative PM  
 3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↗	↗	↖↗	↑↑↑	↑↑↑	↗
Volume (veh/h)	382	404	282	641	971	312
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	1055	486	388	3423	2595	735
Arrive On Green	0.31	0.31	0.04	0.20	0.47	0.47
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	415	439	307	697	1055	339
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	10.7	29.9	10.0	11.7	14.0	16.3
Cycle Q Clear(g_c), s	10.7	29.9	10.0	11.7	14.0	16.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1055	486	388	3423	2595	735
V/C Ratio(X)	0.39	0.90	0.79	0.20	0.41	0.46
Avail Cap(c_a), veh/h	1314	604	642	3423	2595	735
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.94	0.94	0.77	0.77
Uniform Delay (d), s/veh	30.3	36.9	52.4	21.6	19.4	20.1
Incr Delay (d2), s/veh	0.2	14.9	3.5	0.1	0.4	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.6	2.0	4.8	5.9	6.4	6.6
Lane Grp Delay (d), s/veh	30.5	51.8	55.8	21.7	19.8	21.7
Lane Grp LOS	C	D	E	C	B	C
Approach Vol, veh/h	854			1004	1394	
Approach Delay, s/veh	41.4			32.1	20.3	
Approach LOS	D			C	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			16.7	73.0	56.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			21.0	69.0	44.0	
Max Q Clear Time (g_c+I1), s			12.0	13.7	18.3	
Green Ext Time (p_c), s			0.7	23.9	16.1	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			29.5			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Cumulative PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	232	416	0	0	0	0	779	667	480	988	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	580	314	534				0	3097	878	574	4217	0
Arrive On Green	0.17	0.17	0.17				0.00	1.00	1.00	0.34	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	299	252	452				0	847	725	522	1074	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	9.4	15.5	16.5				0.0	0.0	0.0	17.3	0.0	0.0
Cycle Q Clear(g_c), s	9.4	15.5	16.5				0.0	0.0	0.0	17.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	580	314	534				0	3097	878	574	4217	0
V/C Ratio(X)	0.52	0.80	0.85				0.00	0.27	0.83	0.91	0.25	0.00
Avail Cap(c_a), veh/h	635	344	584				0	3097	878	635	4217	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.77	0.77	0.88	0.88	0.00
Uniform Delay (d), s/veh	44.6	47.1	47.5				0.0	0.0	0.0	38.3	0.0	0.0
Incr Delay (d2), s/veh	0.7	11.9	10.4				0.0	0.2	6.9	14.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.2	8.5	7.5				0.0	0.0	1.7	7.9	0.0	0.0
Lane Grp Delay (d), s/veh	45.3	59.0	57.9				0.0	0.2	6.9	53.0	0.1	0.0
Lane Grp LOS	D	E	E					A	A	D	A	
Approach Vol, veh/h		1003						1572			1596	
Approach Delay, s/veh		54.4						3.3			17.4	
Approach LOS		D						A			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		24.1						70.1		23.9	94.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		22.0						64.0		22.0	90.0	
Max Q Clear Time (g_c+I1), s		18.5						2.0		19.3	2.0	
Green Ext Time (p_c), s		1.6						34.5		0.6	40.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			21.0									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

Cumulative PM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	438	371	33	47	143	410	54	608	24	429	547	245
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1141	559	50	588	617	525	65	1775	70	577	1726	733
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.01	0.11	0.11	0.28	0.78	0.78
Sat Flow, veh/h	3408	1669	149	1757	1845	1568	1757	5290	207	3408	3689	1568
Grp Volume(v), veh/h	476	0	439	51	155	446	59	460	227	466	595	266
Grp Sat Flow(s),veh/h/ln	1704	0	1818	1757	1845	1568	1757	1845	1808	1704	1845	1568
Q Serve(g_s), s	8.1	0.0	15.8	1.5	4.6	19.8	2.5	8.7	8.7	9.5	3.6	3.9
Cycle Q Clear(g_c), s	8.1	0.0	15.8	1.5	4.6	19.8	2.5	8.7	8.7	9.5	3.6	3.9
Prop In Lane	1.00		0.08	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	1141	0	609	588	617	525	65	1238	607	577	1726	733
V/C Ratio(X)	0.42	0.00	0.72	0.09	0.25	0.85	0.90	0.37	0.37	0.81	0.34	0.36
Avail Cap(c_a), veh/h	1594	0	850	588	617	525	211	1238	607	911	1726	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.95	0.95	0.96	0.96	0.96	0.93	0.93	0.93
Uniform Delay (d), s/veh	19.2	0.0	21.8	17.1	18.1	23.1	36.8	26.0	26.0	25.7	4.8	4.8
Incr Delay (d2), s/veh	0.2	0.0	1.8	0.1	0.2	12.0	31.0	0.8	1.7	2.8	0.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	0.0	7.1	0.6	2.0	9.2	1.7	4.4	4.5	3.7	1.3	1.3
Lane Grp Delay (d), s/veh	19.5	0.0	23.7	17.1	18.3	35.1	67.8	26.8	27.7	28.4	5.3	6.1
Lane Grp LOS	B		C	B	B	D	E	C	C	C	A	A
Approach Vol, veh/h		915			652			746			1327	
Approach Delay, s/veh		21.5			29.7			30.3			13.6	
Approach LOS		C			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		29.0			29.0		6.8	29.1		16.7		39.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0			25.0		9.0	24.0		20.0		35.0
Max Q Clear Time (g_c+I1), s		17.8			21.8		4.5	10.7		11.5		5.9
Green Ext Time (p_c), s		7.2			2.2		0.1	3.9		1.2		5.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					21.9							
HCM 2010 LOS					C							
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Cumulative PM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	335	490	690	32	223	129	253	283	22	264	613	278
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	406	1406	597	45	324	275	315	790	61	330	894	380
Arrive On Green	0.23	0.38	0.00	0.03	0.18	0.00	0.18	0.23	0.23	0.19	0.24	0.24
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3381	262	1757	3689	1568
Grp Volume(v), veh/h	364	533	0	35	242	0	275	167	165	287	666	242
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1798	1757	1845	1568
Q Serve(g_s), s	18.7	9.7	0.0	1.8	11.6	0.0	14.2	7.1	7.2	14.8	15.5	12.9
Cycle Q Clear(g_c), s	18.7	9.7	0.0	1.8	11.6	0.0	14.2	7.1	7.2	14.8	15.5	12.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	406	1406	597	45	324	275	315	431	420	330	894	380
V/C Ratio(X)	0.90	0.38	0.00	0.78	0.75	0.00	0.87	0.39	0.39	0.87	0.74	0.64
Avail Cap(c_a), veh/h	585	1823	775	113	416	354	453	431	420	585	1110	472
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	20.8	0.0	45.1	36.4	0.0	37.2	30.0	30.1	36.7	32.6	31.6
Incr Delay (d2), s/veh	12.4	0.2	0.0	24.4	5.4	0.0	12.5	0.6	0.6	7.0	2.2	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.4	4.3	0.0	1.1	5.9	0.0	7.4	3.4	3.3	7.2	7.5	5.2
Lane Grp Delay (d), s/veh	47.1	21.0	0.0	69.5	41.8	0.0	49.7	30.6	30.7	43.7	34.7	33.5
Lane Grp LOS	D	C		E	D		D	C	C	D	C	C
Approach Vol, veh/h		897			277			607			1195	
Approach Delay, s/veh		31.6			45.3			39.3			36.7	
Approach LOS		C			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	25.5	39.5		6.4	20.3		20.7	25.8		21.5		26.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	31.0	46.0		6.0	21.0		24.0	21.0		31.0		28.0
Max Q Clear Time (g_c+I1), s	20.7	11.7		3.8	13.6		16.2	9.2		16.8		17.5
Green Ext Time (p_c), s	0.8	5.3		0.0	2.8		0.5	5.7		0.7		5.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				36.5								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

Cumulative PM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	18	0	13	14	369	0	7	4	1244	5	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	72	247	0	25	149	63	4	73	37	1746	1220	2074
Arrive On Green	0.04	0.07	0.00	0.01	0.04	0.00	0.00	0.06	0.06	0.51	0.66	0.66
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	1161	581	3408	1845	3136
Grp Volume(v), veh/h	50	20	0	14	15	0	0	0	12	1352	5	86
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1742	1704	1845	1568
Q Serve(g_s), s	1.3	0.2	0.0	0.4	0.2	0.0	0.0	0.0	0.3	14.9	0.0	0.2
Cycle Q Clear(g_c), s	1.3	0.2	0.0	0.4	0.2	0.0	0.0	0.0	0.3	14.9	0.0	0.2
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	72	247	0	25	149	63	4	0	110	1746	1220	2074
V/C Ratio(X)	0.70	0.08	0.00	0.56	0.10	0.00	0.00	0.00	0.11	0.77	0.00	0.04
Avail Cap(c_a), veh/h	264	1980	0	151	1742	740	151	0	673	4169	2811	4779
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	20.4	0.0	22.8	21.5	0.0	0.0	0.0	20.6	9.2	2.7	0.4
Incr Delay (d2), s/veh	11.4	0.1	0.0	18.1	0.3	0.0	0.0	0.0	0.4	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.1	5.1	0.0	0.1
Lane Grp Delay (d), s/veh	33.5	20.5	0.0	41.0	21.8	0.0	0.0	0.0	21.0	9.9	2.7	0.4
Lane Grp LOS	C	C		D	C				C	A	A	A
Approach Vol, veh/h		70			29			12			1443	
Approach Delay, s/veh		29.8			31.1			21.0			9.4	
Approach LOS		C			C			C			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	5.9	7.1		4.7	5.9		0.0	6.9		27.9	34.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	7.0	25.0		4.0	22.0		4.0	18.0		57.0	71.0	
Max Q Clear Time (g_c+I1), s	3.3	2.2		2.4	2.2		0.0	2.3		16.9	2.2	
Green Ext Time (p_c), s	0.0	0.2		0.0	0.0		0.0	0.3		6.9	0.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	10.8											
HCM 2010 LOS	B											
<b>Notes</b>												

# HCM 2010 Signalized Intersection Summary

## 25: Buchanan Rd & Delta Fair Blvd

Cumulative PM  
3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	60	431	163	100	228	80	90	275	27	277	453	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	435	1000	375	296	1028	351	372	825	80	502	919	782
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1031	2559	961	774	2631	899	862	1656	161	1037	1845	1568
Grp Volume(v), veh/h	65	336	309	109	172	163	98	0	328	301	492	37
Grp Sat Flow(s),veh/h/ln	1031	1845	1675	774	1845	1686	862	0	1816	1037	1845	1568
Q Serve(g_s), s	3.3	9.8	9.9	8.8	4.5	4.7	6.3	0.0	8.0	18.1	13.2	0.9
Cycle Q Clear(g_c), s	8.0	9.8	9.9	18.8	4.5	4.7	19.5	0.0	8.0	26.0	13.2	0.9
Prop In Lane	1.00		0.57	1.00		0.53	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	435	721	655	296	721	659	372	0	905	502	919	782
V/C Ratio(X)	0.15	0.47	0.47	0.37	0.24	0.25	0.26	0.00	0.36	0.60	0.54	0.05
Avail Cap(c_a), veh/h	703	1201	1090	497	1201	1097	719	0	1635	919	1661	1412
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	16.4	16.4	23.4	14.8	14.8	19.1	0.0	11.1	19.1	12.4	9.3
Incr Delay (d2), s/veh	0.2	0.5	0.5	0.8	0.2	0.2	0.4	0.0	0.2	1.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	4.3	4.0	1.7	1.9	1.8	1.3	0.0	3.3	4.6	5.6	0.3
Lane Grp Delay (d), s/veh	17.7	16.9	17.0	24.2	14.9	15.0	19.4	0.0	11.3	20.2	12.9	9.3
Lane Grp LOS	B	B	B	C	B	B	B		B	C	B	A
Approach Vol, veh/h		710			444			426			830	
Approach Delay, s/veh		17.0			17.2			13.2			15.4	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		32.2			32.2			40.0			40.0	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		47.0			47.0			65.0			65.0	
Max Q Clear Time (g_c+I1), s		11.9			20.8			21.5			28.0	
Green Ext Time (p_c), s		8.0			7.4			8.1			7.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				15.8								
HCM 2010 LOS				B								
<b>Notes</b>												

**HCM 2010 Signalized Intersection Summary**  
**26: James Donlon Blvd & Contra Loma Blvd**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕		↖	↗	
Volume (veh/h)	114	1152	8	27	621	124	4	19	8	246	21	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	160	1929	14	44	1377	275	84	307	118	446	59	357
Arrive On Green	0.09	0.53	0.53	0.03	0.46	0.46	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1757	3658	26	1757	2987	597	81	1185	456	1361	226	1376
Grp Volume(v), veh/h	124	631	630	29	417	393	34	0	0	267	0	163
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1739	1721	0	0	1361	0	1602
Q Serve(g_s), s	4.4	15.7	15.7	1.0	10.0	10.0	0.0	0.0	0.0	11.7	0.0	5.3
Cycle Q Clear(g_c), s	4.4	15.7	15.7	1.0	10.0	10.0	0.9	0.0	0.0	12.7	0.0	5.3
Prop In Lane	1.00		0.01	1.00		0.34	0.12		0.26	1.00		0.86
Lane Grp Cap(c), veh/h	160	972	970	44	851	802	509	0	0	446	0	415
V/C Ratio(X)	0.77	0.65	0.65	0.65	0.49	0.49	0.07	0.00	0.00	0.60	0.00	0.39
Avail Cap(c_a), veh/h	359	1217	1214	138	985	929	888	0	0	756	0	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.3	10.8	10.8	30.7	11.9	11.9	17.8	0.0	0.0	22.6	0.0	19.4
Incr Delay (d2), s/veh	7.7	0.8	0.8	15.2	0.4	0.5	0.1	0.0	0.0	1.3	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	6.5	6.5	0.6	4.3	4.0	0.4	0.0	0.0	4.0	0.0	2.1
Lane Grp Delay (d), s/veh	36.0	11.7	11.7	45.9	12.4	12.4	17.9	0.0	0.0	23.9	0.0	20.1
Lane Grp LOS	D	B	B	D	B	B	B			C		C
Approach Vol, veh/h		1385			839			34			430	
Approach Delay, s/veh		13.8			13.6			17.9			22.4	
Approach LOS		B			B			B			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8			2			6	
Phs Duration (G+Y+Rc), s	9.8	37.6		5.6	33.3			20.5			20.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	13.0	42.0		5.0	34.0			31.0			31.0	
Max Q Clear Time (g_c+l1), s	6.4	17.7		3.0	12.0			2.9			14.7	
Green Ext Time (p_c), s	0.1	15.9		0.0	14.8			2.1			1.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				15.2								
HCM 2010 LOS				B								
<b>Notes</b>												

# HCM 2010 Signalized Intersection Summary

## 27: Lone Tree Way & James Donlon Blvd

Cumulative PM




























3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	155	135	1149	13	66	77	781	842	10	80	1274	251
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	301	316	1421	51	263	269	960	2348	998	112	1879	370
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.28	0.64	0.64	0.06	0.42	0.42
Sat Flow, veh/h	1757	1845	3136	298	1532	1568	3408	3689	1568	1757	4493	885
Grp Volume(v), veh/h	168	147	1249	86	0	84	849	915	11	87	1137	521
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1830	0	1568	1704	1845	1568	1757	1845	1689
Q Serve(g_s), s	8.2	6.7	16.0	3.8	0.0	4.4	22.2	11.2	0.2	4.6	24.2	24.2
Cycle Q Clear(g_c), s	8.2	6.7	16.0	3.8	0.0	4.4	22.2	11.2	0.2	4.6	24.2	24.2
Prop In Lane	1.00		1.00	0.16		1.00	1.00		1.00	1.00		0.52
Lane Grp Cap(c), veh/h	301	316	1421	314	0	269	960	2348	998	112	1543	706
V/C Ratio(X)	0.56	0.46	0.88	0.27	0.00	0.31	0.88	0.39	0.01	0.78	0.74	0.74
Avail Cap(c_a), veh/h	301	316	1421	314	0	269	1132	2372	1008	226	1621	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	34.8	23.2	33.6	0.0	33.9	32.1	8.2	6.2	43.1	22.8	22.8
Incr Delay (d2), s/veh	2.3	1.1	6.6	0.5	0.0	0.7	7.6	0.1	0.0	11.1	1.7	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.8	3.2	14.0	1.8	0.0	1.8	10.6	4.5	0.1	2.4	11.3	10.7
Lane Grp Delay (d), s/veh	37.7	35.9	29.8	34.1	0.0	34.5	39.7	8.3	6.2	54.1	24.5	26.6
Lane Grp LOS	D	D	C	C		C	D	A	A	D	C	C
Approach Vol, veh/h		1564			170			1775			1745	
Approach Delay, s/veh		31.2			34.3			23.3			26.6	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		20.0			20.0		30.3	63.4		9.9		43.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		31.0	60.0		12.0		41.0
Max Q Clear Time (g_c+I1), s		18.0			6.4		24.2	13.2		6.6		26.2
Green Ext Time (p_c), s		0.0			5.6		2.1	32.4		0.1		12.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr

Cumulative PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	56	0	47	2	0	1	55	2067	3	0	693	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	103	0	92	291	108	92	76	3073	1306	2	4000	58
Arrive On Green	0.06	0.00	0.06	0.06	0.00	0.06	0.04	0.83	0.83	0.00	0.74	0.74
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5441	79
Grp Volume(v), veh/h	61	0	51	2	0	1	60	2247	3	0	510	254
Grp Sat Flow(s), veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1831
Q Serve(g_s), s	2.5	0.0	2.3	0.0	0.0	0.0	2.5	19.2	0.0	0.0	3.1	3.1
Cycle Q Clear(g_c), s	2.5	0.0	2.3	0.0	0.0	0.0	2.5	19.2	0.0	0.0	3.1	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	103	0	92	291	108	92	76	3073	1306	2	2712	1346
V/C Ratio(X)	0.59	0.00	0.55	0.01	0.00	0.01	0.79	0.73	0.00	0.00	0.19	0.19
Avail Cap(c_a), veh/h	381	0	340	1075	400	340	214	3402	1446	95	3152	1564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	0.0	33.8	32.7	0.0	32.7	34.9	2.6	1.0	0.0	3.0	3.0
Incr Delay (d2), s/veh	5.3	0.0	5.1	0.0	0.0	0.0	16.0	0.7	0.0	0.0	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	1.1	0.0	0.0	0.0	1.4	5.0	0.0	0.0	1.1	1.1
Lane Grp Delay (d), s/veh	39.2	0.0	38.9	32.7	0.0	32.7	51.0	3.4	1.0	0.0	3.0	3.1
Lane Grp LOS	D		D	C		C	D	A	A		A	A
Approach Vol, veh/h	112				3		2310				764	
Approach Delay, s/veh	39.1				32.7		4.6				3.0	
Approach LOS	D				C		A				A	
<b>Timer</b>												
Assigned Phs	4				8		5		2		1 6	
Phs Duration (G+Y+Rc), s	8.3				8.3		7.2		65.4		0.0 58.2	
Change Period (Y+Rc), s	4.0				4.0		4.0		4.0		4.0	
Max Green Setting (Gmax), s	16.0				16.0		9.0		68.0		4.0 63.0	
Max Q Clear Time (g_c+I1), s	4.5				2.0		4.5		21.2		0.0 5.1	
Green Ext Time (p_c), s	0.3				0.3		0.0		40.2		0.0 48.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			5.5									
HCM 2010 LOS			A									
<b>Notes</b>												

# HCM 2010 Signalized Intersection Summary

## 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Cumulative PM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↬	↶↷		↬	↶↷	↶	↬	↶↷		↬	↶↷	
Volume (veh/h)	309	327	177	222	143	46	160	1407	397	63	487	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	369	428	227	273	493	210	206	1914	535	87	1898	230
Arrive On Green	0.21	0.19	0.19	0.16	0.13	0.13	0.12	0.46	0.46	0.05	0.39	0.39
Sat Flow, veh/h	1757	2271	1206	1757	3689	1568	1757	4165	1163	1757	4844	586
Grp Volume(v), veh/h	336	287	260	241	155	50	174	1352	609	68	401	193
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1639	1757	1845	1741
Q Serve(g_s), s	20.3	16.3	16.7	14.6	4.1	3.1	10.5	34.0	34.7	4.2	8.1	8.2
Cycle Q Clear(g_c), s	20.3	16.3	16.7	14.6	4.1	3.1	10.5	34.0	34.7	4.2	8.1	8.2
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.71	1.00		0.34
Lane Grp Cap(c), veh/h	369	348	308	273	493	210	206	1696	753	87	1446	682
V/C Ratio(X)	0.91	0.83	0.84	0.88	0.31	0.24	0.84	0.80	0.81	0.78	0.28	0.28
Avail Cap(c_a), veh/h	453	390	345	339	543	231	323	1799	799	113	1446	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	42.4	42.6	45.0	42.6	42.1	47.0	25.1	25.3	51.1	22.6	22.6
Incr Delay (d2), s/veh	19.8	12.4	15.8	19.9	0.4	0.6	11.3	2.5	5.9	22.7	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	11.1	8.9	8.4	8.1	2.0	1.3	5.4	16.0	15.1	2.4	3.8	3.6
Lane Grp Delay (d), s/veh	61.7	54.8	58.4	64.8	42.9	42.7	58.3	27.5	31.2	73.7	22.7	22.8
Lane Grp LOS	E	D	E	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		883			446			2135			662	
Approach Delay, s/veh		58.5			54.7			31.1			28.0	
Approach LOS		E			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	26.8	24.5		20.9	18.5		16.7	54.0		9.4	46.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	23.0		21.0	16.0		20.0	53.0		7.0	40.0	
Max Q Clear Time (g_c+I1), s	22.3	18.7		16.6	6.1		12.5	36.7		6.2	10.2	
Green Ext Time (p_c), s	0.5	1.8		0.3	3.3		0.3	13.3		0.0	23.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.0								
HCM 2010 LOS				D								
<b>Notes</b>												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔↔		↔	↔↔		↔	↔↔	↔	↔	↔↔	↔
Volume (veh/h)	647	946	30	251	443	150	145	1607	594	273	433	225
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	768	1425	0	329	712	0	216	2238	634	354	2462	697
Arrive On Green	0.23	0.26	0.00	0.10	0.13	0.00	0.06	0.40	0.40	0.10	0.44	0.44
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	703	1028	0	273	482	0	158	1747	646	297	471	245
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	23.4	19.7	0.0	9.1	9.7	0.0	5.3	31.9	47.0	9.9	6.0	11.9
Cycle Q Clear(g_c), s	23.4	19.7	0.0	9.1	9.7	0.0	5.3	31.9	47.0	9.9	6.0	11.9
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	768	1425	0	329	712	0	216	2238	634	354	2462	697
V/C Ratio(X)	0.91	0.72	0.00	0.83	0.68	0.00	0.73	0.78	1.02	0.84	0.19	0.35
Avail Cap(c_a), veh/h	821	1524	0	352	762	0	293	2238	634	381	2462	697
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	39.3	0.0	51.6	48.3	0.0	53.5	30.1	34.6	51.1	19.6	21.2
Incr Delay (d2), s/veh	14.2	1.6	0.0	14.5	2.2	0.0	6.0	1.8	40.6	14.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	11.8	9.5	0.0	4.7	4.8	0.0	2.5	15.3	25.5	5.1	2.8	4.7
Lane Grp Delay (d), s/veh	58.1	40.9	0.0	66.0	50.5	0.0	59.5	32.0	75.2	65.6	19.6	21.5
Lane Grp LOS	E	D		E	D		E	C	F	E	B	C
Approach Vol, veh/h		1731			755			2551			1013	
Approach Delay, s/veh		47.9			56.1			44.6			33.6	
Approach LOS		D			E			D			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	30.2	33.9		15.2	19.0		11.4	51.0		16.1		55.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	28.0	32.0		12.0	16.0		10.0	47.0		13.0		50.0
Max Q Clear Time (g_c+I1), s	25.4	21.7		11.1	11.7		7.3	49.0		11.9		13.9
Green Ext Time (p_c), s	0.8	6.8		0.1	3.3		0.1	0.0		0.1		28.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				45.1								
HCM 2010 LOS				D								
<b>Notes</b>												



# HCM 2010 Signalized Intersection Summary















## 31: Un Rd & Buchanan Rd

Cumulative PM  
3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	24	1419	14	32	677	38	20	0	31	40	0	25	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	
Lanes	1	2	0	1	2	0	1	1	0	1	1	0	
Cap, veh/h	41	2561	25	51	2452	137	199	0	123	193	0	123	
Arrive On Green	0.02	0.70	0.70	0.03	0.71	0.71	0.08	0.00	0.08	0.08	0.00	0.08	
Sat Flow, veh/h	1757	3648	35	1757	3462	193	1364	0	1568	1356	0	1568	
Grp Volume(v), veh/h	26	779	778	35	392	385	22	0	34	43	0	27	
Grp Sat Flow(s), veh/h/ln	1757	1845	1838	1757	1845	1811	1364	0	1568	1356	0	1568	
Q Serve(g_s), s	0.9	13.8	13.8	1.2	5.0	5.0	1.0	0.0	1.3	1.9	0.0	1.0	
Cycle Q Clear(g_c), s	0.9	13.8	13.8	1.2	5.0	5.0	2.0	0.0	1.3	3.2	0.0	1.0	
Prop In Lane	1.00		0.02	1.00		0.11	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	41	1295	1291	51	1306	1282	199	0	123	193	0	123	
V/C Ratio(X)	0.64	0.60	0.60	0.69	0.30	0.30	0.11	0.00	0.28	0.22	0.00	0.22	
Avail Cap(c_a), veh/h	223	2395	2387	223	2395	2351	481	0	447	473	0	447	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	30.6	4.8	4.9	30.4	3.4	3.4	28.2	0.0	27.4	28.9	0.0	27.3	
Incr Delay (d2), s/veh	15.4	0.5	0.5	15.0	0.1	0.1	0.2	0.0	1.2	0.6	0.0	0.9	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q (50%), veh/ln	0.6	3.8	3.8	0.7	1.4	1.3	0.3	0.0	0.5	0.7	0.0	0.4	
Lane Grp Delay (d), s/veh	46.0	5.3	5.3	45.4	3.5	3.5	28.4	0.0	28.6	29.5	0.0	28.2	
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C	
Approach Vol, veh/h	1583				812				56				70
Approach Delay, s/veh	6.0				5.4				28.5				29.0
Approach LOS	A				A				C				C
<b>Timer</b>													
Assigned Phs	5	2		1	6			8			4		
Phs Duration (G+Y+Rc), s	5.5	48.4		5.8	48.7			9.0			9.0		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0		
Max Green Setting (Gmax), s	8.0	82.0		8.0	82.0			18.0			18.0		
Max Q Clear Time (g_c+I1), s	2.9	15.8		3.2	7.0			4.0			5.2		
Green Ext Time (p_c), s	0.0	28.6		0.0	29.7			0.4			0.3		
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay					6.9								
HCM 2010 LOS					A								
<b>Notes</b>													

HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd

Cumulative PM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			 
Volume (veh/h)	417	1313	482	162	170	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	512	2448	840	281	399	356
Arrive On Green	0.29	0.66	0.32	0.32	0.23	0.23
Sat Flow, veh/h	1757	3689	2648	885	1757	1568
Grp Volume(v), veh/h	453	1427	364	336	185	315
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1688	1757	1568
Q Serve(g_s), s	18.0	15.5	12.3	12.4	6.6	14.2
Cycle Q Clear(g_c), s	18.0	15.5	12.3	12.4	6.6	14.2
Prop In Lane	1.00			0.52	1.00	1.00
Lane Grp Cap(c), veh/h	512	2448	585	536	399	356
V/C Ratio(X)	0.88	0.58	0.62	0.63	0.46	0.89
Avail Cap(c_a), veh/h	843	3236	632	578	433	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	6.7	21.2	21.2	24.4	27.3
Incr Delay (d2), s/veh	6.6	0.2	1.7	1.9	0.8	20.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.5	5.8	5.6	5.2	2.9	13.2
Lane Grp Delay (d), s/veh	31.3	7.0	22.9	23.1	25.2	47.3
Lane Grp LOS	C	A	C	C	C	D
Approach Vol, veh/h		1880	700		500	
Approach Delay, s/veh		12.8	23.0		39.1	
Approach LOS		B	C		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.3	52.4	27.2			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	35.0	64.0	25.0			
Max Q Clear Time (g_c+I1), s	20.0	17.5	14.4			
Green Ext Time (p_c), s	1.3	26.0	8.8			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			19.4			
HCM 2010 LOS			B			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
33: Somersville Rd & Fairview Dr

Cumulative PM  
3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Volume (veh/h)	129	9	546	19	1	2	237	446	14	21	492	51		
Number	7	4	14	3	8	18	5	2	12	1	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0		
Lanes	1	1	0	1	1	0	1	2	0	1	2	0		
Cap, veh/h	726	12	701	186	249	499	310	702	22	336	698	72		
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.18	0.20	0.20	0.38	0.42	0.42		
Sat Flow, veh/h	1394	26	1546	805	550	1100	1757	3560	110	1757	3292	338		
Grp Volume(v), veh/h	140	0	603	21	0	3	258	251	249	23	299	291		
Grp Sat Flow(s),veh/h/ln	1394	0	1572	805	0	1650	1757	1845	1825	1757	1845	1785		
Q Serve(g_s), s	4.6	0.0	25.8	1.8	0.0	0.1	10.7	9.6	9.6	0.6	10.5	10.6		
Cycle Q Clear(g_c), s	4.7	0.0	25.8	27.6	0.0	0.1	10.7	9.6	9.6	0.6	10.5	10.6		
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.06	1.00		0.19		
Lane Grp Cap(c), veh/h	726	0	712	186	0	748	310	364	360	336	391	379		
V/C Ratio(X)	0.19	0.00	0.85	0.11	0.00	0.00	0.83	0.69	0.69	0.07	0.76	0.77		
Avail Cap(c_a), veh/h	958	0	974	320	0	1023	695	1338	1324	336	754	730		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00		
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	0.77	0.77	0.77	0.91	0.91	0.91		
Uniform Delay (d), s/veh	12.6	0.0	18.4	30.6	0.0	11.4	30.1	28.3	28.3	19.1	20.2	20.2		
Incr Delay (d2), s/veh	0.1	0.0	5.2	0.3	0.0	0.0	4.5	8.0	8.2	0.1	12.2	12.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile Back of Q (50%), veh/ln	1.5	0.0	10.4	0.4	0.0	0.0	5.0	5.1	5.1	0.3	5.0	4.9		
Lane Grp Delay (d), s/veh	12.8	0.0	23.6	30.9	0.0	11.4	34.7	36.3	36.5	19.2	32.5	33.1		
Lane Grp LOS	B		C	C		B	C	D	D	B	C	C		
Approach Vol, veh/h	743		24				758			613				
Approach Delay, s/veh	21.6		28.4				35.8			32.3				
Approach LOS	C		C				D			C				
<b>Timer</b>														
Assigned Phs	4		8				5		2		1		6	
Phs Duration (G+Y+Rc), s	38.4		38.4				17.4		18.9		18.5		20.1	
Change Period (Y+Rc), s	4.0		4.0				4.0		4.0		4.0		4.0	
Max Green Setting (Gmax), s	47.0		47.0				30.0		55.0		6.0		31.0	
Max Q Clear Time (g_c+I1), s	27.8		29.6				12.7		11.6		2.6		12.6	
Green Ext Time (p_c), s	5.0		4.8				0.7		3.3		1.2		3.5	
<b>Intersection Summary</b>														
HCM 2010 Ctrl Delay			29.7											
HCM 2010 LOS			C											
<b>Notes</b>														

HCM 2010 Signalized Intersection Summary  
34: Fairview Dr & Delta Fair Blvd













Cumulative PM  
3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	928	560	128	384	10	178	20	34	15	11	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	31	1132	653	171	2129	56	274	22	393	63	42	13
Arrive On Green	0.02	0.52	0.52	0.10	0.59	0.59	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1757	2198	1267	1757	3578	94	781	89	1568	14	167	52
Grp Volume(v), veh/h	20	839	779	139	215	213	215	0	37	36	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1621	1757	1845	1828	871	0	1568	232	0	0
Q Serve(g_s), s	1.0	35.5	39.3	6.8	4.7	4.7	0.0	0.0	1.6	0.4	0.0	0.0
Cycle Q Clear(g_c), s	1.0	35.5	39.3	6.8	4.7	4.7	21.6	0.0	1.6	22.0	0.0	0.0
Prop In Lane	1.00		0.78	1.00		0.05	0.90		1.00	0.44		0.22
Lane Grp Cap(c), veh/h	31	950	835	171	1097	1087	296	0	393	117	0	0
V/C Ratio(X)	0.65	0.88	0.93	0.81	0.20	0.20	0.73	0.00	0.09	0.31	0.00	0.00
Avail Cap(c_a), veh/h	100	967	850	200	1097	1087	296	0	393	117	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.8	18.9	19.9	38.8	8.1	8.2	32.7	0.0	25.2	27.3	0.0	0.0
Incr Delay (d2), s/veh	20.5	9.6	16.8	19.3	0.1	0.1	8.6	0.0	0.1	1.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	17.9	18.8	4.0	1.9	1.9	5.4	0.0	0.6	0.6	0.0	0.0
Lane Grp Delay (d), s/veh	63.3	28.5	36.6	58.1	8.2	8.2	41.3	0.0	25.3	28.7	0.0	0.0
Lane Grp LOS	E	C	D	E	A	A	D		C	C		
Approach Vol, veh/h		1638			567			252				36
Approach Delay, s/veh		32.8			20.5			38.9				28.7
Approach LOS		C			C			D				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.5	49.2		12.5	56.2			26.0				26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	5.0	46.0		10.0	51.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	3.0	41.3		8.8	6.7			23.6				24.0
Green Ext Time (p_c), s	0.0	3.8		0.0	24.7			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					30.6							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

No Bypass Cumulative +Project AM

3/16/2014













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↕↕	↕↕		↕	↕↕	↕
Volume (veh/h)	0	0	0	166	323	194	757	827	155	268	827	324
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				213	431	274	874	1342	251	322	1367	581
Arrive On Green				0.26	0.26	0.26	0.34	0.59	0.59	0.18	0.37	0.00
Sat Flow, veh/h				806	1626	1034	3408	3025	565	1757	3689	1568
Grp Volume(v), veh/h				403	0	339	823	548	519	291	899	0
Grp Sat Flow(s),veh/h/ln				1804	0	1662	1704	1845	1745	1757	1845	1568
Q Serve(g_s), s				23.4	0.0	20.9	25.9	22.3	22.3	17.9	22.4	0.0
Cycle Q Clear(g_c), s				23.4	0.0	20.9	25.9	22.3	22.3	17.9	22.4	0.0
Prop In Lane				0.45		0.62	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h				478	0	440	874	818	774	322	1367	581
V/C Ratio(X)				0.84	0.00	0.77	0.94	0.67	0.67	0.90	0.66	0.00
Avail Cap(c_a), veh/h				619	0	571	893	818	774	381	1367	581
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.56	0.56	0.56	1.00	1.00	0.00
Uniform Delay (d), s/veh				38.5	0.0	37.6	35.7	17.2	17.2	44.2	29.0	0.0
Incr Delay (d2), s/veh				8.2	0.0	4.8	11.4	2.5	2.6	21.9	2.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				11.8	0.0	9.4	12.1	9.5	9.1	10.0	10.8	0.0
Lane Grp Delay (d), s/veh				46.7	0.0	42.4	47.1	19.7	19.8	66.2	31.5	0.0
Lane Grp LOS				D		D	D	B	B	E	C	
Approach Vol, veh/h					742			1890			1190	
Approach Delay, s/veh					44.7			31.6			40.0	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1		6
Phs Duration (G+Y+Rc), s					33.3		32.4	53.1		24.3		45.0
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s					38.0		29.0	46.0		24.0		41.0
Max Q Clear Time (g_c+I1), s					25.4		27.9	24.3		19.9		24.4
Green Ext Time (p_c), s					3.9		0.4	14.3		0.3		11.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay											36.8	
HCM 2010 LOS											D	
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

No Bypass Cumulative +Project AM

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	329	0	486	0	0	0	0	1100	290	281	678	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	415	436	741				0	1651	435	468	2555	0
Arrive On Green	0.24	0.00	0.24				0.00	0.39	0.39	0.53	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4225	1113	1757	3689	0
Grp Volume(v), veh/h	358	0	528				0	1044	467	305	737	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1648	1757	1845	0
Q Serve(g_s), s	22.0	0.0	17.4				0.0	27.1	27.1	14.0	0.0	0.0
Cycle Q Clear(g_c), s	22.0	0.0	17.4				0.0	27.1	27.1	14.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.68	1.00		0.00
Lane Grp Cap(c), veh/h	415	436	741				0	1441	644	468	2555	0
V/C Ratio(X)	0.86	0.00	0.71				0.00	0.72	0.72	0.65	0.29	0.00
Avail Cap(c_a), veh/h	530	557	947				0	1441	644	468	2555	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.63	0.63	0.00
Uniform Delay (d), s/veh	41.2	0.0	39.5				0.0	29.2	29.2	22.6	0.0	0.0
Incr Delay (d2), s/veh	11.2	0.0	1.8				0.0	3.2	7.0	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	11.1	0.0	7.1				0.0	13.1	12.4	5.2	0.1	0.0
Lane Grp Delay (d), s/veh	52.5	0.0	41.3				0.0	32.4	36.1	24.6	0.2	0.0
Lane Grp LOS	D		D					C	D	C	A	
Approach Vol, veh/h		886						1511			1042	
Approach Delay, s/veh		45.8						33.5			7.3	
Approach LOS		D						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		30.6						48.0		34.0	82.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		34.0						44.0		30.0	78.0	
Max Q Clear Time (g_c+I1), s		24.0						29.1		16.0	2.0	
Green Ext Time (p_c), s		2.6						9.1		5.2	7.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.8									
HCM 2010 LOS			C									
<b>Notes</b>												













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕	↕	↵	↕	↕	↵	↕	↕
Volume (veh/h)	275	476	5	93	580	322	128	808	66	152	353	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	336	1261	12	128	838	356	171	1090	463	220	1193	507
Arrive On Green	0.19	0.35	0.35	0.07	0.23	0.23	0.10	0.30	0.30	0.13	0.32	0.32
Sat Flow, veh/h	1757	3648	35	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	299	261	261	101	630	350	139	878	72	165	384	297
Grp Sat Flow(s), veh/h/ln	1757	1845	1838	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.5	10.8	10.8	5.6	15.9	16.2	7.7	21.9	2.6	9.0	7.8	15.8
Cycle Q Clear(g_c), s	16.5	10.8	10.8	5.6	15.9	16.2	7.7	21.9	2.6	9.0	7.8	15.8
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	336	638	636	128	838	356	171	1090	463	220	1193	507
V/C Ratio(X)	0.89	0.41	0.41	0.79	0.75	0.98	0.81	0.81	0.16	0.75	0.32	0.59
Avail Cap(c_a), veh/h	458	704	701	229	926	393	300	1407	598	264	1333	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	24.8	24.8	45.4	35.9	20.6	44.1	32.5	15.9	42.0	25.4	28.1
Incr Delay (d2), s/veh	15.0	0.4	0.4	10.3	3.2	39.3	8.9	2.7	0.2	9.2	0.2	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.8	5.0	5.0	2.9	7.7	10.1	3.9	10.5	1.3	4.6	3.7	6.3
Lane Grp Delay (d), s/veh	54.3	25.3	25.3	55.7	39.0	59.9	53.0	35.2	16.0	51.3	25.6	29.4
Lane Grp LOS	D	C	C	E	D	E	D	D	B	D	C	C
Approach Vol, veh/h		821			1081			1089			846	
Approach Delay, s/veh		35.8			47.3			36.2			31.9	
Approach LOS		D			D			D			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	23.1	38.4		11.3	26.6		13.7	33.4		16.5	36.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	26.0	38.0		13.0	25.0		17.0	38.0		15.0	36.0	
Max Q Clear Time (g_c+I1), s	18.5	12.8		7.6	18.2		9.7	23.9		11.0	17.8	
Green Ext Time (p_c), s	0.5	10.1		0.1	4.4		0.2	5.5		1.6	3.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	38.3											
HCM 2010 LOS	D											
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

No Bypass Cumulative +Project AM  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	94	102	30	1153	57	137	8	486	485	99	567	73
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	757	795	676	1469	795	676	79	1311	557	137	1432	609
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.05	0.36	0.36	0.08	0.39	0.39
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	102	111	33	1253	62	149	9	528	527	108	616	79
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.1	3.2	1.1	29.3	1.8	5.3	0.4	9.5	28.9	5.3	10.8	2.9
Cycle Q Clear(g_c), s	3.1	3.2	1.1	29.3	1.8	5.3	0.4	9.5	28.9	5.3	10.8	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	757	795	676	1469	795	676	79	1311	557	137	1432	609
V/C Ratio(X)	0.13	0.14	0.05	0.85	0.08	0.22	0.11	0.40	0.95	0.79	0.43	0.13
Avail Cap(c_a), veh/h	757	795	676	2081	1127	958	318	1335	567	219	1432	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.2	15.2	14.6	22.6	14.8	15.8	40.5	21.4	27.7	40.1	19.9	17.4
Incr Delay (d2), s/veh	0.1	0.1	0.0	2.6	0.0	0.2	0.6	0.2	24.8	9.6	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	1.4	0.4	12.0	0.7	2.0	0.2	4.3	14.8	2.7	4.9	1.1
Lane Grp Delay (d), s/veh	15.3	15.3	14.7	25.2	14.9	16.0	41.1	21.6	52.4	49.7	20.1	17.5
Lane Grp LOS	B	B	B	C	B	B	D	C	D	D	C	B
Approach Vol, veh/h		246			1464			1064			803	
Approach Delay, s/veh		15.2			23.8			37.1			23.8	
Approach LOS		B			C			D			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		42.1			42.1		8.0	35.4		10.9		38.3
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			54.0		16.0	32.0		11.0		27.0
Max Q Clear Time (g_c+I1), s		5.2			31.3		2.4	30.9		7.3		12.8
Green Ext Time (p_c), s		5.8			6.8		0.0	0.6		0.1		8.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.2								
HCM 2010 LOS				C								
<b>Notes</b>												



						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	177	44	14	801	1689	59
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	239	213	25	2804	2459	85
Arrive On Green	0.14	0.14	0.01	0.76	0.69	0.69
Sat Flow, veh/h	1757	1568	1757	3689	3545	123
Grp Volume(v), veh/h	192	48	15	871	951	949
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1823
Q Serve(g_s), s	8.1	2.1	0.7	5.7	25.0	25.6
Cycle Q Clear(g_c), s	8.1	2.1	0.7	5.7	25.0	25.6
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	239	213	25	2804	1280	1265
V/C Ratio(X)	0.80	0.23	0.60	0.31	0.74	0.75
Avail Cap(c_a), veh/h	366	327	91	3169	1392	1376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	29.6	37.7	2.9	7.4	7.5
Incr Delay (d2), s/veh	7.3	0.5	20.8	0.1	2.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.1	0.0	0.4	1.8	10.0	10.0
Lane Grp Delay (d), s/veh	39.5	30.1	58.4	3.0	9.4	9.7
Lane Grp LOS	D	C	E	A	A	A
Approach Vol, veh/h	240			886	1900	
Approach Delay, s/veh	37.7			3.9	9.6	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			5.1	62.4	57.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			4.0	66.0	58.0	
Max Q Clear Time (g_c+I1), s			2.7	7.7	27.6	
Green Ext Time (p_c), s			0.0	43.3	25.7	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			10.1			
HCM 2010 LOS			B			
<b>Notes</b>						

























HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

No Bypass Cumulative +Project AM

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	159	612	129	115	557	199	227	657	241	249	314	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	211	945	402	157	832	353	293	1000	425	314	746	254
Arrive On Green	0.12	0.26	0.26	0.09	0.23	0.23	0.17	0.27	0.27	0.18	0.28	0.28
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2635	896
Grp Volume(v), veh/h	173	665	140	125	605	216	247	714	262	271	237	222
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1686
Q Serve(g_s), s	7.5	12.8	5.7	5.5	11.9	9.7	10.7	13.7	11.4	11.7	8.3	8.5
Cycle Q Clear(g_c), s	7.5	12.8	5.7	5.5	11.9	9.7	10.7	13.7	11.4	11.7	8.3	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	211	945	402	157	832	353	293	1000	425	314	522	477
V/C Ratio(X)	0.82	0.70	0.35	0.79	0.73	0.61	0.84	0.71	0.62	0.86	0.45	0.47
Avail Cap(c_a), veh/h	269	1038	441	202	896	381	472	1179	501	404	522	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	26.4	23.8	34.9	28.1	27.2	31.6	25.8	25.0	31.2	23.1	23.2
Incr Delay (d2), s/veh	14.4	2.0	0.5	15.3	2.8	2.5	7.5	1.7	1.7	14.1	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.1	6.1	2.2	3.1	5.7	3.9	5.3	6.5	4.6	6.3	3.8	3.6
Lane Grp Delay (d), s/veh	48.0	28.4	24.3	50.2	30.8	29.8	39.1	27.5	26.7	45.3	23.7	23.9
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		978			946			1223			730	
Approach Delay, s/veh		31.2			33.2			29.7			31.7	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.4	24.0		11.0	21.6		17.1	25.2		18.0	26.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	22.0		9.0	19.0		21.0	25.0		18.0	22.0	
Max Q Clear Time (g_c+I1), s	9.5	14.8		7.5	13.9		12.7	15.7		13.7	10.5	
Green Ext Time (p_c), s	0.1	5.0		0.0	3.7		0.5	5.5		0.3	6.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			31.3									
HCM 2010 LOS			C									
<b>Notes</b>												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	546	5	2	1138	120	103	110	3	149	36	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	122	1180	10	54	1121	953	135	220	6	135	34	164
Arrive On Green	0.07	0.65	0.65	0.03	0.61	0.61	0.08	0.12	0.12	0.08	0.12	0.12
Sat Flow, veh/h	1757	1827	15	1757	1845	1568	1757	1792	45	1757	275	1334
Grp Volume(v), veh/h	138	0	598	2	1237	130	112	0	123	162	0	228
Grp Sat Flow(s),veh/h/ln	1757	0	1842	1757	1845	1568	1757	0	1837	1757	0	1609
Q Serve(g_s), s	9.0	0.0	22.1	0.1	79.0	3.0	8.2	0.0	8.2	10.0	0.0	16.0
Cycle Q Clear(g_c), s	9.0	0.0	22.1	0.1	79.0	3.0	8.2	0.0	8.2	10.0	0.0	16.0
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.02	1.00		0.83
Lane Grp Cap(c), veh/h	122	0	1190	54	1121	953	135	0	226	135	0	198
V/C Ratio(X)	1.13	0.00	0.50	0.04	1.10	0.14	0.83	0.00	0.54	1.20	0.00	1.15
Avail Cap(c_a), veh/h	122	0	1190	54	1121	953	135	0	226	135	0	198
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.00	0.69	0.31	0.31	0.31	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.5	0.0	12.0	61.1	25.5	4.6	59.2	0.0	53.6	60.0	0.0	57.0
Incr Delay (d2), s/veh	108.7	0.0	1.1	0.1	51.3	0.1	33.1	0.0	2.7	140.5	0.0	110.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.7	0.0	9.3	0.1	49.3	1.7	5.0	0.0	4.1	9.9	0.0	12.8
Lane Grp Delay (d), s/veh	169.2	0.0	13.1	61.2	76.8	4.7	92.3	0.0	56.3	200.5	0.0	167.6
Lane Grp LOS	F		B	E	F	A	F		E	F		F
Approach Vol, veh/h		736			1369			235				390
Approach Delay, s/veh		42.4			69.9			73.4				181.3
Approach LOS		D			E			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	13.0	88.0		8.0	83.0		14.0	20.0		14.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	9.0	84.0		4.0	79.0		10.0	16.0		10.0		16.0
Max Q Clear Time (g_c+I1), s	11.0	24.1		2.1	81.0		10.2	10.2		12.0		18.0
Green Ext Time (p_c), s	0.0	4.5		0.1	0.0		0.0	0.5		0.0		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				78.7								
HCM 2010 LOS				E								
<b>Notes</b>												

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	36	300	24	759	370	150	23	55	93	85	104	16	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	
Lanes	1	2	0	2	2	1	1	1	1	1	1	0	
Cap, veh/h	63	938	74	1622	2650	1126	188	198	168	188	168	25	
Arrive On Green	0.04	0.28	0.28	0.48	0.72	0.72	0.11	0.11	0.11	0.11	0.11	0.11	
Sat Flow, veh/h	1757	3374	268	3408	3689	1568	1757	1845	1568	1757	1567	236	
Grp Volume(v), veh/h	39	177	175	825	402	163	25	60	101	92	0	130	
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1803	
Q Serve(g_s), s	1.9	6.6	6.7	14.5	3.0	2.8	1.1	2.6	5.3	4.3	0.0	6.0	
Cycle Q Clear(g_c), s	1.9	6.6	6.7	14.5	3.0	2.8	1.1	2.6	5.3	4.3	0.0	6.0	
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13	
Lane Grp Cap(c), veh/h	63	513	500	1622	2650	1126	188	198	168	188	0	193	
V/C Ratio(X)	0.62	0.35	0.35	0.51	0.15	0.14	0.13	0.30	0.60	0.49	0.00	0.67	
Avail Cap(c_a), veh/h	142	513	500	1777	2650	1126	346	363	309	366	0	376	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	41.1	24.9	24.9	15.6	3.8	3.8	34.9	35.6	36.8	36.3	0.0	37.1	
Incr Delay (d2), s/veh	9.8	1.8	1.9	0.1	0.1	0.1	0.3	0.9	3.4	2.0	0.0	4.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q (50%), veh/ln	1.0	3.3	3.3	5.9	1.1	0.9	0.5	1.3	2.2	2.0	0.0	3.0	
Lane Grp Delay (d), s/veh	50.8	26.7	26.8	15.8	3.9	4.0	35.2	36.4	40.2	38.3	0.0	41.1	
Lane Grp LOS	D	C	C	B	A	A	D	D	D	D	D	D	
Approach Vol, veh/h	391		1390					186		222			
Approach Delay, s/veh	29.2		11.0					38.3		39.9			
Approach LOS	C		B					D		D			
<b>Timer</b>													
Assigned Phs	5	2		1	6			8				4	
Phs Duration (G+Y+Rc), s	7.1	28.0		45.1	66.0			13.2				13.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0	
Max Green Setting (Gmax), s	7.0	24.0		45.0	62.0			17.0				18.0	
Max Q Clear Time (g_c+I1), s	3.9	8.7		16.5	5.0			7.3				8.0	
Green Ext Time (p_c), s	1.2	1.8		3.5	3.6			1.2				1.3	
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			19.5										
HCM 2010 LOS			B										
<b>Notes</b>													

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	66	297	49	169	3	652	329	103	8	240	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	189	365	310	111	633	10	894	1584	488	16	1224	520
Arrive On Green	0.06	0.20	0.20	0.03	0.17	0.17	0.26	0.59	0.59	0.01	0.33	0.33
Sat Flow, veh/h	3408	1845	1568	3408	3620	59	3408	2707	835	1757	3689	1568
Grp Volume(v), veh/h	124	72	323	53	94	93	709	242	228	9	261	621
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1834	1704	1845	1697	1757	1845	1568
Q Serve(g_s), s	3.2	3.0	18.0	1.4	4.0	4.0	17.6	5.7	5.9	0.5	4.6	23.7
Cycle Q Clear(g_c), s	3.2	3.0	18.0	1.4	4.0	4.0	17.6	5.7	5.9	0.5	4.6	23.7
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	189	365	310	111	322	321	894	1079	993	16	1224	520
V/C Ratio(X)	0.66	0.20	1.04	0.48	0.29	0.29	0.79	0.22	0.23	0.57	0.21	1.19
Avail Cap(c_a), veh/h	225	365	310	150	324	322	1123	1581	1455	77	2108	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	30.5	36.5	43.3	32.6	32.7	31.3	9.0	9.0	44.9	21.9	18.8
Incr Delay (d2), s/veh	5.3	0.3	62.4	3.2	0.5	0.5	3.1	0.1	0.1	28.9	0.1	97.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	1.4	12.4	0.7	1.9	1.9	8.0	2.4	2.2	0.3	2.1	22.8
Lane Grp Delay (d), s/veh	47.4	30.7	98.9	46.5	33.1	33.2	34.4	9.1	9.2	73.8	22.0	116.1
Lane Grp LOS	D	C	F	D	C	C	C	A	A	E	C	F
Approach Vol, veh/h		519			240			1179			891	
Approach Delay, s/veh		77.1			36.1			24.3			88.1	
Approach LOS		E			D			C			F	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	9.0	22.0		7.0	19.9		27.9	57.3		4.8		34.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	18.0		4.0	16.0		30.0	78.0		4.0		52.0
Max Q Clear Time (g_c+I1), s	5.2	20.0		3.4	6.0		19.6	7.9		2.5		25.7
Green Ext Time (p_c), s	0.0	0.0		0.1	0.8		4.2	6.8		0.0		4.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay											55.1	
HCM 2010 LOS											E	
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

No Bypass Cumulative +Project AM













3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	462	0	411	0	0	0	0	758	220	141	526	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1121	0	516				0	1834	780	217	2205	0
Arrive On Green	0.33	0.00	0.33				0.00	0.50	0.50	0.06	0.60	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	502	0	447				0	824	239	153	572	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	12.6	0.0	29.1				0.0	15.7	9.8	4.8	8.0	0.0
Cycle Q Clear(g_c), s	12.6	0.0	29.1				0.0	15.7	9.8	4.8	8.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1121	0	516				0	1834	780	217	2205	0
V/C Ratio(X)	0.45	0.00	0.87				0.00	0.45	0.31	0.71	0.26	0.00
Avail Cap(c_a), veh/h	1473	0	677				0	1834	780	376	2205	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	28.7	0.0	34.3				0.0	17.7	16.2	49.9	10.4	0.0
Incr Delay (d2), s/veh	0.3	0.0	9.2				0.0	0.8	1.0	3.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.4	0.0	12.7				0.0	7.2	3.9	2.2	3.5	0.0
Lane Grp Delay (d), s/veh	29.0	0.0	43.4				0.0	18.5	17.2	53.7	10.7	0.0
Lane Grp LOS	C		D					B	B	D	B	
Approach Vol, veh/h		949						1063			725	
Approach Delay, s/veh		35.8						18.2			19.8	
Approach LOS		D						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		39.8						58.1		10.9	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						49.0		12.0	65.0	
Max Q Clear Time (g_c+I1), s		31.1						17.7		6.8	10.0	
Green Ext Time (p_c), s		4.7						13.6		0.2	16.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.7									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
11: Loveridge Rd & Leland Rd

No Bypass Cumulative +Project AM  
3/16/2014























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↕	↗	↔↔	↕↕	↗	↔	↕↕	↗	↔↔	↕↕	↗
Volume (veh/h)	201	259	185	193	739	197	278	652	151	198	393	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	304	1186	504	294	1175	499	350	1165	495	301	757	322
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.20	0.32	0.32	0.09	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	218	282	201	210	803	214	302	709	164	215	427	185
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.3	4.8	8.5	5.1	16.1	9.2	14.1	13.8	6.8	5.2	8.9	9.0
Cycle Q Clear(g_c), s	5.3	4.8	8.5	5.1	16.1	9.2	14.1	13.8	6.8	5.2	8.9	9.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1186	504	294	1175	499	350	1165	495	301	757	322
V/C Ratio(X)	0.72	0.24	0.40	0.71	0.68	0.43	0.86	0.61	0.33	0.71	0.56	0.58
Avail Cap(c_a), veh/h	521	1648	700	481	1604	682	661	1778	756	521	954	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	21.2	22.5	37.9	25.3	22.9	33.0	24.6	22.2	37.7	30.4	30.5
Incr Delay (d2), s/veh	3.2	0.1	0.5	3.2	0.7	0.6	6.4	0.5	0.4	3.2	0.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	2.2	3.3	2.3	7.4	3.6	6.8	6.4	2.6	2.4	4.1	3.7
Lane Grp Delay (d), s/veh	40.9	21.3	23.0	41.1	26.0	23.5	39.3	25.2	22.6	40.9	31.1	32.1
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		701			1227			1175			827	
Approach Delay, s/veh		27.9			28.1			28.5			33.8	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.6	31.4		11.3	31.1		20.9	30.9		11.5	21.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	38.0		12.0	37.0		32.0	41.0		13.0	22.0	
Max Q Clear Time (g_c+I1), s	7.3	10.5		7.1	18.1		16.1	15.8		7.2	11.0	
Green Ext Time (p_c), s	0.3	10.7		0.3	9.0		0.8	10.3		0.3	6.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.4								
HCM 2010 LOS				C								
<b>Notes</b>												

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	295	477	1201	402	225	208
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	270	1504	1164	989	216	193
Arrive On Green	0.15	0.82	0.63	0.63	0.12	0.12
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	321	518	1305	437	245	226
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	20.0	9.4	82.0	18.5	16.0	16.0
Cycle Q Clear(g_c), s	20.0	9.4	82.0	18.5	16.0	16.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	270	1504	1164	989	216	193
V/C Ratio(X)	1.19	0.34	1.12	0.44	1.13	1.17
Avail Cap(c_a), veh/h	270	1504	1164	989	216	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.83	0.83	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	55.0	3.1	24.0	12.3	57.0	57.0
Incr Delay (d2), s/veh	111.0	0.5	56.0	0.1	101.6	118.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	17.3	3.1	52.0	6.6	13.4	19.4
Lane Grp Delay (d), s/veh	166.0	3.6	80.0	12.4	158.6	175.5
Lane Grp LOS	F	A	F	B	F	F
Approach Vol, veh/h		839	1742		471	
Approach Delay, s/veh		65.7	63.0		166.7	
Approach LOS		E	E		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	24.0	110.0	86.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	20.0	106.0	82.0			
Max Q Clear Time (g_c+I1), s	22.0	11.4	84.0			
Green Ext Time (p_c), s	0.0	4.8	0.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			79.8			
HCM 2010 LOS			E			
<b>Notes</b>						



HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

No Bypass Cumulative +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	600	110	37	1341	12	274	118	78	15	11	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	7	1253	1065	51	1285	11	296	196	130	148	114	199
Arrive On Green	0.00	0.68	0.68	0.03	0.70	0.70	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	1845	1568	1757	1826	16	1357	1036	688	1152	603	1055
Grp Volume(v), veh/h	11	652	120	40	0	1471	298	0	213	16	0	33
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1842	1357	0	1723	1152	0	1658
Q Serve(g_s), s	0.5	20.4	3.1	2.6	0.0	82.0	20.1	0.0	13.3	1.5	0.0	1.9
Cycle Q Clear(g_c), s	0.5	20.4	3.1	2.6	0.0	82.0	22.0	0.0	13.3	14.8	0.0	1.9
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.40	1.00		0.64
Lane Grp Cap(c), veh/h	7	1253	1065	51	0	1297	296	0	326	148	0	313
V/C Ratio(X)	1.59	0.52	0.11	0.79	0.00	1.13	1.01	0.00	0.65	0.11	0.00	0.11
Avail Cap(c_a), veh/h	60	1253	1065	106	0	1297	296	0	326	148	0	313
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.20	0.00	0.20	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	9.3	6.5	56.2	0.0	17.2	50.3	0.0	43.7	50.6	0.0	39.1
Incr Delay (d2), s/veh	353.2	1.2	0.2	5.4	0.0	62.7	54.2	0.0	4.7	0.3	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	8.4	1.1	1.3	0.0	53.9	13.3	0.0	6.3	0.5	0.0	0.8
Lane Grp Delay (d), s/veh	411.2	10.5	6.7	61.5	0.0	79.9	104.5	0.0	48.4	50.9	0.0	39.2
Lane Grp LOS	F	B	A	E		F	F		D	D		D
Approach Vol, veh/h		783			1511			511				49
Approach Delay, s/veh		15.5			79.4			81.1				43.0
Approach LOS		B			E			F				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.5	83.1		7.4	86.0			26.0				26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	79.0		7.0	82.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	2.5	22.4		4.6	84.0			24.0				16.8
Green Ext Time (p_c), s	0.0	5.6		0.0	0.0			0.0				1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				61.6								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
14: Ventura Dr & James Donlon Blvd

No Bypass Cumulative +Project AM

3/16/2014






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	230	0	0	77	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	29	61	0	29	61	0	29	625	0	29	625	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.34	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	1845	0	1757	1845	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	250	0	0	84	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	1845	0	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	29	61	0	29	61	0	29	625	0	29	625	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.13	0.00
Avail Cap(c_a), veh/h	1162	9758	0	1162	9758	0	1162	15247	0	1162	15247	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.5	0.0
Lane Grp LOS								A			A	
Approach Vol, veh/h		0			0			250			84	
Approach Delay, s/veh		0.0			0.0			1.9			1.5	
Approach LOS								A			A	
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7	4	
Phs Duration (G+Y+Rc), s	0.0	0.0		0.0	0.0		0.0	6.0		0.0	6.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0		4.0	50.0		4.0	50.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0		0.0	2.6		0.0	2.2	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	2.1		0.0	2.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				1.8								
HCM 2010 LOS				A								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↙	↗
Volume (veh/h)	711	25	36	1182	74	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	998	848	50	1107	595	531
Arrive On Green	0.54	0.54	0.03	0.60	0.34	0.34
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	773	27	39	1285	80	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	43.1	1.0	2.9	78.0	4.1	6.9
Cycle Q Clear(g_c), s	43.1	1.0	2.9	78.0	4.1	6.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	998	848	50	1107	595	531
V/C Ratio(X)	0.77	0.03	0.78	1.16	0.13	0.22
Avail Cap(c_a), veh/h	998	848	95	1107	595	531
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	13.9	62.8	26.0	29.8	30.7
Incr Delay (d2), s/veh	3.9	0.0	22.9	82.7	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	19.8	0.4	1.6	58.3	1.9	2.9
Lane Grp Delay (d), s/veh	27.4	14.0	85.7	108.7	30.3	31.7
Lane Grp LOS	C	B	F	F	C	C
Approach Vol, veh/h	800			1324	196	
Approach Delay, s/veh	27.0			108.0	31.1	
Approach LOS	C			F	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	74.3		7.7	82.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	67.0		7.0	78.0		
Max Q Clear Time (g_c+I1), s	45.1		4.9	80.0		
Green Ext Time (p_c), s	16.6		0.0	0.0		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			73.6			
HCM 2010 LOS			E			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

No Bypass Cumulative +Project AM

3/16/2014























													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	0	0	0	25	0	0	0	0	67	0	0	0	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	
Lanes	1	2	0	1	2	0	1	1	0	1	1	0	
Cap, veh/h	20	41	0	51	107	0	20	0	116	20	137	0	
Arrive On Green	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0	
Grp Volume(v), veh/h	0	0	0	27	0	0	0	0	73	0	0	0	
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0	
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00	
Lane Grp Cap(c), veh/h	20	41	0	51	107	0	20	0	116	20	137	0	
V/C Ratio(X)	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	
Avail Cap(c_a), veh/h	788	6617	0	4530	14475	0	788	0	5449	788	6410	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	
Incr Delay (d2), s/veh	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	9.5	0.0	0.0	0.0	
Lane Grp LOS	B						A						
Approach Vol, veh/h	0				27				73				0
Approach Delay, s/veh	0.0				12.5				9.5				0.0
Approach LOS					B				A				
<b>Timer</b>													
Assigned Phs	7	4		3	8		5	2		1	6		
Phs Duration (G+Y+Rc), s	0.0	0.0		4.3	4.3		0.0	4.7		0.0	4.7		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		
Max Green Setting (Gmax), s	4.0	16.0		23.0	35.0		4.0	31.0		4.0	31.0		
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.1	0.0		0.0	2.4		0.0	0.0		
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	0.4		0.0	0.0		
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay				10.3									
HCM 2010 LOS				B									
<b>Notes</b>													

HCM 2010 Signalized Intersection Summary  
 17: Proposed Apartments & Buchanan Rd













No Bypass Cumulative +Project AM

3/16/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	802	16	22	1156	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	942	801	304	1323	380	339
Arrive On Green	0.51	0.51	0.17	0.72	0.22	0.22
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	872	17	24	1257	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	52.7	0.6	1.4	72.7	3.7	6.2
Cycle Q Clear(g_c), s	52.7	0.6	1.4	72.7	3.7	6.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	942	801	304	1323	380	339
V/C Ratio(X)	0.93	0.02	0.08	0.95	0.18	0.29
Avail Cap(c_a), veh/h	1244	1057	304	1474	380	339
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	14.5	41.6	15.1	38.3	39.3
Incr Delay (d2), s/veh	9.8	0.0	0.1	12.8	1.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	25.3	0.2	0.6	31.9	1.8	2.7
Lane Grp Delay (d), s/veh	37.1	14.6	41.8	27.9	39.3	41.4
Lane Grp LOS	D	B	D	C	D	D
Approach Vol, veh/h	889			1281	164	
Approach Delay, s/veh	36.6			28.1	40.6	
Approach LOS	D			C	D	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	65.3		24.8	90.1		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	81.0		11.0	96.0		
Max Q Clear Time (g_c+I1), s	54.7		3.4	74.7		
Green Ext Time (p_c), s	6.6		5.4	11.4		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			32.2			
HCM 2010 LOS			C			
<b>Notes</b>						

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	114	34	42	223	83	32	222	513	160	26	564	287	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	
Lanes	2	1	1	2	1	0	2	3	0	1	3	0	
Cap, veh/h	407	220	187	407	151	59	595	2879	874	41	2047	870	
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.06	0.23	0.23	0.02	0.55	0.55	
Sat Flow, veh/h	3408	1845	1568	3408	1266	492	3408	4078	1238	1757	3689	1568	
Grp Volume(v), veh/h	124	37	46	242	0	125	241	503	229	28	613	312	
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1626	1757	1845	1568	
Q Serve(g_s), s	2.6	1.4	2.1	5.3	0.0	5.3	5.4	8.7	9.0	1.3	7.0	8.8	
Cycle Q Clear(g_c), s	2.6	1.4	2.1	5.3	0.0	5.3	5.4	8.7	9.0	1.3	7.0	8.8	
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.76	1.00		1.00	
Lane Grp Cap(c), veh/h	407	220	187	407	0	210	595	2605	1148	41	2047	870	
V/C Ratio(X)	0.30	0.17	0.25	0.59	0.00	0.60	0.41	0.19	0.20	0.69	0.30	0.36	
Avail Cap(c_a), veh/h	774	419	356	945	0	488	859	2605	1148	177	2047	870	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00	
Uniform Delay (d), s/veh	31.9	31.4	31.7	33.1	0.0	33.1	33.4	12.3	12.4	38.4	9.4	9.8	
Incr Delay (d2), s/veh	0.4	0.4	0.7	1.4	0.0	2.7	0.4	0.2	0.4	18.5	0.4	1.2	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q (50%), veh/ln	1.1	0.7	0.8	2.3	0.0	2.5	2.5	4.5	4.1	0.8	3.0	3.4	
Lane Grp Delay (d), s/veh	32.3	31.7	32.4	34.5	0.0	35.8	33.8	12.4	12.8	56.9	9.8	11.0	
Lane Grp LOS	C	C	C	C		D	C	B	B	E	A	B	
Approach Vol, veh/h		207			367			973			953		
Approach Delay, s/veh		32.2			34.9			17.8			11.6		
Approach LOS		C			C			B			B		
<b>Timer</b>													
Assigned Phs		4			8		5	2		1		6	
Phs Duration (G+Y+Rc), s		13.5			13.5		17.8	60.0		5.8		48.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0	
Max Green Setting (Gmax), s		18.0			22.0		20.0	56.0		8.0		44.0	
Max Q Clear Time (g_c+I1), s		4.6			7.3		7.4	11.0		3.3		10.8	
Green Ext Time (p_c), s		2.0			2.1		4.7	6.9		0.0		7.5	
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay					19.1								
HCM 2010 LOS					B								
<b>Notes</b>													

HCM 2010 Signalized Intersection Summary  
19: Somersville Rd & WB SR-4 Ramps

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	236	283	635	585	455	316
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	740	340	811	3952	2444	693
Arrive On Green	0.22	0.22	0.08	0.24	0.44	0.44
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	257	308	690	636	495	343
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	7.4	22.2	23.2	10.6	6.4	18.2
Cycle Q Clear(g_c), s	7.4	22.2	23.2	10.6	6.4	18.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	740	340	811	3952	2444	693
V/C Ratio(X)	0.35	0.91	0.85	0.16	0.20	0.50
Avail Cap(c_a), veh/h	850	391	1202	3952	2444	693
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.93	0.91	0.91
Uniform Delay (d), s/veh	38.5	44.3	51.5	16.8	19.9	23.2
Incr Delay (d2), s/veh	0.3	22.1	3.7	0.1	0.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.2	2.1	11.2	5.4	2.9	7.5
Lane Grp Delay (d), s/veh	38.8	66.5	55.2	16.8	20.1	25.5
Lane Grp LOS	D	E	E	B	C	C
Approach Vol, veh/h	565			1326	838	
Approach Delay, s/veh	53.9			36.8	22.3	
Approach LOS	D			D	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			31.7	87.0	55.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			41.0	83.0	38.0	
Max Q Clear Time (g_c+I1), s			25.2	12.6	20.2	
Green Ext Time (p_c), s			2.4	13.1	8.8	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			35.9			
HCM 2010 LOS			D			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

No Bypass Cumulative +Project AM

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	228	0	281	0	0	0	0	1038	463	148	626	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	436	236	401				0	3859	1093	224	4424	0
Arrive On Green	0.13	0.00	0.13				0.00	1.00	1.00	0.13	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	248	0	305				0	1128	503	161	680	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.5	0.0	10.3				0.0	0.0	0.0	5.0	0.0	0.0
Cycle Q Clear(g_c), s	7.5	0.0	10.3				0.0	0.0	0.0	5.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	436	236	401				0	3859	1093	224	4424	0
V/C Ratio(X)	0.57	0.00	0.76				0.00	0.29	0.46	0.72	0.15	0.00
Avail Cap(c_a), veh/h	743	402	684				0	3859	1093	495	4424	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.75	0.75	0.94	0.94	0.00
Uniform Delay (d), s/veh	45.2	0.0	46.4				0.0	0.0	0.0	46.8	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	3.0				0.0	0.1	1.0	4.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	0.0	4.3				0.0	0.1	0.3	2.2	0.0	0.0
Lane Grp Delay (d), s/veh	46.3	0.0	49.4				0.0	0.1	1.0	50.8	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		553						1631			841	
Approach Delay, s/veh		48.0						0.4			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		18.1						80.8		11.2	92.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		24.0						68.0		16.0	88.0	
Max Q Clear Time (g_c+I1), s		12.3						2.0		7.0	2.0	
Green Ext Time (p_c), s		1.7						29.1		0.3	31.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			11.7									
HCM 2010 LOS			B									
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 21: Somersville Rd & Delta Fair Blvd

No Bypass Cumulative +Project AM  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	288	126	5	45	345	452	95	820	17	150	377	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1253	650	24	646	678	577	193	2218	45	248	1376	585
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.04	0.14	0.14	0.12	0.62	0.62
Sat Flow, veh/h	3408	1769	65	1757	1845	1568	1757	5406	109	3408	3689	1568
Grp Volume(v), veh/h	313	0	142	49	375	491	103	608	301	163	410	335
Grp Sat Flow(s),veh/h/ln	1704	0	1833	1757	1845	1568	1757	1845	1825	1704	1845	1568
Q Serve(g_s), s	5.1	0.0	4.3	1.5	13.0	23.2	4.6	12.1	12.1	3.7	4.1	10.1
Cycle Q Clear(g_c), s	5.1	0.0	4.3	1.5	13.0	23.2	4.6	12.1	12.1	3.7	4.1	10.1
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	1253	0	674	646	678	577	193	1514	749	248	1376	585
V/C Ratio(X)	0.25	0.00	0.21	0.08	0.55	0.85	0.53	0.40	0.40	0.66	0.30	0.57
Avail Cap(c_a), veh/h	1253	0	674	961	1009	858	284	1514	749	424	1376	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.75	0.75	0.96	0.96	0.96	0.98	0.98	0.98
Uniform Delay (d), s/veh	17.7	0.0	17.4	16.5	20.2	23.4	36.7	25.7	25.8	34.4	10.3	11.4
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.5	4.2	2.2	0.8	1.5	2.9	0.5	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.1	0.0	1.9	0.6	5.8	9.2	2.3	6.2	6.3	1.6	1.7	3.4
Lane Grp Delay (d), s/veh	17.8	0.0	17.6	16.6	20.7	27.6	38.9	26.5	27.3	37.3	10.8	15.4
Lane Grp LOS	B		B	B	C	C	D	C	C	D	B	B
Approach Vol, veh/h		455			915			1012			908	
Approach Delay, s/veh		17.7			24.2			28.0			17.3	
Approach LOS		B			C			C			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		33.6			33.6		12.9	37.0		9.9	34.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		17.0			44.0		13.0	33.0		10.0	30.0	
Max Q Clear Time (g_c+I1), s		7.1			25.2		6.6	14.1		5.7	12.1	
Green Ext Time (p_c), s		4.6			4.4		0.4	5.9		0.3	3.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.6								
HCM 2010 LOS				C								
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
22: Somersville Rd & Buchanan Rd

No Bypass Cumulative +Project AM  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	434	242	202	26	383	433	648	1146	54	43	160	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	383	1440	612	36	355	302	559	1475	70	59	506	215
Arrive On Green	0.22	0.39	0.00	0.02	0.19	0.00	0.32	0.42	0.42	0.03	0.14	0.14
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3495	165	1757	3689	1568
Grp Volume(v), veh/h	472	263	0	28	416	0	704	657	648	47	174	163
Grp Sat Flow(s), veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1815	1757	1845	1568
Q Serve(g_s), s	26.0	5.6	0.0	1.9	23.0	0.0	38.0	38.2	38.3	3.2	5.1	11.9
Cycle Q Clear(g_c), s	26.0	5.6	0.0	1.9	23.0	0.0	38.0	38.2	38.3	3.2	5.1	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	383	1440	612	36	355	302	559	778	766	59	506	215
V/C Ratio(X)	1.23	0.18	0.00	0.79	1.17	0.00	1.26	0.84	0.85	0.80	0.34	0.76
Avail Cap(c_a), veh/h	383	1440	612	88	355	302	559	788	776	59	525	223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.7	23.9	0.0	58.2	48.2	0.0	40.7	31.0	31.0	57.3	46.6	49.6
Incr Delay (d2), s/veh	125.9	0.1	0.0	30.5	102.7	0.0	130.5	8.3	8.5	52.5	0.4	13.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	24.9	2.5	0.0	1.2	21.1	0.0	37.4	19.3	19.1	2.3	2.4	5.6
Lane Grp Delay (d), s/veh	172.6	24.0	0.0	88.7	150.9	0.0	171.2	39.3	39.5	109.8	47.0	63.0
Lane Grp LOS	F	C		F	F		F	D	D	F	D	E
Approach Vol, veh/h		735			444			2009			384	
Approach Delay, s/veh		119.4			147.0			85.6			61.5	
Approach LOS		F			F			F			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	30.0	50.6		6.4	27.0		42.0	54.4		8.0	20.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	26.0	43.0		6.0	23.0		38.0	51.0		4.0	17.0	
Max Q Clear Time (g_c+I1), s	28.0	7.6		3.9	25.0		40.0	40.3		5.2	13.9	
Green Ext Time (p_c), s	0.0	4.7		0.0	0.0		0.0	7.2		0.0	2.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	97.6											
HCM 2010 LOS	F											
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 23: Sequoia Dr & Somersville Rd

No Bypass Cumulative +Project AM  
 3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	263	11	4	1587	301	87
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	341	304	734	2583	2583	1098
Arrive On Green	0.19	0.19	0.70	0.70	0.70	0.70
Sat Flow, veh/h	1757	1568	952	3689	3689	1568
Grp Volume(v), veh/h	286	12	4	1725	327	95
Grp Sat Flow(s),veh/h/ln	1757	1568	952	1845	1845	1568
Q Serve(g_s), s	11.8	0.5	0.1	19.9	2.2	1.5
Cycle Q Clear(g_c), s	11.8	0.5	2.3	19.9	2.2	1.5
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	341	304	734	2583	2583	1098
V/C Ratio(X)	0.84	0.04	0.01	0.67	0.13	0.09
Avail Cap(c_a), veh/h	768	685	1064	3861	3861	1641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	24.7	4.1	6.4	3.7	3.6
Incr Delay (d2), s/veh	5.5	0.1	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.6	0.2	0.0	7.3	0.8	0.5
Lane Grp Delay (d), s/veh	34.8	24.8	4.1	6.7	3.7	3.6
Lane Grp LOS	C	C	A	A	A	A
Approach Vol, veh/h	298			1729	422	
Approach Delay, s/veh	34.4			6.7	3.7	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				56.8	56.8	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				79.0	79.0	
Max Q Clear Time (g_c+I1), s				21.9	4.2	
Green Ext Time (p_c), s				31.0	35.0	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			9.5			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

No Bypass Cumulative +Project AM

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷	↷	↶	↷		↶↷	↷	↶↷
Volume (veh/h)	104	10	0	11	14	1483	0	1	2	304	9	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	154	412	0	22	137	58	7	30	61	584	717	1219
Arrive On Green	0.09	0.11	0.00	0.01	0.04	0.00	0.00	0.06	0.06	0.17	0.39	0.39
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	113	11	0	12	15	0	0	0	3	330	10	48
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	1.5	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	2.2	0.1	0.1
Cycle Q Clear(g_c), s	1.5	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	2.2	0.1	0.1
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	154	412	0	22	137	58	7	0	91	584	717	1219
V/C Ratio(X)	0.74	0.03	0.00	0.53	0.11	0.00	0.00	0.00	0.03	0.57	0.01	0.04
Avail Cap(c_a), veh/h	427	10771	0	285	10472	4451	285	0	1272	1244	1795	3052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.0	9.8	0.0	12.1	11.5	0.0	0.0	0.0	11.0	9.4	4.6	0.5
Incr Delay (d2), s/veh	6.7	0.0	0.0	18.2	0.3	0.0	0.0	0.0	0.1	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
Lane Grp Delay (d), s/veh	17.7	9.8	0.0	30.3	11.8	0.0	0.0	0.0	11.2	10.2	4.6	0.5
Lane Grp LOS	B	A		C	B				B	B	A	A
Approach Vol, veh/h		124			27			3			388	
Approach Delay, s/veh		17.0			20.0			11.2			8.9	
Approach LOS		B			C			B			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	6.2	6.8		4.3	4.9		0.0	5.4		8.2		13.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	72.0		4.0	70.0		4.0	19.0		9.0		24.0
Max Q Clear Time (g_c+I1), s	3.5	2.1		2.2	2.1		0.0	2.0		4.2		2.1
Green Ext Time (p_c), s	0.1	0.4		0.0	0.1		0.0	0.1		0.5		0.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			11.3									
HCM 2010 LOS			B									
<b>Notes</b>												

# HCM 2010 Signalized Intersection Summary

## 25: Buchanan Rd & Delta Fair Blvd

No Bypass Cumulative +Project AM





















3/16/2014

	↖	→	↘	↙	←	↖	↘	↑	↘	↙	↓	↖
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖		↖	↖	↖
Volume (veh/h)	43	230	59	55	430	223	137	461	57	69	114	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	300	1109	278	476	894	460	657	750	93	318	859	730
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	730	2849	714	1051	2298	1183	1233	1610	199	836	1845	1568
Grp Volume(v), veh/h	47	160	154	60	374	335	149	0	563	75	124	15
Grp Sat Flow(s),veh/h/ln	730	1845	1719	1051	1845	1636	1233	0	1809	836	1845	1568
Q Serve(g_s), s	2.9	3.2	3.3	2.2	8.6	8.7	4.3	0.0	13.3	4.2	2.1	0.3
Cycle Q Clear(g_c), s	11.6	3.2	3.3	5.6	8.6	8.7	6.5	0.0	13.3	17.5	2.1	0.3
Prop In Lane	1.00		0.42	1.00		0.72	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	300	718	669	476	718	637	657	0	843	318	859	730
V/C Ratio(X)	0.16	0.22	0.23	0.13	0.52	0.53	0.23	0.00	0.67	0.24	0.14	0.02
Avail Cap(c_a), veh/h	585	1439	1341	887	1439	1276	1626	0	2265	975	2309	1963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	11.3	11.3	13.2	12.9	12.9	10.3	0.0	11.4	18.2	8.4	7.9
Incr Delay (d2), s/veh	0.2	0.2	0.2	0.1	0.6	0.7	0.2	0.0	0.9	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	1.3	1.3	0.5	3.5	3.2	1.2	0.0	5.4	0.8	0.8	0.1
Lane Grp Delay (d), s/veh	17.6	11.4	11.5	13.3	13.5	13.6	10.5	0.0	12.3	18.6	8.5	8.0
Lane Grp LOS	B	B	B	B	B	B	B		B	B	A	A
Approach Vol, veh/h		361			769			712				214
Approach Delay, s/veh		12.2			13.5			12.0				12.0
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs		4			8			2				6
Phs Duration (G+Y+Rc), s		25.5			25.5			29.7				29.7
Change Period (Y+Rc), s		4.0			4.0			4.0				4.0
Max Green Setting (Gmax), s		43.0			43.0			69.0				69.0
Max Q Clear Time (g_c+I1), s		13.6			10.7			15.3				19.5
Green Ext Time (p_c), s		7.9			8.1			6.2				6.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.6								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

























No Bypass Cumulative +Project AM

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	475	2	10	1068	235	7	10	13	226	14	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	254	2144	8	19	1321	288	119	161	168	330	38	385
Arrive On Green	0.14	0.58	0.58	0.01	0.45	0.45	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1757	3673	14	1757	2937	640	252	604	631	1367	144	1446
Grp Volume(v), veh/h	217	259	259	11	726	690	33	0	0	246	0	166
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1732	1487	0	0	1367	0	1590
Q Serve(g_s), s	10.4	5.9	5.9	0.5	30.8	31.5	0.0	0.0	0.0	15.5	0.0	7.4
Cycle Q Clear(g_c), s	10.4	5.9	5.9	0.5	30.8	31.5	7.4	0.0	0.0	22.9	0.0	7.4
Prop In Lane	1.00		0.01	1.00		0.37	0.24		0.42	1.00		0.91
Lane Grp Cap(c), veh/h	254	1077	1075	19	830	779	448	0	0	330	0	423
V/C Ratio(X)	0.85	0.24	0.24	0.58	0.87	0.89	0.07	0.00	0.00	0.75	0.00	0.39
Avail Cap(c_a), veh/h	305	1090	1088	81	855	802	448	0	0	330	0	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	8.7	8.7	42.5	21.5	21.7	23.7	0.0	0.0	35.3	0.0	25.9
Incr Delay (d2), s/veh	17.8	0.1	0.1	25.4	9.8	11.5	0.1	0.0	0.0	8.9	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.8	2.4	2.4	0.4	15.8	15.5	0.5	0.0	0.0	6.1	0.0	3.0
Lane Grp Delay (d), s/veh	53.8	8.8	8.8	67.9	31.4	33.2	23.8	0.0	0.0	44.2	0.0	26.5
Lane Grp LOS	D	A	A	E	C	C	C			D		C
Approach Vol, veh/h		735			1427			33				412
Approach Delay, s/veh		22.1			32.5			23.8				37.1
Approach LOS		C			C			C				D
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	16.5	54.4		4.9	42.8			27.0				27.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	15.0	51.0		4.0	40.0			23.0				23.0
Max Q Clear Time (g_c+I1), s	12.4	7.9		2.5	33.5			9.4				24.9
Green Ext Time (p_c), s	0.2	21.1		0.0	5.4			1.7				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.2								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

No Bypass Cumulative +Project AM  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	214	55	533	12	124	85	1004	1270	10	54	950	164
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	297	312	1670	27	284	265	1237	2410	1024	76	1533	264
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.36	0.65	0.65	0.04	0.33	0.33
Sat Flow, veh/h	1757	1845	3136	161	1675	1568	3408	3689	1568	1757	4603	792
Grp Volume(v), veh/h	233	60	579	148	0	92	1091	1380	11	59	828	383
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1837	0	1568	1704	1845	1568	1757	1845	1705
Q Serve(g_s), s	11.3	2.5	9.4	6.5	0.0	4.6	26.8	18.5	0.2	3.0	17.2	17.3
Cycle Q Clear(g_c), s	11.3	2.5	9.4	6.5	0.0	4.6	26.8	18.5	0.2	3.0	17.2	17.3
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	297	312	1670	311	0	265	1237	2410	1024	76	1229	568
V/C Ratio(X)	0.78	0.19	0.35	0.48	0.00	0.35	0.88	0.57	0.01	0.78	0.67	0.67
Avail Cap(c_a), veh/h	335	351	1736	329	0	281	1528	2604	1107	157	1282	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.5	31.8	12.0	33.5	0.0	32.7	26.6	8.6	5.4	42.3	25.6	25.6
Incr Delay (d2), s/veh	10.4	0.3	0.1	1.1	0.0	0.8	5.4	0.3	0.0	15.9	1.3	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.9	1.2	3.4	3.1	0.0	1.9	12.0	7.4	0.1	1.7	8.0	7.7
Lane Grp Delay (d), s/veh	45.9	32.1	12.1	34.6	0.0	33.5	32.0	8.8	5.4	58.1	26.9	28.5
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h	872					240		2482			1270	
Approach Delay, s/veh	22.5					34.2		19.0			28.8	
Approach LOS	C					C		B			C	

Timer												
Assigned Phs	4		8			5		2		1		6
Phs Duration (G+Y+Rc), s	19.1					19.1		36.4		62.3		7.8
Change Period (Y+Rc), s	4.0					4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s	17.0					16.0		40.0		63.0		8.0
Max Q Clear Time (g_c+I1), s	13.3					8.5		28.8		20.5		5.0
Green Ext Time (p_c), s	1.8					3.0		3.6		30.8		0.0

Intersection Summary												
HCM 2010 Ctrl Delay			23.0									
HCM 2010 LOS			C									

Notes

HCM 2010 Signalized Intersection Summary  
 28: Kirker Pass Rd & Myrtle Dr

No Bypass Cumulative +Project AM

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	26	0	107	0	0	0	61	558	3	0	1786	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	176	0	157	495	184	157	84	2897	1231	3	3687	65
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.05	0.79	0.79	0.00	0.68	0.68
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5422	95
Grp Volume(v), veh/h	28	0	116	0	0	0	66	607	3	0	1320	655
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	2.9	0.0	0.0	12.4	12.5
Cycle Q Clear(g_c), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	2.9	0.0	0.0	12.4	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	176	0	157	495	184	157	84	2897	1231	3	2508	1243
V/C Ratio(X)	0.16	0.00	0.74	0.00	0.00	0.00	0.78	0.21	0.00	0.00	0.53	0.53
Avail Cap(c_a), veh/h	403	0	360	1137	423	360	252	3597	1529	101	3280	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	30.5	0.0	0.0	0.0	32.8	1.9	1.6	0.0	5.6	5.6
Incr Delay (d2), s/veh	0.4	0.0	6.7	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.0	2.2	0.0	0.0	0.0	1.5	0.8	0.0	0.0	4.5	4.5
Lane Grp Delay (d), s/veh	29.1	0.0	37.2	0.0	0.0	0.0	47.3	2.0	1.6	0.0	5.7	5.9
Lane Grp LOS	C		D				D	A	A		A	A
Approach Vol, veh/h		144			0			676			1975	
Approach Delay, s/veh		35.6			0.0			6.4			5.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2			1	6
Phs Duration (G+Y+Rc), s		11.0			11.0		7.3	58.8			0.0	51.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0			16.0		10.0	68.0			4.0	62.0
Max Q Clear Time (g_c+I1), s		7.0			0.0		4.6	4.9			0.0	14.5
Green Ext Time (p_c), s		0.4			0.0		0.0	39.5			0.0	33.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				7.5								
HCM 2010 LOS				A								
<b>Notes</b>												



# HCM 2010 Signalized Intersection Summary

## 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

No Bypass Cumulative +Project AM

3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	75	136	412	421	98	73	455	86	55	1678	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	99	209	177	450	1153	490	90	2051	376	77	1919	454
Arrive On Green	0.06	0.11	0.11	0.26	0.31	0.31	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4551	835	1757	4329	1024
Grp Volume(v), veh/h	78	82	148	448	458	107	79	399	189	60	1547	720
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1697	1757	1845	1664
Q Serve(g_s), s	5.1	4.8	10.8	29.8	11.4	5.9	5.2	7.8	8.1	4.0	47.1	49.7
Cycle Q Clear(g_c), s	5.1	4.8	10.8	29.8	11.4	5.9	5.2	7.8	8.1	4.0	47.1	49.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		0.62
Lane Grp Cap(c), veh/h	99	209	177	450	1153	490	90	1662	765	77	1635	737
V/C Ratio(X)	0.79	0.39	0.83	1.00	0.40	0.22	0.88	0.24	0.25	0.78	0.95	0.98
Avail Cap(c_a), veh/h	180	252	214	450	1153	490	90	1662	765	135	1637	738
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	48.2	50.9	43.5	31.6	29.7	55.2	19.8	19.9	55.5	31.3	32.0
Incr Delay (d2), s/veh	12.7	1.2	20.7	41.4	0.2	0.2	57.2	0.1	0.2	15.4	11.9	27.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	2.4	5.4	18.6	5.4	2.4	3.8	3.6	3.4	2.1	24.4	26.1
Lane Grp Delay (d), s/veh	67.2	49.4	71.6	84.9	31.8	29.9	112.4	19.9	20.1	70.9	43.2	59.1
Lane Grp LOS	E	D	E	F	C	C	F	B	C	E	D	E
Approach Vol, veh/h		308			1013			667				2327
Approach Delay, s/veh		64.6			55.1			30.9				48.8
Approach LOS		E			E			C				D
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	10.6	17.3		34.0	40.6		10.0	56.8		9.1		55.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	16.0		30.0	34.0		6.0	49.0		9.0		52.0
Max Q Clear Time (g_c+I1), s	7.1	12.8		31.8	13.4		7.2	10.1		6.0		51.7
Green Ext Time (p_c), s	0.1	0.4		0.0	4.9		0.0	31.7		0.0		0.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay												48.7
HCM 2010 LOS												D
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
30: Ygnacio Valley Rd & Clayton Blvd

No Bypass Cumulative +Project AM  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	230	384	37	485	1277	150	165	346	183	300	1182	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	306	1261	0	605	1748	0	234	1887	535	393	2146	608
Arrive On Green	0.09	0.23	0.00	0.18	0.32	0.00	0.07	0.34	0.34	0.12	0.39	0.39
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	250	417	0	527	1388	0	179	376	199	326	1285	621
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Cycle Q Clear(g_c), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	306	1261	0	605	1748	0	234	1887	535	393	2146	608
V/C Ratio(X)	0.82	0.33	0.00	0.87	0.79	0.00	0.77	0.20	0.37	0.83	0.60	1.02
Avail Cap(c_a), veh/h	323	1261	0	764	1908	0	235	1887	535	529	2146	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	37.4	0.0	46.4	36.2	0.0	53.1	27.0	28.9	50.2	28.3	35.5
Incr Delay (d2), s/veh	14.4	0.2	0.0	8.9	2.2	0.0	13.9	0.1	0.4	8.0	0.5	42.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.5	0.0	8.4	12.8	0.0	3.1	2.6	4.5	5.2	10.1	24.7
Lane Grp Delay (d), s/veh	66.3	37.5	0.0	55.3	38.5	0.0	67.0	27.1	29.3	58.2	28.8	77.5
Lane Grp LOS	E	D		E	D		E	C	C	E	C	F
Approach Vol, veh/h	667			1915			754			2232		
Approach Delay, s/veh	48.3			43.1			37.1			46.6		
Approach LOS	D			D			D			D		
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	14.4	30.4		24.6	40.6		12.0	43.6		17.4	49.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	25.0		26.0	40.0		8.0	35.0		18.0	45.0	
Max Q Clear Time (g_c+I1), s	10.4	9.3		19.5	28.6		8.0	13.1		12.9	47.0	
Green Ext Time (p_c), s	0.1	10.9		1.2	8.1		0.0	16.0		0.5	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			44.3									
HCM 2010 LOS			D									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd














No Bypass Cumulative +Project AM






















3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	823	5	10	1260	12	7	0	31	8	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	18	2637	15	20	2628	25	191	0	66	164	0	66
Arrive On Green	0.01	0.72	0.72	0.01	0.72	0.72	0.04	0.00	0.04	0.04	0.00	0.04
Sat Flow, veh/h	1757	3665	20	1757	3649	35	1393	0	1568	1356	0	1568
Grp Volume(v), veh/h	10	450	450	11	692	691	8	0	34	9	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1841	1757	1845	1839	1393	0	1568	1356	0	1568
Q Serve(g_s), s	0.3	4.8	4.8	0.3	8.9	8.9	0.3	0.0	1.1	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.3	4.8	4.8	0.3	8.9	8.9	0.4	0.0	1.1	1.5	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1327	1325	20	1329	1324	191	0	66	164	0	66
V/C Ratio(X)	0.55	0.34	0.34	0.55	0.52	0.52	0.04	0.00	0.52	0.05	0.00	0.06
Avail Cap(c_a), veh/h	200	2935	2930	200	2935	2926	608	0	535	570	0	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.0	2.7	2.7	26.0	3.3	3.3	24.5	0.0	24.8	25.5	0.0	24.3
Incr Delay (d2), s/veh	23.5	0.2	0.2	22.0	0.3	0.3	0.1	0.0	6.2	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.9	0.9	0.3	1.8	1.8	0.1	0.0	0.5	0.1	0.0	0.1
Lane Grp Delay (d), s/veh	49.5	2.9	2.9	48.0	3.6	3.6	24.6	0.0	30.9	25.6	0.0	24.7
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		910			1394			42				13
Approach Delay, s/veh		3.4			4.0			29.7				25.3
Approach LOS		A			A			C				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.5	42.0		4.6	42.0			6.2				6.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	84.0		6.0	84.0			18.0				18.0
Max Q Clear Time (g_c+l1), s	2.3	6.8		2.3	10.9			3.1				3.5
Green Ext Time (p_c), s	0.0	27.5		0.0	27.1			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.3								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd

No Bypass Cumulative +Project AM  
 3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			
Volume (veh/h)	110	325	782	110	116	326
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	157	2167	1351	191	475	424
Arrive On Green	0.09	0.59	0.43	0.43	0.27	0.27
Sat Flow, veh/h	1757	3689	3164	447	1757	1568
Grp Volume(v), veh/h	120	353	496	474	126	354
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1766	1757	1568
Q Serve(g_s), s	3.8	2.5	11.8	11.8	3.2	12.0
Cycle Q Clear(g_c), s	3.8	2.5	11.8	11.8	3.2	12.0
Prop In Lane	1.00			0.25	1.00	1.00
Lane Grp Cap(c), veh/h	157	2167	788	754	475	424
V/C Ratio(X)	0.77	0.16	0.63	0.63	0.27	0.84
Avail Cap(c_a), veh/h	438	3807	1313	1257	750	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.0	5.3	12.6	12.6	16.1	19.3
Incr Delay (d2), s/veh	7.6	0.0	0.8	0.9	0.3	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.9	5.0	4.8	1.3	0.6
Lane Grp Delay (d), s/veh	32.6	5.3	13.4	13.5	16.4	24.6
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		473	970		480	
Approach Delay, s/veh		12.3	13.5		22.4	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	9.0	37.0	28.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	58.0	40.0			
Max Q Clear Time (g_c+I1), s	5.8	4.5	13.8			
Green Ext Time (p_c), s	0.2	12.3	10.2			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			15.4			
HCM 2010 LOS			B			
<b>Notes</b>						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	111	0	0	0	874	829	0	2	257	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	234	0	151	65	178	0	993	2936	0	2	757	78
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.56	0.80	0.00	0.00	0.23	0.23
Sat Flow, veh/h	1757	0	1568	1253	1845	0	1757	3689	0	1757	3290	339
Grp Volume(v), veh/h	50	0	121	0	0	0	950	901	0	2	155	153
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1253	1845	0	1757	1845	0	1757	1845	1785
Q Serve(g_s), s	2.9	0.0	8.4	0.0	0.0	0.0	56.6	7.3	0.0	0.1	7.8	8.0
Cycle Q Clear(g_c), s	2.9	0.0	8.4	0.0	0.0	0.0	56.6	7.3	0.0	0.1	7.8	8.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.19
Lane Grp Cap(c), veh/h	234	0	151	65	178	0	993	2936	0	2	425	411
V/C Ratio(X)	0.21	0.00	0.80	0.00	0.00	0.00	0.96	0.31	0.00	1.26	0.37	0.37
Avail Cap(c_a), veh/h	319	0	227	126	267	0	1208	2936	0	64	425	411
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	0.00	0.11	0.11	0.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	46.5	0.0	48.9	0.0	0.0	0.0	22.8	3.0	0.0	55.3	35.8	35.8
Incr Delay (d2), s/veh	0.4	0.0	11.4	0.0	0.0	0.0	2.6	0.0	0.0	428.0	2.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	3.8	0.0	0.0	0.0	24.7	2.6	0.0	0.2	4.0	3.9
Lane Grp Delay (d), s/veh	46.9	0.0	60.4	0.0	0.0	0.0	25.3	3.1	0.0	483.3	38.1	38.3
Lane Grp LOS	D		E				C	A		F	D	D
Approach Vol, veh/h		171			0			1851			310	
Approach Delay, s/veh		56.4			0.0			14.5			41.1	
Approach LOS		E						B			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		14.6			14.6		66.5	92.0		3.9	29.4	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		16.0			16.0		76.0	88.0		4.0	16.0	
Max Q Clear Time (g_c+I1), s		10.4			0.0		58.6	9.3		2.1	10.0	
Green Ext Time (p_c), s		0.3			0.0		3.8	8.3		0.0	0.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	376	169	24	500	8	668	7	32	9	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	22	519	231	39	810	13	891	9	944	190	38	24
Arrive On Green	0.01	0.21	0.21	0.02	0.22	0.22	0.60	0.60	0.60	0.60	0.60	0.60
Sat Flow, veh/h	1757	2423	1077	1757	3619	60	1320	15	1568	177	63	40
Grp Volume(v), veh/h	13	310	283	26	277	275	734	0	35	14	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1655	1757	1845	1834	1334	0	1568	280	0	0
Q Serve(g_s), s	0.5	11.8	12.0	1.1	10.2	10.2	0.0	0.0	0.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	11.8	12.0	1.1	10.2	10.2	36.9	0.0	0.7	37.3	0.0	0.0
Prop In Lane	1.00		0.65	1.00		0.03	0.99		1.00	0.71		0.14
Lane Grp Cap(c), veh/h	22	395	354	39	413	411	899	0	944	252	0	0
V/C Ratio(X)	0.58	0.79	0.80	0.66	0.67	0.67	0.82	0.00	0.04	0.06	0.00	0.00
Avail Cap(c_a), veh/h	95	423	379	95	423	420	1132	0	1204	489	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.4	27.5	27.6	36.0	26.3	26.3	13.2	0.0	6.0	14.8	0.0	0.0
Incr Delay (d2), s/veh	22.0	8.9	10.8	17.4	4.0	4.0	3.8	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	6.3	5.9	0.7	5.0	5.0	11.4	0.0	0.2	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	58.4	36.5	38.4	53.4	30.2	30.3	17.0	0.0	6.0	14.9	0.0	0.0
Lane Grp LOS	E	D	D	D	C	C	B		A	B		
Approach Vol, veh/h		606			578			769				14
Approach Delay, s/veh		37.8			31.3			16.5				14.9
Approach LOS		D			C			B				B

Timer

Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.9	19.9		5.7	20.6			48.7				48.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	17.0		4.0	17.0			57.0				57.0
Max Q Clear Time (g_c+I1), s	2.5	14.0		3.1	12.2			38.9				39.3
Green Ext Time (p_c), s	0.0	1.9		0.0	2.8			5.4				5.4

Intersection Summary













HCM 2010 Ctrl Delay				27.4								
HCM 2010 LOS				C								

Notes

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

No Bypass Cumulative +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↕↕	↕↕		↕	↕↕	↕
Volume (veh/h)	0	0	0	141	262	58	536	775	392	258	820	321
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				202	397	91	683	1148	576	320	1757	747
Arrive On Green				0.19	0.19	0.19	0.33	0.83	0.83	0.18	0.48	0.00
Sat Flow, veh/h				1039	2047	468	3408	2320	1164	1757	3689	1568
Grp Volume(v), veh/h				264	0	237	583	668	600	280	891	0
Grp Sat Flow(s),veh/h/ln				1793	0	1762	1704	1845	1639	1757	1845	1568
Q Serve(g_s), s				12.9	0.0	11.6	14.8	14.8	15.2	14.4	15.5	0.0
Cycle Q Clear(g_c), s				12.9	0.0	11.6	14.8	14.8	15.2	14.4	15.5	0.0
Prop In Lane				0.58		0.27	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h				348	0	342	683	913	811	320	1757	747
V/C Ratio(X)				0.76	0.00	0.69	0.85	0.73	0.74	0.88	0.51	0.00
Avail Cap(c_a), veh/h				733	0	720	1063	913	811	454	1757	747
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.64	0.64	0.64	1.00	1.00	0.00
Uniform Delay (d), s/veh				35.4	0.0	34.9	29.7	5.4	5.4	37.0	16.8	0.0
Incr Delay (d2), s/veh				3.4	0.0	2.5	2.8	3.4	3.9	12.9	1.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				6.1	0.0	5.4	6.0	3.7	3.5	7.6	7.1	0.0
Lane Grp Delay (d), s/veh				38.8	0.0	37.4	32.4	8.7	9.3	49.9	17.9	0.0
Lane Grp LOS				D		D	C	A	A	D	B	
Approach Vol, veh/h				501			1851			1171		
Approach Delay, s/veh				38.1			16.4			25.5		
Approach LOS				D			B			C		
<b>Timer</b>												
Assigned Phs				8			5	2		1	6	
Phs Duration (G+Y+Rc), s				22.0			22.6	50.0		20.9	48.3	
Change Period (Y+Rc), s				4.0			4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s				38.0			29.0	46.0		24.0	41.0	
Max Q Clear Time (g_c+I1), s				14.9			16.8	17.2		16.4	17.5	
Green Ext Time (p_c), s				3.1			1.8	19.4		0.5	16.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.5								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

No Bypass Cumulative +Project PM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	575	0	869	0	0	0	0	983	122	83	615	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	726	762	1295				0	1719	214	203	1882	0
Arrive On Green	0.41	0.00	0.41				0.00	0.36	0.36	0.23	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4828	600	1757	3689	0
Grp Volume(v), veh/h	625	0	945				0	816	385	90	668	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1739	1757	1845	0
Q Serve(g_s), s	33.7	0.0	26.3				0.0	19.0	19.0	4.6	0.0	0.0
Cycle Q Clear(g_c), s	33.7	0.0	26.3				0.0	19.0	19.0	4.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.35	1.00		0.00
Lane Grp Cap(c), veh/h	726	762	1295				0	1314	619	203	1882	0
V/C Ratio(X)	0.86	0.00	0.73				0.00	0.62	0.62	0.44	0.36	0.00
Avail Cap(c_a), veh/h	997	1047	1780				0	1314	619	203	1882	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.84	0.84	0.00
Uniform Delay (d), s/veh	27.8	0.0	25.6				0.0	27.7	27.7	37.1	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.0	1.0				0.0	2.2	4.7	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.9	0.0	10.4				0.0	9.1	9.0	2.0	0.1	0.0
Lane Grp Delay (d), s/veh	33.6	0.0	26.6				0.0	29.9	32.3	38.4	0.4	0.0
Lane Grp LOS	C		C					C	C	D	A	
Approach Vol, veh/h		1570						1201			758	
Approach Delay, s/veh		29.4						30.7			4.9	
Approach LOS		C						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		46.9						41.0		16.0	57.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		59.0						37.0		12.0	53.0	
Max Q Clear Time (g_c+I1), s		35.7						21.0		6.6	2.0	
Green Ext Time (p_c), s		7.2						7.5		2.2	5.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
<b>Notes</b>												



























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	226	867	182	104	336	252	78	603	148	544	920	281	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	
Lanes	1	2	0	1	2	1	1	2	1	1	2	1	
Cap, veh/h	273	888	186	117	780	332	107	676	287	556	1619	688	
Arrive On Green	0.16	0.30	0.30	0.07	0.21	0.21	0.06	0.18	0.18	0.32	0.44	0.44	
Sat Flow, veh/h	1757	2959	621	1757	3689	1568	1757	3689	1568	1757	3689	1568	
Grp Volume(v), veh/h	246	587	553	113	365	274	85	655	161	591	1000	305	
Grp Sat Flow(s),veh/h/ln	1757	1845	1735	1757	1845	1568	1757	1845	1568	1757	1845	1568	
Q Serve(g_s), s	16.5	36.0	36.0	7.7	10.4	10.3	5.7	21.2	9.4	38.0	25.0	16.3	
Cycle Q Clear(g_c), s	16.5	36.0	36.0	7.7	10.4	10.3	5.7	21.2	9.4	38.0	25.0	16.3	
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	273	553	521	117	780	332	107	676	287	556	1619	688	
V/C Ratio(X)	0.90	1.06	1.06	0.96	0.47	0.83	0.79	0.97	0.56	1.06	0.62	0.44	
Avail Cap(c_a), veh/h	293	553	521	117	780	332	176	676	287	556	1619	688	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	49.8	42.0	42.0	55.9	41.4	11.9	55.6	48.7	31.2	41.0	25.9	23.4	
Incr Delay (d2), s/veh	28.0	55.3	57.1	71.9	0.4	15.6	12.2	26.8	2.4	55.8	0.7	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q (50%), veh/ln	9.6	25.4	24.2	5.9	5.0	5.2	3.0	12.5	3.9	25.5	11.7	6.4	
Lane Grp Delay (d), s/veh	77.8	97.3	99.1	127.7	41.8	27.6	67.8	75.5	33.7	96.8	26.6	23.9	
Lane Grp LOS	E	F	F	F	D	C	E	E	C	F	C	C	
Approach Vol, veh/h	1386			752				901			1896		
Approach Delay, s/veh	94.6			49.5				67.3			48.1		
Approach LOS	F			D				E			D		
<b>Timer</b>													
Assigned Phs	7	4		3	8		5	2		1	6		
Phs Duration (G+Y+Rc), s	22.6	40.0		12.0	29.4		11.3	26.0		42.0	56.7		
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		
Max Green Setting (Gmax), s	20.0	36.0		8.0	24.0		12.0	22.0		38.0	48.0		
Max Q Clear Time (g_c+I1), s	18.5	38.0		9.7	12.4		7.7	23.2		40.0	27.0		
Green Ext Time (p_c), s	0.1	0.0		0.0	7.9		0.1	0.0		0.0	11.1		
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay	64.9												
HCM 2010 LOS	E												
<b>Notes</b>													

# HCM 2010 Signalized Intersection Summary

## 4: Railroad Ave & Buchanan Rd

No Bypass Cumulative +Project PM













3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	55	3	489	117	138	38	744	1151	147	584	127
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	303	319	271	589	319	271	73	2272	966	178	2491	1059
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.04	0.62	0.62	0.10	0.68	0.68
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	67	60	3	532	127	150	41	809	1251	160	635	138
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.6	3.0	0.2	16.6	6.7	9.5	2.5	11.7	67.0	9.8	7.3	3.4
Cycle Q Clear(g_c), s	3.6	3.0	0.2	16.6	6.7	9.5	2.5	11.7	67.0	9.8	7.3	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	319	271	589	319	271	73	2272	966	178	2491	1059
V/C Ratio(X)	0.22	0.19	0.01	0.90	0.40	0.55	0.56	0.36	1.30	0.90	0.25	0.13
Avail Cap(c_a), veh/h	303	319	271	595	322	274	258	2272	966	178	2491	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	38.5	37.3	44.1	40.0	41.2	51.2	10.3	20.9	48.4	6.9	6.3
Incr Delay (d2), s/veh	0.4	0.3	0.0	17.1	0.8	2.4	6.5	0.1	140.7	40.7	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	1.4	0.1	8.4	3.1	4.0	1.3	5.0	62.2	6.5	3.1	1.2
Lane Grp Delay (d), s/veh	39.1	38.8	37.3	61.2	40.8	43.5	57.7	10.4	161.6	89.0	7.0	6.3
Lane Grp LOS	D	D	D	E	D	D	E	B	F	F	A	A
Approach Vol, veh/h		130			809			2101			933	
Approach Delay, s/veh		38.9			54.7			101.4			21.0	
Approach LOS		D			D			F			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7	4	
Phs Duration (G+Y+Rc), s		22.8			22.8		8.5	71.0		15.0	77.5	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		17.0			19.0		16.0	67.0		11.0	62.0	
Max Q Clear Time (g_c+I1), s		5.6			18.6		4.5	69.0		11.8	9.3	
Green Ext Time (p_c), s		3.0			0.1		0.0	0.0		0.0	34.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				70.9								
HCM 2010 LOS				E								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

No Bypass Cumulative +Project PM

3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	108	28	48	1825	890	186
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	1	2	2	0
Cap, veh/h	159	142	65	2958	2106	439
Arrive On Green	0.09	0.09	0.04	0.80	0.71	0.71
Sat Flow, veh/h	1757	1568	1757	3689	2962	618
Grp Volume(v), veh/h	117	30	52	1984	602	567
Grp Sat Flow(s),veh/h/ln	1757	1568	1757	1845	1845	1736
Q Serve(g_s), s	4.8	1.3	2.2	17.1	10.4	10.4
Cycle Q Clear(g_c), s	4.8	1.3	2.2	17.1	10.4	10.4
Prop In Lane	1.00	1.00	1.00			0.36
Lane Grp Cap(c), veh/h	159	142	65	2958	1311	1234
V/C Ratio(X)	0.74	0.21	0.80	0.67	0.46	0.46
Avail Cap(c_a), veh/h	378	338	166	3278	1366	1285
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	31.3	35.5	3.2	4.6	4.6
Incr Delay (d2), s/veh	6.5	0.7	19.2	0.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	0.0	1.3	4.9	3.8	3.6
Lane Grp Delay (d), s/veh	39.4	32.1	54.7	3.6	4.9	4.9
Lane Grp LOS	D	C	D	A	A	A
Approach Vol, veh/h	147			2036	1169	
Approach Delay, s/veh	37.9			4.9	4.9	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			6.8	63.6	56.8	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			7.0	66.0	55.0	
Max Q Clear Time (g_c+I1), s			4.2	19.1	12.4	
Green Ext Time (p_c), s			0.0	40.4	37.2	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			6.4			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd






















No Bypass Cumulative +Project PM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↷	↷↷	↷	↷	↷↷	↷	↷	↷↷	↷	↷	↷↷	↷
Volume (veh/h)	104	1190	195	191	323	121	93	277	298	263	458	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	143	1312	557	215	1463	622	128	656	279	293	743	221
Arrive On Green	0.08	0.36	0.36	0.12	0.40	0.40	0.07	0.18	0.18	0.17	0.27	0.27
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2733	813
Grp Volume(v), veh/h	113	1293	212	208	351	132	101	301	324	286	335	312
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1701
Q Serve(g_s), s	5.7	31.3	9.1	10.6	5.7	5.0	5.1	6.6	16.0	14.6	14.6	14.7
Cycle Q Clear(g_c), s	5.7	31.3	9.1	10.6	5.7	5.0	5.1	6.6	16.0	14.6	14.6	14.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	143	1312	557	215	1463	622	128	656	279	293	501	462
V/C Ratio(X)	0.79	0.99	0.38	0.97	0.24	0.21	0.79	0.46	1.16	0.98	0.67	0.67
Avail Cap(c_a), veh/h	234	1312	557	215	1463	622	156	656	279	293	501	462
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	28.8	21.6	39.3	18.1	17.9	41.1	33.1	37.0	37.3	29.2	29.2
Incr Delay (d2), s/veh	9.4	21.4	0.4	52.3	0.1	0.2	19.7	0.5	105.2	46.1	3.4	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	17.9	3.5	7.8	2.6	1.9	3.0	3.1	14.4	10.2	7.2	6.7
Lane Grp Delay (d), s/veh	50.0	50.2	22.0	91.7	18.2	18.1	60.8	33.6	142.2	83.4	32.6	33.1
Lane Grp LOS	D	D	C	F	B	B	E	C	F	F	C	C
Approach Vol, veh/h		1618			691			726			933	
Approach Delay, s/veh		46.5			40.3			85.8			48.3	
Approach LOS		D			D			F			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.3	36.0		15.0	39.7		10.5	20.0		19.0	28.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	32.0		11.0	31.0		8.0	16.0		15.0	23.0	
Max Q Clear Time (g_c+I1), s	7.7	33.3		12.6	7.7		7.1	18.0		16.6	16.7	
Green Ext Time (p_c), s	0.1	0.0		0.0	14.7		0.0	0.0		0.0	3.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					53.0							
HCM 2010 LOS					D							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St




























No Bypass Cumulative +Project PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	1186	31	24	668	108	18	43	9	164	83	95
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	109	1248	33	32	1207	1026	29	84	18	162	105	120
Arrive On Green	0.06	0.70	0.70	0.02	0.65	0.65	0.02	0.06	0.06	0.09	0.13	0.13
Sat Flow, veh/h	1757	1789	47	1757	1845	1568	1757	1475	314	1757	786	900
Grp Volume(v), veh/h	86	0	1323	26	726	117	20	0	57	178	0	193
Grp Sat Flow(s),veh/h/ln	1757	0	1836	1757	1845	1568	1757	0	1789	1757	0	1686
Q Serve(g_s), s	5.7	0.0	83.0	1.8	26.7	3.3	1.3	0.0	3.7	11.0	0.0	13.3
Cycle Q Clear(g_c), s	5.7	0.0	83.0	1.8	26.7	3.3	1.3	0.0	3.7	11.0	0.0	13.3
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	109	0	1281	32	1207	1026	29	0	102	162	0	225
V/C Ratio(X)	0.79	0.00	1.03	0.81	0.60	0.11	0.70	0.00	0.56	1.10	0.00	0.86
Avail Cap(c_a), veh/h	177	0	1281	59	1207	1026	74	0	241	162	0	312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.09	0.00	0.09	0.63	0.63	0.63	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.1	0.0	18.0	58.2	11.7	7.7	58.2	0.0	54.6	54.0	0.0	50.5
Incr Delay (d2), s/veh	1.2	0.0	18.0	25.3	1.4	0.1	26.6	0.0	4.7	98.6	0.0	15.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.6	0.0	38.1	1.0	11.4	1.2	0.8	0.0	1.9	9.5	0.0	6.8
Lane Grp Delay (d), s/veh	56.3	0.0	36.0	83.5	13.1	7.8	84.8	0.0	59.3	152.6	0.0	66.1
Lane Grp LOS	E		F	F	B	A	F		E	F		E
Approach Vol, veh/h		1409			869			77				371
Approach Delay, s/veh		37.2			14.5			65.9				107.6
Approach LOS		D			B			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	11.3	87.0		6.2	81.8		5.9	10.8		15.0		19.9
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	83.0		4.0	75.0		5.0	16.0		11.0		22.0
Max Q Clear Time (g_c+l1), s	7.7	85.0		3.8	28.7		3.3	5.7		13.0		15.3
Green Ext Time (p_c), s	0.1	0.0		0.0	6.5		0.0	0.2		0.0		0.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				40.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave

No Bypass Cumulative +Project PM























3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 						 	
Volume (veh/h)	32	721	25	668	284	90	44	26	268	78	65	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	51	1355	47	1050	2439	1036	327	343	291	327	290	45
Arrive On Green	0.03	0.38	0.38	0.31	0.66	0.66	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3546	122	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	35	408	403	726	309	98	48	28	291	85	0	82
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.9	17.0	17.0	18.1	3.0	2.2	2.2	1.2	18.0	4.0	0.0	3.8
Cycle Q Clear(g_c), s	1.9	17.0	17.0	18.1	3.0	2.2	2.2	1.2	18.0	4.0	0.0	3.8
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	51	705	697	1050	2439	1036	327	343	291	327	0	335
V/C Ratio(X)	0.68	0.58	0.58	0.69	0.13	0.09	0.15	0.08	1.00	0.26	0.00	0.24
Avail Cap(c_a), veh/h	109	705	697	1162	2439	1036	327	343	291	327	0	335
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.6	23.7	23.7	29.5	6.1	5.9	33.0	32.6	39.4	33.7	0.0	33.6
Incr Delay (d2), s/veh	14.7	3.4	3.5	1.3	0.1	0.1	0.2	0.1	52.2	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	8.4	8.3	7.8	1.2	0.8	1.0	0.6	11.3	1.8	0.0	1.7
Lane Grp Delay (d), s/veh	61.3	27.2	27.2	30.7	6.2	6.1	33.2	32.7	91.6	34.1	0.0	34.0
Lane Grp LOS	E	C	C	C	A	A	C	C	F	C		C
Approach Vol, veh/h		846			1133			367				167
Approach Delay, s/veh		28.6			21.9			79.5				34.1
Approach LOS		C			C			E				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.8	41.0		33.8	68.0			22.0				22.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	37.0		33.0	64.0			18.0				16.0
Max Q Clear Time (g_c+I1), s	3.9	19.0		20.1	5.0			20.0				6.0
Green Ext Time (p_c), s	0.7	5.0		2.5	2.6			0.0				1.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				33.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 9: Loveridge Rd & California Ave/N Park Blvd

No Bypass Cumulative +Project PM

3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	333	315	390	94	174	19	502	617	230	19	196	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	470	583	496	178	753	83	887	1079	402	32	660	281
Arrive On Green	0.14	0.32	0.32	0.05	0.23	0.23	0.26	0.42	0.42	0.02	0.18	0.18
Sat Flow, veh/h	3408	1845	1568	3408	3267	359	3408	2565	956	1757	3689	1568
Grp Volume(v), veh/h	362	342	424	102	106	104	546	482	439	21	213	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1781	1704	1845	1676	1757	1845	1568
Q Serve(g_s), s	8.5	12.9	21.1	2.4	3.9	4.0	11.7	17.1	17.1	1.0	4.2	10.6
Cycle Q Clear(g_c), s	8.5	12.9	21.1	2.4	3.9	4.0	11.7	17.1	17.1	1.0	4.2	10.6
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	470	583	496	178	425	410	887	776	705	32	660	281
V/C Ratio(X)	0.77	0.59	0.86	0.57	0.25	0.25	0.62	0.62	0.62	0.65	0.32	1.11
Avail Cap(c_a), veh/h	861	821	698	287	510	493	1270	1220	1108	106	1286	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.6	23.9	26.7	38.5	26.1	26.2	27.1	18.9	18.9	40.5	29.8	17.4
Incr Delay (d2), s/veh	2.7	0.9	7.4	2.9	0.3	0.3	0.7	0.8	0.9	19.5	0.3	66.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.8	5.9	9.0	1.1	1.8	1.8	5.0	7.7	7.0	0.6	1.9	9.1
Lane Grp Delay (d), s/veh	37.3	24.8	34.1	41.4	26.4	26.5	27.8	19.7	19.8	60.1	30.0	83.7
Lane Grp LOS	D	C	C	D	C	C	C	B	B	E	C	F
Approach Vol, veh/h	1128			312			1467			546		
Approach Delay, s/veh	32.3			31.3			22.8			61.9		
Approach LOS	C			C			C			E		
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	15.5	30.3		8.4	23.2		25.6	39.0		5.5	18.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	21.0	37.0		7.0	23.0		31.0	55.0		5.0	29.0	
Max Q Clear Time (g_c+I1), s	10.5	23.1		4.4	6.0		13.7	19.1		3.0	12.6	
Green Ext Time (p_c), s	1.0	3.2		0.4	1.4		7.9	10.5		0.0	2.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				32.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

No Bypass Cumulative +Project PM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔						↑↑	↔	↔↔	↑↑	
Volume (veh/h)	856	0	533	0	0	0	0	728	409	139	543	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1425	0	656				0	1431	608	301	1887	0
Arrive On Green	0.42	0.00	0.42				0.00	0.39	0.39	0.09	0.51	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	930	0	579				0	791	445	151	590	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	24.8	0.0	38.6				0.0	18.9	27.5	4.8	10.5	0.0
Cycle Q Clear(g_c), s	24.8	0.0	38.6				0.0	18.9	27.5	4.8	10.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1425	0	656				0	1431	608	301	1887	0
V/C Ratio(X)	0.65	0.00	0.88				0.00	0.55	0.73	0.50	0.31	0.00
Avail Cap(c_a), veh/h	1623	0	747				0	1431	608	301	1887	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.88	0.88	0.00
Uniform Delay (d), s/veh	26.4	0.0	30.4				0.0	27.0	29.7	49.3	16.1	0.0
Incr Delay (d2), s/veh	0.8	0.0	11.1				0.0	1.5	7.6	1.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.6	0.0	17.0				0.0	9.1	12.0	2.2	4.9	0.0
Lane Grp Delay (d), s/veh	27.2	0.0	41.6				0.0	28.6	37.3	50.5	16.5	0.0
Lane Grp LOS	C		D					C	D	D	B	
Approach Vol, veh/h		1509						1236			741	
Approach Delay, s/veh		32.7						31.7			23.4	
Approach LOS		C						C			C	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		51.4						48.0		14.0	62.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		54.0						44.0		10.0	58.0	
Max Q Clear Time (g_c+I1), s		40.6						29.5		6.8	12.5	
Green Ext Time (p_c), s		6.8						6.3		1.4	5.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			30.4									
HCM 2010 LOS			C									
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd













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3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↗	↔	↔	↗	↔	↔	↗	↔	↔	↗
Volume (veh/h)	567	1167	277	234	430	148	238	507	166	260	453	132
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	711	1509	641	315	1080	459	291	911	387	354	683	290
Arrive On Green	0.21	0.41	0.41	0.09	0.29	0.29	0.17	0.25	0.25	0.10	0.19	0.19
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	616	1268	301	254	467	161	259	551	180	283	492	143
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	18.9	33.5	15.2	7.9	11.1	8.8	15.6	14.3	10.6	8.8	13.6	8.9
Cycle Q Clear(g_c), s	18.9	33.5	15.2	7.9	11.1	8.8	15.6	14.3	10.6	8.8	13.6	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	711	1509	641	315	1080	459	291	911	387	354	683	290
V/C Ratio(X)	0.87	0.84	0.47	0.81	0.43	0.35	0.89	0.60	0.46	0.80	0.72	0.49
Avail Cap(c_a), veh/h	945	1636	695	346	1080	459	357	988	420	504	784	333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	28.8	23.4	48.2	31.0	30.2	44.2	36.1	34.7	47.4	41.5	39.5
Incr Delay (d2), s/veh	6.7	3.9	0.5	12.1	0.3	0.5	20.3	0.9	0.9	6.0	2.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.9	16.0	5.9	4.0	5.2	3.5	8.7	6.9	4.3	4.2	6.7	3.6
Lane Grp Delay (d), s/veh	48.1	32.7	23.9	60.3	31.3	30.6	64.5	37.0	35.5	53.4	44.2	40.8
Lane Grp LOS	D	C	C	E	C	C	E	D	D	D	D	D
Approach Vol, veh/h		2185			882			990			918	
Approach Delay, s/veh		35.8			39.5			43.9			46.5	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	26.6	48.3		14.0	35.7		21.9	30.7		15.2	24.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	30.0	48.0		11.0	29.0		22.0	29.0		16.0	23.0	
Max Q Clear Time (g_c+I1), s	20.9	35.5		9.9	13.1		17.6	16.3		10.8	15.6	
Green Ext Time (p_c), s	1.7	8.8		0.1	11.9		0.3	6.5		0.5	4.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			40.1									
HCM 2010 LOS			D									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

No Bypass Cumulative +Project PM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	152	1142	565	301	551	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	190	1149	893	759	554	495
Arrive On Green	0.11	0.62	0.48	0.48	0.32	0.32
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	165	1241	614	327	599	315
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	12.0	81.0	33.5	17.7	41.0	22.4
Cycle Q Clear(g_c), s	12.0	81.0	33.5	17.7	41.0	22.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	190	1149	893	759	554	495
V/C Ratio(X)	0.87	1.08	0.69	0.43	1.08	0.64
Avail Cap(c_a), veh/h	216	1149	893	759	554	495
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.65	0.65	1.00	1.00
Uniform Delay (d), s/veh	57.1	24.5	25.9	21.9	44.5	38.1
Incr Delay (d2), s/veh	16.6	45.0	2.8	1.2	62.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.3	48.2	15.7	7.0	27.9	19.4
Lane Grp Delay (d), s/veh	73.7	69.5	28.8	23.0	106.5	40.8
Lane Grp LOS	E	F	C	C	F	D
Approach Vol, veh/h		1406	941		914	
Approach Delay, s/veh		70.0	26.8		83.9	
Approach LOS		E	C		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	18.1	85.0	66.9			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	16.0	81.0	61.0			
Max Q Clear Time (g_c+I1), s	14.0	83.0	35.5			
Green Ext Time (p_c), s	0.1	0.0	18.8			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			61.4			
HCM 2010 LOS			E			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
13: Ventura Dr & Buchanan Rd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	1429	260	70	727	12	175	23	76	199	104	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	59	1307	1111	59	1282	21	173	60	198	185	242	43
Arrive On Green	0.03	0.71	0.71	0.03	0.71	0.71	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1757	1845	1568	1757	1810	30	1239	376	1248	1268	1527	270
Grp Volume(v), veh/h	8	1553	283	76	0	803	190	0	108	216	0	133
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1839	1239	0	1624	1268	0	1797
Q Serve(g_s), s	0.5	85.0	7.7	4.0	0.0	27.1	10.9	0.0	7.2	11.8	0.0	8.1
Cycle Q Clear(g_c), s	0.5	85.0	7.7	4.0	0.0	27.1	19.0	0.0	7.2	19.0	0.0	8.1
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.77	1.00		0.15
Lane Grp Cap(c), veh/h	59	1307	1111	59	0	1303	173	0	257	185	0	285
V/C Ratio(X)	0.14	1.19	0.25	1.30	0.00	0.62	1.10	0.00	0.42	1.17	0.00	0.47
Avail Cap(c_a), veh/h	59	1307	1111	59	0	1303	173	0	257	185	0	285
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.81	0.00	0.81	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	17.5	6.2	58.0	0.0	9.1	56.4	0.0	45.5	56.0	0.0	45.9
Incr Delay (d2), s/veh	0.1	85.6	0.0	205.1	0.0	1.8	97.5	0.0	1.1	119.2	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	63.4	2.5	5.1	0.0	10.9	10.1	0.0	3.1	11.9	0.0	3.8
Lane Grp Delay (d), s/veh	56.4	103.1	6.3	263.1	0.0	10.8	153.9	0.0	46.6	175.2	0.0	47.1
Lane Grp LOS	E	F	A	F		B	F		D	F		D
Approach Vol, veh/h		1844			879			298			349	
Approach Delay, s/veh		88.1			32.7			115.0			126.4	
Approach LOS		F			C			F			F	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	8.0	89.0		8.0	89.0			23.0				23.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	85.0		4.0	85.0			19.0				19.0
Max Q Clear Time (g_c+I1), s	2.5	87.0		6.0	29.1			21.0				21.0
Green Ext Time (p_c), s	1.4	0.0		0.0	7.1			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			80.0									
HCM 2010 LOS			E									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

No Bypass Cumulative +Project PM  
 3/14/2014






















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	0	0	0	128	0	0	216	0
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	27	57	0	27	57	0	27	697	0	27	697	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.38	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	1845	0	1757	1845	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	139	0	0	235	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	1845	0	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.6	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	27	57	0	27	57	0	27	697	0	27	697	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.34	0.00
Avail Cap(c_a), veh/h	1093	9179	0	1093	9179	0	1093	14341	0	1093	14341	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.7	0.0
Lane Grp LOS								A			A	
Approach Vol, veh/h		0			0			139			235	
Approach Delay, s/veh		0.0			0.0			1.5			1.7	
Approach LOS								A			A	
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7	4	
Phs Duration (G+Y+Rc), s	0.0	0.0		0.0	0.0		0.0	6.4		0.0	6.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0		4.0	50.0		4.0	50.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0		0.0	2.3		0.0	2.6	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0		0.0	2.4		0.0	2.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				1.6								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 15: Tuscany Meadows Dr & Buchanan Rd

No Bypass Cumulative +Project PM

3/14/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1686	77	94	855	45	55
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1485	1262	73	1622	95	85
Arrive On Green	0.80	0.80	0.08	1.00	0.05	0.05
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1833	84	102	929	49	60
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	97.0	1.3	5.0	0.0	3.3	4.5
Cycle Q Clear(g_c), s	97.0	1.3	5.0	0.0	3.3	4.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1485	1262	73	1622	95	85
V/C Ratio(X)	1.23	0.07	1.40	0.57	0.51	0.71
Avail Cap(c_a), veh/h	1485	1262	73	1622	233	208
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.74	0.74	1.00	1.00
Uniform Delay (d), s/veh	11.8	2.4	55.3	0.0	55.5	56.1
Incr Delay (d2), s/veh	106.2	0.0	229.8	1.1	4.3	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	75.1	0.4	6.8	0.5	1.6	2.1
Lane Grp Delay (d), s/veh	118.0	2.4	285.1	1.1	59.7	66.3
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1917			1031	109	
Approach Delay, s/veh	112.9			29.2	63.3	
Approach LOS	F			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	101.0		9.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	97.0		5.0	106.0		
Max Q Clear Time (g_c+I1), s	99.0		7.0	2.0		
Green Ext Time (p_c), s	0.0		0.0	97.9		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			82.9			
HCM 2010 LOS			F			
<b>Notes</b>						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	76	0	0	0	0	61	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	19	39	0	146	306	0	19	0	106	19	124	0
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
Sat Flow, veh/h	1757	3689	0	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	0	0	83	0	0	0	0	66	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	19	39	0	146	306	0	19	0	106	19	124	0
V/C Ratio(X)	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00
Avail Cap(c_a), veh/h	746	6270	0	5225	15675	0	746	0	4330	746	5094	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	0.0	0.0	7.6	0.0	0.0	0.0	0.0	10.2	0.0	0.0	0.0
Lane Grp LOS	A						B					
Approach Vol, veh/h	0			83			66			0		
Approach Delay, s/veh	0.0			7.6			10.2			0.0		
Approach LOS				A			B					
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	0.0		4.8	4.8		0.0	4.6		0.0	4.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	16.0		28.0	40.0		4.0	26.0		4.0	26.0	
Max Q Clear Time (g_c+I1), s	0.0	0.0		2.4	0.0		0.0	2.4		0.0	0.0	
Green Ext Time (p_c), s	0.0	0.0		0.2	0.0		0.0	0.3		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				8.8								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 17: Proposed Apartments & Buchanan Rd

No Bypass Cumulative +Project PM

3/14/2014

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1787	66	80	970	36	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1515	1288	59	1639	78	70
Arrive On Green	1.00	1.00	0.03	0.89	0.04	0.04
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1942	72	87	1054	39	47
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	98.0	0.0	4.0	17.8	2.6	3.5
Cycle Q Clear(g_c), s	98.0	0.0	4.0	17.8	2.6	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1515	1288	59	1639	78	70
V/C Ratio(X)	1.28	0.06	1.48	0.64	0.50	0.67
Avail Cap(c_a), veh/h	1515	1288	59	1639	236	210
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	57.7	1.7	55.7	56.1
Incr Delay (d2), s/veh	127.3	0.0	285.8	2.0	4.8	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	53.6	0.0	6.5	4.1	1.3	1.6
Lane Grp Delay (d), s/veh	127.3	0.0	343.5	3.7	60.5	66.8
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	2014			1141	86	
Approach Delay, s/veh	122.8			29.6	63.9	
Approach LOS	F			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	102.0		8.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	98.0		4.0	106.0		
Max Q Clear Time (g_c+I1), s	100.0		6.0	19.8		
Green Ext Time (p_c), s	0.0		0.0	11.6		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			88.4			
HCM 2010 LOS			F			
<b>Notes</b>						

# HCM 2010 Signalized Intersection Summary

No Bypass Cumulative +Project PM

18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy

3/14/2014













Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	381	140	262	220	71	25	447	567	133	27	846	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	717	388	330	717	275	96	803	2781	642	40	1875	410
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.39	1.00	1.00	0.02	0.43	0.43
Sat Flow, veh/h	3408	1845	1568	3408	1306	458	3408	4351	1005	1757	4402	962
Grp Volume(v), veh/h	414	152	285	239	0	104	486	520	241	29	770	352
Grp Sat Flow(s), veh/h/ln	1704	1845	1568	1704	0	1764	1704	1845	1667	1757	1845	1675
Q Serve(g_s), s	10.2	6.7	16.5	5.6	0.0	4.6	10.7	0.0	0.0	1.5	14.2	14.3
Cycle Q Clear(g_c), s	10.2	6.7	16.5	5.6	0.0	4.6	10.7	0.0	0.0	1.5	14.2	14.3
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.60	1.00		0.57
Lane Grp Cap(c), veh/h	717	388	330	717	0	371	803	2358	1066	40	1572	714
V/C Ratio(X)	0.58	0.39	0.86	0.33	0.00	0.28	0.61	0.22	0.23	0.73	0.49	0.49
Avail Cap(c_a), veh/h	799	432	367	717	0	371	944	2358	1066	112	1572	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	31.9	35.8	31.5	0.0	31.1	25.0	0.0	0.0	45.6	19.5	19.6
Incr Delay (d2), s/veh	0.8	0.6	17.4	0.3	0.0	0.4	0.8	0.2	0.5	22.4	1.1	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	3.2	8.0	2.5	0.0	2.1	4.1	0.1	0.1	0.9	6.6	6.2
Lane Grp Delay (d), s/veh	34.1	32.5	53.2	31.7	0.0	31.5	25.8	0.2	0.5	68.0	20.6	22.0
Lane Grp LOS	C	C	D	C		C	C	A	A	E	C	C
Approach Vol, veh/h	851			343			1247			1151		
Approach Delay, s/veh	40.2			31.7			10.2			22.2		
Approach LOS	D			C			B			C		
<b>Timer</b>												
Assigned Phs	4			8			5	2		1	6	
Phs Duration (G+Y+Rc), s	23.8			23.8			26.1	64.0		6.1	44.0	
Change Period (Y+Rc), s	4.0			4.0			4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	22.0			16.0			26.0	60.0		6.0	40.0	
Max Q Clear Time (g_c+I1), s	18.5			7.6			12.7	2.0		3.5	16.3	
Green Ext Time (p_c), s	1.3			3.4			5.8	8.8		0.0	8.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.2								
HCM 2010 LOS				C								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps




















No Bypass Cumulative +Project PM

3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	382	484	321	663	1012	312
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	1232	567	415	3146	2278	646
Arrive On Green	0.36	0.36	0.24	1.00	0.41	0.41
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	415	526	349	721	1100	339
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	10.1	36.9	11.1	0.0	16.7	18.6
Cycle Q Clear(g_c), s	10.1	36.9	11.1	0.0	16.7	18.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1232	567	415	3146	2278	646
V/C Ratio(X)	0.34	0.93	0.84	0.23	0.48	0.53
Avail Cap(c_a), veh/h	1401	645	626	3146	2278	646
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.93	0.76	0.76
Uniform Delay (d), s/veh	26.5	35.1	42.2	0.0	24.7	25.2
Incr Delay (d2), s/veh	0.2	18.5	6.0	0.2	0.6	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.4	2.9	4.8	0.0	7.9	7.7
Lane Grp Delay (d), s/veh	26.7	53.6	48.2	0.2	25.3	27.6
Lane Grp LOS	C	D	D	A	C	C
Approach Vol, veh/h	941			1070	1439	
Approach Delay, s/veh	41.7			15.8	25.8	
Approach LOS	D			B	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			17.9	69.0	51.1	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			21.0	65.0	40.0	
Max Q Clear Time (g_c+I1), s			13.1	2.0	20.6	
Green Ext Time (p_c), s			0.8	26.5	13.7	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			27.1			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps



























No Bypass Cumulative +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	232	485	0	0	0	0	840	713	480	1109	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	596	323	549				0	3073	871	578	4197	0
Arrive On Green	0.17	0.17	0.17				0.00	1.00	1.00	0.23	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	299	252	527				0	913	775	522	1205	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	9.5	15.7	20.0				0.0	0.0	0.0	17.9	0.0	0.0
Cycle Q Clear(g_c), s	9.5	15.7	20.0				0.0	0.0	0.0	17.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	596	323	549				0	3073	871	578	4197	0
V/C Ratio(X)	0.50	0.78	0.96				0.00	0.30	0.89	0.90	0.29	0.00
Avail Cap(c_a), veh/h	596	323	549				0	3073	871	625	4197	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	1.33	1.33	1.00
Upstream Filter(l)	1.00	1.00	1.00				0.00	0.74	0.74	0.82	0.82	0.00
Uniform Delay (d), s/veh	44.8	47.3	49.1				0.0	0.0	0.0	45.5	0.0	0.0
Incr Delay (d2), s/veh	0.7	11.6	28.6				0.0	0.2	10.2	13.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.2	8.5	10.2				0.0	0.1	2.5	8.7	0.1	0.0
Lane Grp Delay (d), s/veh	45.4	58.9	77.7				0.0	0.2	10.2	59.0	0.1	0.0
Lane Grp LOS	D	E	E					A	B	E	A	
Approach Vol, veh/h		1078						1688			1727	
Approach Delay, s/veh		64.4						4.8			17.9	
Approach LOS		E						A			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		25.0						70.6		24.4	95.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		21.0						65.0		22.0	91.0	
Max Q Clear Time (g_c+I1), s		22.0						2.0		19.9	2.0	
Green Ext Time (p_c), s		0.0						40.0		0.5	48.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.1									
HCM 2010 LOS			C									
<b>Notes</b>												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	438	371	39	53	143	410	57	715	27	429	737	245
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1098	529	55	566	594	505	74	1906	71	565	1782	757
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.01	0.12	0.12	0.33	0.97	0.97
Sat Flow, veh/h	3408	1643	171	1757	1845	1568	1757	5302	197	3408	3689	1568
Grp Volume(v), veh/h	476	0	445	58	155	446	62	540	266	466	801	266
Grp Sat Flow(s), veh/h/ln	1704	0	1814	1757	1845	1568	1757	1845	1810	1704	1845	1568
Q Serve(g_s), s	8.7	0.0	17.3	1.8	4.9	21.2	2.8	10.7	10.7	9.9	1.0	0.7
Cycle Q Clear(g_c), s	8.7	0.0	17.3	1.8	4.9	21.2	2.8	10.7	10.7	9.9	1.0	0.7
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	1098	0	585	566	594	505	74	1326	651	565	1782	757
V/C Ratio(X)	0.43	0.00	0.76	0.10	0.26	0.88	0.84	0.41	0.41	0.83	0.45	0.35
Avail Cap(c_a), veh/h	1517	0	807	566	594	505	156	1326	651	867	1782	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.89	0.89	0.89
Uniform Delay (d), s/veh	21.0	0.0	23.9	18.7	19.7	25.3	38.5	26.9	26.9	25.2	0.7	0.7
Incr Delay (d2), s/veh	0.3	0.0	2.8	0.1	0.2	16.0	20.1	0.9	1.8	3.5	0.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.6	0.0	8.1	0.8	2.2	10.2	1.7	5.5	5.6	3.7	0.4	0.4
Lane Grp Delay (d), s/veh	21.3	0.0	26.8	18.8	19.9	41.2	58.6	27.8	28.7	28.8	1.4	1.8
Lane Grp LOS	C		C	B	B	D	E	C	C	C	A	A
Approach Vol, veh/h		921			659			868			1533	
Approach Delay, s/veh		23.9			34.2			30.3			9.8	
Approach LOS		C			C			C			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		29.3			29.3		7.3	32.3		17.0		42.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0			24.0		7.0	25.0		20.0		38.0
Max Q Clear Time (g_c+I1), s		19.3			23.2		4.8	12.7		11.9		3.0
Green Ext Time (p_c), s		6.0			0.6		0.1	4.4		1.1		7.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					21.6							
HCM 2010 LOS					C							
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
22: Somersville Rd & Buchanan Rd

No Bypass Cumulative +Project PM  
3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	412	502	814	50	245	129	336	348	33	264	723	415
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	454	1361	578	69	277	235	381	919	87	319	892	379
Arrive On Green	0.26	0.37	0.00	0.04	0.15	0.00	0.22	0.28	0.28	0.18	0.24	0.24
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3319	314	1757	3689	1568
Grp Volume(v), veh/h	448	546	0	54	266	0	365	209	205	287	786	391
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1789	1757	1845	1568
Q Serve(g_s), s	30.5	13.2	0.0	3.7	17.2	0.0	24.7	11.1	11.2	19.2	24.6	29.0
Cycle Q Clear(g_c), s	30.5	13.2	0.0	3.7	17.2	0.0	24.7	11.1	11.2	19.2	24.6	29.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	454	1361	578	69	277	235	381	511	495	319	892	379
V/C Ratio(X)	0.99	0.40	0.00	0.78	0.96	0.00	0.96	0.41	0.41	0.90	0.88	1.03
Avail Cap(c_a), veh/h	454	1361	578	132	277	235	381	511	495	454	892	379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	28.1	0.0	57.1	50.7	0.0	46.5	35.4	35.4	48.0	43.8	45.5
Incr Delay (d2), s/veh	38.8	0.2	0.0	16.8	43.4	0.0	35.4	0.5	0.6	15.9	10.3	54.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	18.2	6.0	0.0	2.0	11.5	0.0	14.8	5.3	5.2	10.1	12.8	17.3
Lane Grp Delay (d), s/veh	83.1	28.2	0.0	73.9	94.1	0.0	81.9	35.9	36.0	63.9	54.1	100.2
Lane Grp LOS	F	C		E	F		F	D	D	E	D	F
Approach Vol, veh/h		994			320			779			1464	
Approach Delay, s/veh		52.9			90.7			57.5			68.3	
Approach LOS		D			F			E			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	35.0	48.3		8.7	22.0		30.0	37.2		25.8	33.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	31.0	40.0		9.0	18.0		26.0	24.0		31.0	29.0	
Max Q Clear Time (g_c+I1), s	32.5	15.2		5.7	19.2		26.7	13.2		21.2	31.0	
Green Ext Time (p_c), s	0.0	5.2		0.0	0.0		0.0	6.6		0.6	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			63.7									
HCM 2010 LOS			E									
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 23: Sequoia Dr & Somersville Rd

No Bypass Cumulative +Project PM  
 3/14/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	143	26	39	575	1343	243
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	207	184	275	2824	2824	1200
Arrive On Green	0.12	0.12	0.77	0.77	0.77	0.77
Sat Flow, veh/h	1757	1568	278	3689	3689	1568
Grp Volume(v), veh/h	155	28	42	625	1460	264
Grp Sat Flow(s),veh/h/ln	1757	1568	278	1845	1845	1568
Q Serve(g_s), s	5.8	1.1	4.7	3.3	10.5	3.2
Cycle Q Clear(g_c), s	5.8	1.1	15.2	3.3	10.5	3.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	207	184	275	2824	2824	1200
V/C Ratio(X)	0.75	0.15	0.15	0.22	0.52	0.22
Avail Cap(c_a), veh/h	668	596	412	4639	4639	1972
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	27.1	6.1	2.3	3.1	2.3
Incr Delay (d2), s/veh	5.4	0.4	0.3	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	0.4	0.3	1.1	3.3	0.9
Lane Grp Delay (d), s/veh	34.6	27.5	6.3	2.3	3.3	2.4
Lane Grp LOS	C	C	A	A	A	A
Approach Vol, veh/h	183			667	1724	
Approach Delay, s/veh	33.5			2.6	3.1	
Approach LOS	C			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				56.3	56.3	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				86.0	86.0	
Max Q Clear Time (g_c+I1), s				17.2	12.5	
Green Ext Time (p_c), s				35.1	36.2	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			5.1			
HCM 2010 LOS			A			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

No Bypass Cumulative +Project PM  
 3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 					 	 	 
Volume (veh/h)	73	18	0	13	14	397	0	7	4	1261	5	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	101	306	0	25	146	62	4	77	38	1745	1216	2067
Arrive On Green	0.06	0.08	0.00	0.01	0.04	0.00	0.00	0.07	0.07	0.51	0.66	0.66
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	1161	581	3408	1845	3136
Grp Volume(v), veh/h	79	20	0	14	15	0	0	0	12	1371	5	105
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1742	1704	1845	1568
Q Serve(g_s), s	2.2	0.2	0.0	0.4	0.2	0.0	0.0	0.0	0.3	16.2	0.0	0.2
Cycle Q Clear(g_c), s	2.2	0.2	0.0	0.4	0.2	0.0	0.0	0.0	0.3	16.2	0.0	0.2
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	101	306	0	25	146	62	4	0	115	1745	1216	2067
V/C Ratio(X)	0.78	0.07	0.00	0.56	0.10	0.00	0.00	0.00	0.10	0.79	0.00	0.05
Avail Cap(c_a), veh/h	321	2023	0	143	1649	701	143	0	602	3877	2585	4395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.9	20.8	0.0	24.1	22.8	0.0	0.0	0.0	21.6	9.8	2.9	0.4
Incr Delay (d2), s/veh	12.3	0.1	0.0	18.4	0.3	0.0	0.0	0.0	0.4	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.2	0.1	0.0	0.3	0.1	0.0	0.0	0.0	0.1	5.9	0.0	0.1
Lane Grp Delay (d), s/veh	35.2	20.9	0.0	42.5	23.1	0.0	0.0	0.0	22.0	10.6	2.9	0.4
Lane Grp LOS	D	C		D	C				C	B	A	A
Approach Vol, veh/h		99			29			12			1481	
Approach Delay, s/veh		32.3			32.5			22.0			9.9	
Approach LOS		C			C			C			A	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	6.8	8.1		4.7	6.0		0.0	7.2		29.2	36.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	9.0	27.0		4.0	22.0		4.0	17.0		56.0	69.0	
Max Q Clear Time (g_c+I1), s	4.2	2.2		2.4	2.2		0.0	2.3		18.2	2.2	
Green Ext Time (p_c), s	0.1	0.3		0.0	0.0		0.0	0.3		7.0	0.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				11.7								
HCM 2010 LOS				B								
<b>Notes</b>												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	444	163	100	251	80	90	275	27	277	453	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	425	1022	372	292	1067	333	363	823	80	497	916	779
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1008	2583	940	764	2699	841	848	1656	161	1037	1845	1568
Grp Volume(v), veh/h	76	344	316	109	185	175	98	0	328	301	492	55
Grp Sat Flow(s),veh/h/ln	1008	1845	1679	764	1845	1696	848	0	1816	1037	1845	1568
Q Serve(g_s), s	4.1	10.3	10.4	9.2	5.0	5.2	6.7	0.0	8.2	18.6	13.6	1.4
Cycle Q Clear(g_c), s	9.3	10.3	10.4	19.6	5.0	5.2	20.2	0.0	8.2	26.9	13.6	1.4
Prop In Lane	1.00		0.56	1.00		0.50	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	425	729	664	292	729	671	363	0	902	497	916	779
V/C Ratio(X)	0.18	0.47	0.48	0.37	0.25	0.26	0.27	0.00	0.36	0.61	0.54	0.07
Avail Cap(c_a), veh/h	665	1168	1063	474	1168	1074	684	0	1591	890	1615	1373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	16.7	16.7	24.0	15.1	15.1	19.8	0.0	11.5	19.7	12.8	9.7
Incr Delay (d2), s/veh	0.2	0.5	0.5	0.8	0.2	0.2	0.4	0.0	0.2	1.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	4.5	4.1	1.8	2.2	2.1	1.4	0.0	3.4	4.7	5.9	0.5
Lane Grp Delay (d), s/veh	18.4	17.1	17.2	24.8	15.3	15.3	20.2	0.0	11.7	20.9	13.3	9.8
Lane Grp LOS	B	B	B	C	B	B	C		B	C	B	A
Approach Vol, veh/h		736			469			426			848	
Approach Delay, s/veh		17.3			17.5			13.7			15.8	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		33.4			33.4			40.9			40.9	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		47.0			47.0			65.0			65.0	
Max Q Clear Time (g_c+I1), s		12.4			21.6			22.2			28.9	
Green Ext Time (p_c), s		8.4			7.7			8.2			8.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.2								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
26: James Donlon Blvd & Contra Loma Blvd

No Bypass Cumulative +Project PM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	117	1166	8	27	643	124	4	19	8	246	21	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	164	1937	14	44	1387	268	84	307	118	445	56	359
Arrive On Green	0.09	0.53	0.53	0.03	0.46	0.46	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1757	3659	26	1757	3007	580	82	1183	455	1361	217	1384
Grp Volume(v), veh/h	127	639	637	29	429	405	34	0	0	267	0	170
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1742	1720	0	0	1361	0	1600
Q Serve(g_s), s	4.5	16.0	16.1	1.1	10.5	10.5	0.0	0.0	0.0	11.9	0.0	5.7
Cycle Q Clear(g_c), s	4.5	16.0	16.1	1.1	10.5	10.5	0.9	0.0	0.0	12.8	0.0	5.7
Prop In Lane	1.00		0.01	1.00		0.33	0.12		0.26	1.00		0.86
Lane Grp Cap(c), veh/h	164	976	974	44	851	803	508	0	0	445	0	415
V/C Ratio(X)	0.77	0.65	0.65	0.66	0.50	0.50	0.07	0.00	0.00	0.60	0.00	0.41
Avail Cap(c_a), veh/h	355	1204	1201	136	974	920	878	0	0	747	0	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	10.9	10.9	31.1	12.2	12.2	18.0	0.0	0.0	22.9	0.0	19.8
Incr Delay (d2), s/veh	7.6	0.9	0.9	15.3	0.5	0.5	0.1	0.0	0.0	1.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	6.6	6.6	0.6	4.4	4.2	0.4	0.0	0.0	4.0	0.0	2.2
Lane Grp Delay (d), s/veh	36.1	11.8	11.8	46.4	12.6	12.7	18.1	0.0	0.0	24.2	0.0	20.4
Lane Grp LOS	D	B	B	D	B	B	B			C		C
Approach Vol, veh/h		1403			863			34				437
Approach Delay, s/veh		14.0			13.8			18.1				22.7
Approach LOS		B			B			B				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	10.0	38.1		5.6	33.7			20.7				20.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	13.0	42.0		5.0	34.0			31.0				31.0
Max Q Clear Time (g_c+I1), s	6.5	18.1		3.1	12.5			2.9				14.8
Green Ext Time (p_c), s	0.1	16.0		0.0	14.8			2.1				1.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				15.4								
HCM 2010 LOS				B								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

No Bypass Cumulative +Project PM

3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	162	135	1156	13	66	77	792	842	10	80	1274	262
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	299	314	1426	51	261	267	969	2354	1001	112	1860	382
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.28	0.64	0.64	0.06	0.42	0.42
Sat Flow, veh/h	1757	1845	3136	298	1532	1568	3408	3689	1568	1757	4457	916
Grp Volume(v), veh/h	176	147	1257	86	0	84	861	915	11	87	1146	524
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1830	0	1568	1704	1845	1568	1757	1845	1683
Q Serve(g_s), s	8.7	6.7	16.0	3.8	0.0	4.4	22.7	11.2	0.2	4.6	24.7	24.7
Cycle Q Clear(g_c), s	8.7	6.7	16.0	3.8	0.0	4.4	22.7	11.2	0.2	4.6	24.7	24.7
Prop In Lane	1.00		1.00	0.16		1.00	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	299	314	1426	312	0	267	969	2354	1001	112	1540	702
V/C Ratio(X)	0.59	0.47	0.88	0.28	0.00	0.31	0.89	0.39	0.01	0.78	0.74	0.75
Avail Cap(c_a), veh/h	299	314	1426	312	0	267	1126	2358	1002	225	1611	735
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.9	35.1	23.3	33.9	0.0	34.1	32.2	8.2	6.2	43.3	23.1	23.1
Incr Delay (d2), s/veh	3.0	1.1	6.8	0.5	0.0	0.7	8.0	0.1	0.0	11.1	1.8	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.1	3.2	14.1	1.8	0.0	1.8	10.8	4.5	0.1	2.4	11.4	10.8
Lane Grp Delay (d), s/veh	38.9	36.2	30.0	34.4	0.0	34.8	40.2	8.3	6.2	54.4	25.0	27.1
Lane Grp LOS	D	D	C	C		C	D	A	A	D	C	C
Approach Vol, veh/h	1580			170			1787			1757		
Approach Delay, s/veh	31.6			34.6			23.6			27.1		
Approach LOS	C			C			C			C		
<b>Timer</b>												
Assigned Phs	4			8			5		2		1	6
Phs Duration (G+Y+Rc), s	20.0			20.0			30.7		63.9		10.0	43.2
Change Period (Y+Rc), s	4.0			4.0			4.0		4.0		4.0	4.0
Max Green Setting (Gmax), s	16.0			16.0			31.0		60.0		12.0	41.0
Max Q Clear Time (g_c+I1), s	18.0			6.4			24.7		13.2		6.6	26.7
Green Ext Time (p_c), s	0.0			5.6			2.0		32.6		0.1	12.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.5								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 28: Kirker Pass Rd & Myrtle Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	0	47	2	0	1	55	2169	3	0	753	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00		1.00		1.00		1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	102	0	91	289	107	91	76	3086	1311	2	4033	54
Arrive On Green	0.06	0.00	0.06	0.06	0.00	0.06	0.04	0.84	0.84	0.00	0.74	0.74
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5448	73
Grp Volume(v), veh/h	61	0	51	2	0	1	60	2358	3	0	554	275
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1832
Q Serve(g_s), s	2.6	0.0	2.4	0.0	0.0	0.0	2.6	22.0	0.0	0.0	3.5	3.5
Cycle Q Clear(g_c), s	2.6	0.0	2.4	0.0	0.0	0.0	2.6	22.0	0.0	0.0	3.5	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	102	0	91	289	107	91	76	3086	1311	2	2731	1356
V/C Ratio(X)	0.60	0.00	0.56	0.01	0.00	0.01	0.78	0.76	0.00	0.00	0.20	0.20
Avail Cap(c_a), veh/h	370	0	330	1044	389	330	208	3304	1404	93	3061	1520
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	0.0	34.8	33.7	0.0	33.7	36.0	2.8	1.0	0.0	3.0	3.0
Incr Delay (d2), s/veh	5.4	0.0	5.2	0.0	0.0	0.0	15.9	1.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	1.1	0.0	0.0	0.0	1.5	5.7	0.0	0.0	1.2	1.2
Lane Grp Delay (d), s/veh	40.3	0.0	40.1	33.7	0.0	33.7	51.9	3.8	1.0	0.0	3.1	3.1
Lane Grp LOS	D		D	C		C	D	A	A		A	A
Approach Vol, veh/h	112				3		2421				829	
Approach Delay, s/veh	40.2				33.7		5.0				3.1	
Approach LOS	D				C		A				A	
<b>Timer</b>												
Assigned Phs	4				8		5		2		1	
Phs Duration (G+Y+Rc), s	8.4				8.4		7.3		67.5		0.0	
Change Period (Y+Rc), s	4.0				4.0		4.0		4.0		4.0	
Max Green Setting (Gmax), s	16.0				16.0		9.0		68.0		4.0	
Max Q Clear Time (g_c+I1), s	4.6				2.0		4.6		24.0		0.0	
Green Ext Time (p_c), s	0.3				0.3		0.0		39.5		0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			5.7									
HCM 2010 LOS			A									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↗↘		↰	↗↘	↗	↰	↗↘		↰	↗↘	
Volume (veh/h)	320	327	177	222	143	46	160	1498	397	63	540	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	381	434	230	273	476	202	206	1937	506	87	1885	231
Arrive On Green	0.22	0.19	0.19	0.16	0.13	0.13	0.12	0.46	0.46	0.05	0.39	0.39
Sat Flow, veh/h	1757	2271	1206	1757	3689	1568	1757	4233	1106	1757	4836	594
Grp Volume(v), veh/h	348	287	260	241	155	50	174	1416	644	68	446	214
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1650	1757	1845	1740
Q Serve(g_s), s	21.1	16.3	16.7	14.6	4.2	3.1	10.6	36.8	37.9	4.2	9.1	9.3
Cycle Q Clear(g_c), s	21.1	16.3	16.7	14.6	4.2	3.1	10.6	36.8	37.9	4.2	9.1	9.3
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.67	1.00		0.34
Lane Grp Cap(c), veh/h	381	352	312	273	476	202	206	1688	755	87	1438	678
V/C Ratio(X)	0.91	0.81	0.83	0.88	0.33	0.25	0.85	0.84	0.85	0.78	0.31	0.32
Avail Cap(c_a), veh/h	468	406	359	339	542	230	322	1761	787	113	1438	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	42.2	42.4	45.1	43.1	42.7	47.1	26.0	26.3	51.2	23.1	23.1
Incr Delay (d2), s/veh	19.7	10.8	13.8	20.0	0.4	0.6	11.4	3.7	8.8	22.8	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	11.6	8.8	8.2	8.1	2.0	1.3	5.4	17.6	17.2	2.4	4.2	4.1
Lane Grp Delay (d), s/veh	61.3	53.0	56.2	65.1	43.5	43.3	58.5	29.7	35.1	74.0	23.2	23.4
Lane Grp LOS	E	D	E	E	D	D	E	C	D	E	C	C
Approach Vol, veh/h		895			446			2234			728	
Approach Delay, s/veh		57.2			55.1			33.5			28.0	
Approach LOS		E			E			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	27.7	24.8		20.9	18.1		16.8	53.9		9.4	46.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	29.0	24.0		21.0	16.0		20.0	52.0		7.0	39.0	
Max Q Clear Time (g_c+I1), s	23.1	18.7		16.6	6.2		12.6	39.9		6.2	11.3	
Green Ext Time (p_c), s	0.6	2.1		0.3	3.3		0.3	10.0		0.0	22.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					39.7							
HCM 2010 LOS					D							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd

No Bypass Cumulative +Project PM












3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	664	946	30	251	443	161	145	1670	594	280	469	235
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	780	1470	0	328	736	0	215	2212	627	348	2428	688
Arrive On Green	0.23	0.27	0.00	0.10	0.13	0.00	0.06	0.40	0.40	0.10	0.44	0.44
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	722	1028	0	273	482	0	158	1815	646	304	510	255
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	24.4	19.7	0.0	9.3	9.7	0.0	5.4	34.4	47.0	10.3	6.7	12.8
Cycle Q Clear(g_c), s	24.4	19.7	0.0	9.3	9.7	0.0	5.4	34.4	47.0	10.3	6.7	12.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	780	1470	0	328	736	0	215	2212	627	348	2428	688
V/C Ratio(X)	0.93	0.70	0.00	0.83	0.65	0.00	0.73	0.82	1.03	0.87	0.21	0.37
Avail Cap(c_a), veh/h	812	1553	0	348	800	0	290	2212	627	348	2428	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	38.9	0.0	52.2	48.4	0.0	54.1	31.5	35.3	52.0	20.4	22.1
Incr Delay (d2), s/veh	16.0	1.3	0.0	15.0	1.7	0.0	6.3	2.6	44.0	21.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.4	9.5	0.0	4.8	4.8	0.0	2.6	16.5	26.0	5.6	3.0	5.0
Lane Grp Delay (d), s/veh	60.3	40.2	0.0	67.1	50.1	0.0	60.4	34.1	79.3	73.0	20.4	22.5
Lane Grp LOS	E	D		E	D		E	C	F	E	C	C
Approach Vol, veh/h		1750			755			2619			1069	
Approach Delay, s/veh		48.5			56.3			46.8			35.9	
Approach LOS		D			E			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	30.9	35.2		15.3	19.6		11.4	51.0		16.0	55.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	33.0		12.0	17.0		10.0	47.0		12.0	49.0	
Max Q Clear Time (g_c+I1), s	26.4	21.7		11.3	11.7		7.4	49.0		12.3	14.8	
Green Ext Time (p_c), s	0.6	7.3		0.1	3.9		0.1	0.0		0.0	28.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				46.6								
HCM 2010 LOS				D								
<b>Notes</b>												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	1632	14	32	919	38	20	0	31	40	0	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	38	2746	23	47	2663	109	168	0	117	162	0	117
Arrive On Green	0.02	0.75	0.75	0.03	0.76	0.76	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1757	3653	31	1757	3519	144	1364	0	1568	1356	0	1568
Grp Volume(v), veh/h	26	895	894	35	524	516	22	0	34	43	0	27
Grp Sat Flow(s),veh/h/ln	1757	1845	1839	1757	1845	1819	1364	0	1568	1356	0	1568
Q Serve(g_s), s	1.2	19.2	19.2	1.6	7.9	7.9	1.3	0.0	1.7	2.5	0.0	1.3
Cycle Q Clear(g_c), s	1.2	19.2	19.2	1.6	7.9	7.9	2.6	0.0	1.7	4.2	0.0	1.3
Prop In Lane	1.00		0.02	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	38	1387	1383	47	1396	1377	168	0	117	162	0	117
V/C Ratio(X)	0.68	0.65	0.65	0.74	0.38	0.38	0.13	0.00	0.29	0.27	0.00	0.23
Avail Cap(c_a), veh/h	129	1936	1931	129	1936	1910	332	0	306	325	0	306
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.8	4.9	4.9	39.6	3.4	3.4	36.9	0.0	35.8	37.8	0.0	35.7
Incr Delay (d2), s/veh	19.0	0.5	0.5	20.3	0.2	0.2	0.3	0.0	1.3	0.9	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.7	5.9	5.9	1.0	2.2	2.2	0.5	0.0	0.7	0.9	0.0	0.6
Lane Grp Delay (d), s/veh	58.7	5.4	5.4	59.9	3.6	3.6	37.2	0.0	37.2	38.7	0.0	36.7
Lane Grp LOS	E	A	A	E	A	A	D		D	D		D
Approach Vol, veh/h	1815		1075		56		70					
Approach Delay, s/veh	6.2		5.4		37.2		37.9					
Approach LOS	A		A		D		D					
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.8	65.6		6.2	66.0			10.1				10.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	86.0		6.0	86.0			16.0				16.0
Max Q Clear Time (g_c+I1), s	3.2	21.2		3.6	9.9			4.6				6.2
Green Ext Time (p_c), s	0.0	40.4		0.0	44.2			0.3				0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			7.2									
HCM 2010 LOS			A									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd

No Bypass Cumulative +Project PM  
 3/14/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	417	1313	482	179	198	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	510	2460	830	307	397	354
Arrive On Green	0.29	0.67	0.32	0.32	0.23	0.23
Sat Flow, veh/h	1757	3689	2569	952	1757	1568
Grp Volume(v), veh/h	453	1427	376	343	215	315
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1677	1757	1568
Q Serve(g_s), s	18.4	15.7	12.9	13.0	8.1	14.5
Cycle Q Clear(g_c), s	18.4	15.7	12.9	13.0	8.1	14.5
Prop In Lane	1.00			0.57	1.00	1.00
Lane Grp Cap(c), veh/h	510	2460	596	542	397	354
V/C Ratio(X)	0.89	0.58	0.63	0.63	0.54	0.89
Avail Cap(c_a), veh/h	801	3165	643	584	424	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	6.7	21.5	21.5	25.5	28.0
Incr Delay (d2), s/veh	7.8	0.2	1.8	2.0	1.2	21.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.8	5.8	6.0	5.6	3.6	2.1
Lane Grp Delay (d), s/veh	33.1	7.0	23.2	23.5	26.7	49.1
Lane Grp LOS	C	A	C	C	C	D
Approach Vol, veh/h		1880	719		530	
Approach Delay, s/veh		13.3	23.4		40.0	
Approach LOS		B	C		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.7	53.7	28.1			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	34.0	64.0	26.0			
Max Q Clear Time (g_c+I1), s	20.4	17.7	15.0			
Green Ext Time (p_c), s	1.3	26.2	9.1			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			20.1			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

























No Bypass Cumulative +Project PM  
 3/14/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	↑		←	↑		←	↑		←	↑	
Volume (veh/h)	129	9	574	19	1	2	254	571	14	21	711	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	672	11	666	109	237	474	315	817	20	385	910	65
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.18	0.23	0.23	0.44	0.53	0.53
Sat Flow, veh/h	1394	25	1547	782	550	1100	1757	3587	87	1757	3404	242
Grp Volume(v), veh/h	140	0	634	21	0	3	276	319	317	23	419	409
Grp Sat Flow(s),veh/h/ln	1394	0	1572	782	0	1650	1757	1845	1829	1757	1845	1802
Q Serve(g_s), s	6.2	0.0	37.6	2.6	0.0	0.1	14.9	15.8	15.8	0.7	18.9	18.9
Cycle Q Clear(g_c), s	6.3	0.0	37.6	40.1	0.0	0.1	14.9	15.8	15.8	0.7	18.9	18.9
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.05	1.00		0.13
Lane Grp Cap(c), veh/h	672	0	676	109	0	710	315	420	416	385	493	482
V/C Ratio(X)	0.21	0.00	0.94	0.19	0.00	0.00	0.88	0.76	0.76	0.06	0.85	0.85
Avail Cap(c_a), veh/h	672	0	676	109	0	710	486	1134	1125	385	737	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.66	0.66	0.66	0.82	0.82	0.82
Uniform Delay (d), s/veh	17.7	0.0	26.5	45.7	0.0	15.9	39.0	35.2	35.2	21.6	21.0	21.0
Incr Delay (d2), s/veh	0.2	0.0	20.7	0.8	0.0	0.0	7.6	8.4	8.5	0.1	14.1	14.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.1	0.0	18.3	0.5	0.0	0.0	7.3	8.3	8.3	0.3	8.6	8.5
Lane Grp Delay (d), s/veh	17.8	0.0	47.2	46.5	0.0	15.9	46.6	43.6	43.7	21.7	35.1	35.4
Lane Grp LOS	B		D	D		B	D	D	D	C	D	D
Approach Vol, veh/h		774			24			912			851	
Approach Delay, s/veh		41.9			42.7			44.5			34.9	
Approach LOS		D			D			D			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		46.0			46.0		21.5	26.2		25.4	30.1	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		42.0			42.0		27.0	60.0		6.0	39.0	
Max Q Clear Time (g_c+I1), s		39.6			42.1		16.9	17.8		2.7	20.9	
Green Ext Time (p_c), s		1.2			0.0		0.6	4.4		1.6	5.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				40.5								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

No Bypass Cumulative +Project PM



















3/14/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 	 		 	
Volume (veh/h)	18	928	588	128	384	10	195	20	34	15	11	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	31	1116	671	171	2133	56	274	20	392	59	39	11
Arrive On Green	0.02	0.52	0.52	0.10	0.60	0.60	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1757	2161	1299	1757	3578	94	785	81	1568	0	157	45
Grp Volume(v), veh/h	20	853	795	139	215	213	234	0	37	36	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1615	1757	1845	1828	866	0	1568	201	0	0
Q Serve(g_s), s	1.0	36.6	41.2	6.8	4.7	4.7	0.0	0.0	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	36.6	41.2	6.8	4.7	4.7	22.0	0.0	1.6	22.0	0.0	0.0
Prop In Lane	1.00		0.80	1.00		0.05	0.91		1.00	0.44		0.22
Lane Grp Cap(c), veh/h	31	952	834	171	1099	1090	295	0	392	109	0	0
V/C Ratio(X)	0.65	0.90	0.95	0.81	0.20	0.20	0.79	0.00	0.09	0.33	0.00	0.00
Avail Cap(c_a), veh/h	100	964	845	200	1099	1090	295	0	392	109	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.0	19.2	20.3	38.9	8.1	8.1	33.8	0.0	25.3	27.4	0.0	0.0
Incr Delay (d2), s/veh	20.5	10.8	20.3	19.4	0.1	0.1	13.9	0.0	0.1	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	18.5	20.1	4.0	1.9	1.9	6.3	0.0	0.6	0.7	0.0	0.0
Lane Grp Delay (d), s/veh	63.5	30.0	40.5	58.4	8.2	8.2	47.7	0.0	25.4	29.2	0.0	0.0
Lane Grp LOS	E	C	D	E	A	A	D		C	C		
Approach Vol, veh/h		1668			567			271				36
Approach Delay, s/veh		35.4			20.5			44.7				29.2
Approach LOS		D			C			D				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.5	49.4		12.6	56.4			26.0				26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	5.0	46.0		10.0	51.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	3.0	43.2		8.8	6.7			24.0				24.0
Green Ext Time (p_c), s	0.0	2.2		0.0	25.4			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				33.0								
HCM 2010 LOS				C								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	161	323	194	709	809	155	268	823	324
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				201	417	265	855	1302	249	355	1415	602
Arrive On Green				0.26	0.26	0.26	0.42	0.72	0.72	0.20	0.38	0.00
Sat Flow, veh/h				789	1636	1041	3408	3012	576	1757	3689	1568
Grp Volume(v), veh/h				400	0	337	771	538	509	291	895	0
Grp Sat Flow(s),veh/h/ln				1805	0	1661	1704	1845	1743	1757	1845	1568
Q Serve(g_s), s				23.1	0.0	20.6	23.0	17.2	17.2	17.2	21.5	0.0
Cycle Q Clear(g_c), s				23.1	0.0	20.6	23.0	17.2	17.2	17.2	21.5	0.0
Prop In Lane				0.44		0.63	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h				460	0	424	855	798	754	355	1415	602
V/C Ratio(X)				0.87	0.00	0.79	0.90	0.67	0.67	0.82	0.63	0.00
Avail Cap(c_a), veh/h				531	0	489	1097	798	754	469	1415	602
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	0.61	0.61	0.61	1.00	1.00	0.00
Uniform Delay (d), s/veh				38.8	0.0	37.8	30.3	11.0	11.0	41.5	27.3	0.0
Incr Delay (d2), s/veh				13.0	0.0	7.8	5.6	2.8	3.0	8.5	2.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				12.2	0.0	9.5	9.4	5.9	5.6	8.5	10.2	0.0
Lane Grp Delay (d), s/veh				51.8	0.0	45.6	35.9	13.7	13.9	49.9	29.4	0.0
Lane Grp LOS				D		D	D	B	B	D	C	
Approach Vol, veh/h					737			1818			1186	
Approach Delay, s/veh					49.0			23.2			34.4	
Approach LOS					D			C			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					31.7		31.3	51.0		26.0	45.7	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					32.0		35.0	47.0		29.0	41.0	
Max Q Clear Time (g_c+I1), s					25.1		25.0	19.2		19.2	23.5	
Green Ext Time (p_c), s					2.7		2.3	8.1		2.8	7.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					31.8							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	329	0	472	0	0	0	0	1034	276	281	669	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	417	438	744				0	1625	434	473	2549	0
Arrive On Green	0.24	0.00	0.24				0.00	0.39	0.39	0.54	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4212	1124	1757	3689	0
Grp Volume(v), veh/h	358	0	513				0	985	439	305	727	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1646	1757	1845	0
Q Serve(g_s), s	21.8	0.0	16.6				0.0	24.9	24.9	13.7	0.0	0.0
Cycle Q Clear(g_c), s	21.8	0.0	16.6				0.0	24.9	24.9	13.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.68	1.00		0.00
Lane Grp Cap(c), veh/h	417	438	744				0	1423	635	473	2549	0
V/C Ratio(X)	0.86	0.00	0.69				0.00	0.69	0.69	0.65	0.29	0.00
Avail Cap(c_a), veh/h	552	579	985				0	1423	635	473	2549	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.70	0.70	0.00
Uniform Delay (d), s/veh	40.7	0.0	38.7				0.0	28.7	28.7	22.0	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.0	1.3				0.0	2.8	6.1	2.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.8	0.0	6.8				0.0	12.0	11.3	5.2	0.1	0.0
Lane Grp Delay (d), s/veh	50.9	0.0	40.1				0.0	31.5	34.8	24.1	0.2	0.0
Lane Grp LOS	D		D					C	C	C	A	
Approach Vol, veh/h		871						1424			1032	
Approach Delay, s/veh		44.5						32.5			7.3	
Approach LOS		D						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		30.5						47.0		34.0		81.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0						43.0		30.0		77.0
Max Q Clear Time (g_c+I1), s		23.8						26.9		15.7		2.0
Green Ext Time (p_c), s		2.7						9.0		5.2		7.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			27.8									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd

Cumulative AM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	468	0	92	554	274	112	765	59	139	341	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	341	1320	0	128	872	371	380	1063	452	186	656	279
Arrive On Green	0.19	0.36	0.00	0.07	0.24	0.24	0.22	0.29	0.29	0.11	0.18	0.18
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	299	509	0	100	602	298	122	832	64	151	371	297
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	15.1	9.4	0.0	5.1	13.6	12.2	5.3	18.9	2.1	7.7	8.4	10.7
Cycle Q Clear(g_c), s	15.1	9.4	0.0	5.1	13.6	12.2	5.3	18.9	2.1	7.7	8.4	10.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	341	1320	0	128	872	371	380	1063	452	186	656	279
V/C Ratio(X)	0.88	0.39	0.00	0.78	0.69	0.80	0.32	0.78	0.14	0.81	0.57	1.06
Avail Cap(c_a), veh/h	520	1618	0	250	1052	447	380	1456	619	289	1456	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	21.8	0.0	41.6	31.8	18.3	30.1	29.8	14.5	39.9	34.3	16.2
Incr Delay (d2), s/veh	10.5	0.2	0.0	10.0	1.5	8.7	0.5	2.0	0.1	9.5	0.8	44.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.6	4.3	0.0	2.6	6.5	5.4	2.4	8.8	1.0	3.9	3.9	7.4
Lane Grp Delay (d), s/veh	46.2	22.0	0.0	51.6	33.3	27.0	30.6	31.8	14.6	49.3	35.0	60.4
Lane Grp LOS	D	C		D	C	C	C	C	B	D	D	F
Approach Vol, veh/h		808			1000			1018			819	
Approach Delay, s/veh		31.0			33.2			30.6			46.9	
Approach LOS		C			C			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	21.7	36.6		10.6	25.6		23.7	30.3		13.7		20.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	27.0	40.0		13.0	26.0		15.0	36.0		15.0		36.0
Max Q Clear Time (g_c+I1), s	17.1	11.4		7.1	15.6		7.3	20.9		9.7		12.7
Green Ext Time (p_c), s	0.6	10.4		0.1	6.0		0.5	5.4		0.2		3.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			35.0									
HCM 2010 LOS			D									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Cumulative AM With Bypass  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	94	102	30	843	57	95	8	800	329	193	566	73	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	
Lanes	1	1	1	2	1	1	1	2	1	1	2	1	
Cap, veh/h	577	606	515	1119	606	515	90	1379	586	255	1726	733	
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.37	0.37	0.14	0.47	0.47	
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568	
Grp Volume(v), veh/h	102	111	33	916	62	103	9	870	358	210	615	79	
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568	
Q Serve(g_s), s	3.2	3.4	1.1	19.4	1.8	3.7	0.4	15.2	14.5	9.1	8.4	2.2	
Cycle Q Clear(g_c), s	3.2	3.4	1.1	19.4	1.8	3.7	0.4	15.2	14.5	9.1	8.4	2.2	
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	577	606	515	1119	606	515	90	1379	586	255	1726	733	
V/C Ratio(X)	0.18	0.18	0.06	0.82	0.10	0.20	0.10	0.63	0.61	0.82	0.36	0.11	
Avail Cap(c_a), veh/h	577	606	515	1737	940	799	358	1739	739	448	1927	819	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	18.8	18.8	18.1	24.2	18.3	18.9	35.5	20.1	19.9	32.6	13.3	11.7	
Incr Delay (d2), s/veh	0.1	0.1	0.1	1.8	0.1	0.2	0.5	0.5	1.0	6.6	0.1	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile Back of Q (50%), veh/ln	1.3	1.4	0.4	7.9	0.8	1.4	0.2	6.9	5.6	4.5	3.6	0.8	
Lane Grp Delay (d), s/veh	18.9	19.0	18.1	26.0	18.4	19.1	36.0	20.6	21.0	39.2	13.5	11.8	
Lane Grp LOS	B	B	B	C	B	B	D	C	C	D	B	B	
Approach Vol, veh/h	246			1081				1237			904		
Approach Delay, s/veh	18.8			24.9				20.8			19.3		
Approach LOS	B			C				C			B		
<b>Timer</b>													
Assigned Phs	2			6				3	8			7	4
Phs Duration (G+Y+Rc), s	29.8			29.8				8.0	33.3			15.4	40.7
Change Period (Y+Rc), s	4.0			4.0				4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	17.0			40.0				16.0	37.0			20.0	41.0
Max Q Clear Time (g_c+I1), s	5.4			21.4				2.4	17.2			11.1	10.4
Green Ext Time (p_c), s	4.4			4.4				0.0	12.2			0.4	15.7
<b>Intersection Summary</b>													
HCM 2010 Ctrl Delay			21.6										
HCM 2010 LOS			C										
<b>Notes</b>													

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

Cumulative AM With Bypass  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	46	44	1188	15	291	14	748	511	40	1228	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	2	1	2	2	1	2	1
Cap, veh/h	762	800	680	1478	800	1360	24	1760	1496	209	1544	656
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.01	0.48	0.48	0.42	0.42	0.42
Sat Flow, veh/h	1757	1845	1568	3408	1845	3136	1757	3689	3136	392	3689	1568
Grp Volume(v), veh/h	141	50	48	1291	16	316	15	813	555	43	1335	48
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	392	1845	1568
Q Serve(g_s), s	4.4	1.4	1.6	31.0	0.4	5.7	0.8	13.3	10.1	7.4	29.6	1.6
Cycle Q Clear(g_c), s	4.4	1.4	1.6	31.0	0.4	5.7	0.8	13.3	10.1	15.4	29.6	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	762	800	680	1478	800	1360	24	1760	1496	209	1544	656
V/C Ratio(X)	0.19	0.06	0.07	0.87	0.02	0.23	0.61	0.46	0.37	0.21	0.86	0.07
Avail Cap(c_a), veh/h	762	800	680	1749	946	1609	78	1893	1609	211	1564	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	14.8	14.8	23.1	14.5	16.0	44.0	15.7	14.9	22.7	23.8	15.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	4.6	0.0	0.1	22.4	0.2	0.2	0.5	5.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.6	0.6	13.5	0.2	2.1	0.5	5.8	3.7	0.7	14.5	0.6
Lane Grp Delay (d), s/veh	15.7	14.8	14.9	27.7	14.5	16.1	66.4	15.9	15.0	23.1	29.0	15.7
Lane Grp LOS	B	B	B	C	B	B	E	B	B	C	C	B
Approach Vol, veh/h		239			1623			1383			1426	
Approach Delay, s/veh		15.4			25.3			16.1			28.4	
Approach LOS		B			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2			6	
Phs Duration (G+Y+Rc), s		42.9			42.9		5.2	46.8			41.5	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	
Max Green Setting (Gmax), s		16.0			46.0		4.0	46.0			38.0	
Max Q Clear Time (g_c+I1), s		6.4			33.0		2.8	15.3			31.6	
Green Ext Time (p_c), s		5.5			5.9		0.0	23.9			6.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 6: Harbor St & Leland Rd

Cumulative AM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	156	591	125	115	503	199	207	657	241	249	314	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	206	834	355	156	730	310	268	1158	492	312	896	302
Arrive On Green	0.12	0.23	0.23	0.09	0.20	0.20	0.15	0.31	0.31	0.18	0.34	0.34
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2641	891
Grp Volume(v), veh/h	170	642	136	125	547	216	225	714	262	271	236	222
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1687
Q Serve(g_s), s	7.8	13.5	6.1	5.8	11.6	10.6	10.3	13.6	11.4	12.4	8.0	8.3
Cycle Q Clear(g_c), s	7.8	13.5	6.1	5.8	11.6	10.6	10.3	13.6	11.4	12.4	8.0	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	206	834	355	156	730	310	268	1158	492	312	626	573
V/C Ratio(X)	0.82	0.77	0.38	0.80	0.75	0.70	0.84	0.62	0.53	0.87	0.38	0.39
Avail Cap(c_a), veh/h	254	891	379	191	757	322	424	1158	492	403	626	573
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	30.0	27.2	37.0	31.3	30.9	34.1	24.2	23.4	33.1	20.7	20.8
Incr Delay (d2), s/veh	16.3	3.9	0.7	17.6	4.0	6.2	8.4	2.5	4.1	14.7	1.7	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.4	6.7	2.4	3.3	5.7	4.6	5.2	6.4	4.8	6.8	3.9	3.7
Lane Grp Delay (d), s/veh	52.0	33.9	27.8	54.6	35.3	37.1	42.5	26.6	27.5	47.8	22.5	22.8
Lane Grp LOS	D	C	C	D	D	D	D	C	C	D	C	C
Approach Vol, veh/h		948			888			1201			729	
Approach Delay, s/veh		36.3			38.5			29.8			32.0	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.7	22.7		11.4	20.4		16.6	30.0		18.7	32.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	20.0		9.0	17.0		20.0	26.0		19.0	25.0	
Max Q Clear Time (g_c+I1), s	9.8	15.5		7.8	13.6		12.3	15.6		14.4	10.3	
Green Ext Time (p_c), s	0.1	3.2		0.0	2.5		0.4	6.0		0.3	7.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					33.9							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 7: Buchanan Rd & Harbor St

Cumulative AM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	430	5	2	732	87	103	110	3	141	36	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	164	1138	12	23	1004	854	136	237	6	179	43	209
Arrive On Green	0.09	0.62	0.62	0.01	0.54	0.54	0.08	0.13	0.13	0.10	0.16	0.16
Sat Flow, veh/h	1757	1822	20	1757	1845	1568	1757	1792	45	1757	275	1334
Grp Volume(v), veh/h	138	0	472	2	796	95	112	0	123	153	0	228
Grp Sat Flow(s),veh/h/ln	1757	0	1841	1757	1845	1568	1757	0	1837	1757	0	1609
Q Serve(g_s), s	9.7	0.0	16.2	0.1	43.2	2.3	7.8	0.0	7.8	10.7	0.0	17.4
Cycle Q Clear(g_c), s	9.7	0.0	16.2	0.1	43.2	2.3	7.8	0.0	7.8	10.7	0.0	17.4
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.02	1.00		0.83
Lane Grp Cap(c), veh/h	164	0	1150	23	1004	854	136	0	243	179	0	252
V/C Ratio(X)	0.84	0.00	0.41	0.09	0.79	0.11	0.82	0.00	0.51	0.85	0.00	0.90
Avail Cap(c_a), veh/h	197	0	1150	56	1004	854	155	0	243	225	0	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.00	0.76	0.31	0.31	0.31	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.7	0.0	11.8	60.9	22.8	5.6	56.8	0.0	50.4	55.2	0.0	51.7
Incr Delay (d2), s/veh	18.8	0.0	0.8	0.5	2.0	0.1	26.0	0.0	1.7	21.8	0.0	29.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.2	0.0	6.9	0.1	19.1	1.4	4.6	0.0	3.8	6.0	0.0	9.4
Lane Grp Delay (d), s/veh	74.6	0.0	12.7	61.4	24.9	5.7	82.8	0.0	52.1	77.0	0.0	81.5
Lane Grp LOS	E		B	E	C	A	F		D	E		F
Approach Vol, veh/h		610			893			235				381
Approach Delay, s/veh		26.7			22.9			66.7				79.7
Approach LOS		C			C			E				E
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	15.6	82.0		5.6	72.0		13.7	20.5		16.8		23.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	14.0	78.0		4.0	68.0		11.0	16.0		16.0		21.0
Max Q Clear Time (g_c+I1), s	11.7	18.2		2.1	45.2		9.8	9.8		12.7		19.4
Green Ext Time (p_c), s	0.1	3.3		0.1	6.3		0.1	0.5		0.1		0.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					39.1							
HCM 2010 LOS					D							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 8: SR-4 WB Ramps & California Ave























Cumulative AM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	300	24	692	370	150	23	55	86	85	104	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	68	1054	84	1483	2616	1112	190	200	170	190	170	26
Arrive On Green	0.04	0.31	0.31	0.43	0.71	0.71	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1757	3374	268	3408	3689	1568	1757	1845	1568	1757	1567	236
Grp Volume(v), veh/h	39	177	175	752	402	163	25	60	93	92	0	130
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1803
Q Serve(g_s), s	1.8	6.1	6.2	13.3	3.0	2.8	1.1	2.5	4.7	4.1	0.0	5.8
Cycle Q Clear(g_c), s	1.8	6.1	6.2	13.3	3.0	2.8	1.1	2.5	4.7	4.1	0.0	5.8
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	68	576	562	1483	2616	1112	190	200	170	190	0	195
V/C Ratio(X)	0.58	0.31	0.31	0.51	0.15	0.15	0.13	0.30	0.55	0.48	0.00	0.67
Avail Cap(c_a), veh/h	190	576	562	1720	2616	1112	380	399	339	380	0	390
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.54	0.54	0.54	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.3	21.8	21.8	17.0	4.0	3.9	33.6	34.2	35.2	34.9	0.0	35.6
Incr Delay (d2), s/veh	7.6	1.4	1.4	0.1	0.1	0.2	0.3	0.8	2.7	1.9	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	3.0	2.9	5.5	1.1	1.0	0.5	1.2	2.0	1.9	0.0	2.8
Lane Grp Delay (d), s/veh	46.9	23.1	23.2	17.2	4.0	4.1	33.9	35.0	37.9	36.8	0.0	39.5
Lane Grp LOS	D	C	C	B	A	A	C	D	D	D		D
Approach Vol, veh/h	391			1317			178			222		
Approach Delay, s/veh	25.6			11.5			36.4			38.4		
Approach LOS	C			B			D			D		
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	7.2	30.0		40.2	63.0			13.0				13.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	9.0	26.0		42.0	59.0			18.0				18.0
Max Q Clear Time (g_c+I1), s	3.8	8.2		15.3	5.0			6.7				7.8
Green Ext Time (p_c), s	1.6	1.9		3.1	3.6			1.3				1.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.1								
HCM 2010 LOS				B								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd

Cumulative AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	66	291	49	151	3	600	329	96	8	240	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	440	309	263	100	245	4	780	1703	488	65	1569	667
Arrive On Green	0.13	0.17	0.17	0.03	0.07	0.07	0.23	0.62	0.62	0.04	0.43	0.43
Sat Flow, veh/h	3408	1845	1568	3408	3612	66	3408	2759	790	1757	3689	1568
Grp Volume(v), veh/h	124	72	316	53	84	83	652	238	224	9	261	621
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1705	1757	1845	1568
Q Serve(g_s), s	3.5	3.6	18.0	1.6	4.8	4.8	19.6	6.1	6.2	0.5	4.7	40.5
Cycle Q Clear(g_c), s	3.5	3.6	18.0	1.6	4.8	4.8	19.6	6.1	6.2	0.5	4.7	40.5
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	440	309	263	100	125	124	780	1138	1052	65	1569	667
V/C Ratio(X)	0.28	0.23	1.20	0.53	0.67	0.67	0.84	0.21	0.21	0.14	0.17	0.93
Avail Cap(c_a), veh/h	440	309	263	127	275	273	919	1138	1052	261	1819	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	38.8	44.8	51.4	48.9	48.9	39.5	9.0	9.1	50.1	19.1	29.4
Incr Delay (d2), s/veh	0.3	0.4	122.1	4.3	6.0	6.1	5.9	0.1	0.1	0.9	0.0	16.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	1.8	16.1	0.8	2.5	2.5	9.1	2.7	2.5	0.3	2.1	18.5
Lane Grp Delay (d), s/veh	42.7	39.2	166.9	55.7	54.9	55.1	45.4	9.1	9.2	51.0	19.2	45.9
Lane Grp LOS	D	D	F	E	D	E	D	A	A	D	B	D
Approach Vol, veh/h	512				220			1114			891	
Approach Delay, s/veh	118.8				55.2			30.4			38.1	
Approach LOS	F				E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	17.9	22.0		7.2	11.3		28.6	70.3		8.0	49.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	18.0		4.0	16.0		29.0	66.0		16.0	53.0	
Max Q Clear Time (g_c+I1), s	5.5	20.0		3.6	6.8		21.6	8.2		2.5	42.5	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.5		3.0	6.3		0.0	3.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					51.4							
HCM 2010 LOS					D							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	455	0	396	0	0	0	0	706	201	141	520	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1094	0	503				0	1851	787	219	2227	0
Arrive On Green	0.32	0.00	0.32				0.00	0.50	0.50	0.06	0.60	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	495	0	430				0	767	218	153	565	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	12.2	0.0	27.2				0.0	13.9	8.5	4.7	7.6	0.0
Cycle Q Clear(g_c), s	12.2	0.0	27.2				0.0	13.9	8.5	4.7	7.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1094	0	503				0	1851	787	219	2227	0
V/C Ratio(X)	0.45	0.00	0.85				0.00	0.41	0.28	0.70	0.25	0.00
Avail Cap(c_a), veh/h	1543	0	710				0	1851	787	418	2227	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	28.6	0.0	33.7				0.0	16.6	15.3	48.6	9.8	0.0
Incr Delay (d2), s/veh	0.3	0.0	7.2				0.0	0.7	0.9	3.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	11.6				0.0	6.4	3.4	2.2	3.4	0.0
Lane Grp Delay (d), s/veh	28.9	0.0	40.9				0.0	17.3	16.2	52.2	10.1	0.0
Lane Grp LOS	C		D					B	B	D	B	
Approach Vol, veh/h		925						985			718	
Approach Delay, s/veh		34.5						17.1			19.1	
Approach LOS		C						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		38.0						57.2		10.8	68.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		48.0						47.0		13.0	64.0	
Max Q Clear Time (g_c+I1), s		29.2						15.9		6.7	9.6	
Green Ext Time (p_c), s		4.8						12.7		0.2	14.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			23.7									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
11: Loveridge Rd & Leland Rd

Cumulative AM With Bypass  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	199	257	170	189	739	197	224	584	139	198	372	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	307	1234	524	294	1219	518	291	1073	456	306	793	337
Arrive On Green	0.09	0.33	0.33	0.09	0.33	0.33	0.17	0.29	0.29	0.09	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	216	279	185	205	803	214	243	635	151	215	404	185
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.0	4.4	7.2	4.7	15.0	8.5	10.8	11.9	6.1	4.9	7.8	8.4
Cycle Q Clear(g_c), s	5.0	4.4	7.2	4.7	15.0	8.5	10.8	11.9	6.1	4.9	7.8	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1234	524	294	1219	518	291	1073	456	306	793	337
V/C Ratio(X)	0.70	0.23	0.35	0.70	0.66	0.41	0.84	0.59	0.33	0.70	0.51	0.55
Avail Cap(c_a), veh/h	551	1835	780	508	1789	760	612	1789	760	551	1101	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	19.3	20.2	35.7	23.0	20.9	32.5	24.4	22.4	35.6	27.8	28.1
Incr Delay (d2), s/veh	2.9	0.1	0.4	3.0	0.6	0.5	6.3	0.5	0.4	2.9	0.5	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	2.0	2.7	2.1	6.8	3.3	5.2	5.5	2.3	2.2	3.6	3.4
Lane Grp Delay (d), s/veh	38.5	19.4	20.6	38.7	23.7	21.4	38.7	25.0	22.8	38.5	28.3	29.5
Lane Grp LOS	D	B	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		680			1222			1029			804	
Approach Delay, s/veh		25.8			25.8			27.9			31.3	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.2	30.9		10.9	30.6		17.3	27.4		11.2		21.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	13.0	40.0		12.0	39.0		28.0	39.0		13.0		24.0
Max Q Clear Time (g_c+I1), s	7.0	9.2		6.7	17.0		12.8	13.9		6.9		10.4
Green Ext Time (p_c), s	0.4	11.0		0.3	9.6		0.6	9.3		0.4		6.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					27.6							
HCM 2010 LOS					C							
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

Cumulative AM With Bypass  
 3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	295	297	817	267	182	208
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	392	1476	1007	856	243	217
Arrive On Green	0.22	0.80	1.00	1.00	0.14	0.14
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	321	323	888	290	198	226
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	22.6	5.5	0.0	0.0	14.2	18.0
Cycle Q Clear(g_c), s	22.6	5.5	0.0	0.0	14.2	18.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	392	1476	1007	856	243	217
V/C Ratio(X)	0.82	0.22	0.88	0.34	0.81	1.04
Avail Cap(c_a), veh/h	392	1476	1007	856	243	217
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.60	0.60	1.00	1.00
Uniform Delay (d), s/veh	48.0	3.2	0.0	0.0	54.4	56.0
Incr Delay (d2), s/veh	10.9	0.3	7.0	0.6	18.7	72.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	11.2	1.9	2.0	0.2	7.8	18.9
Lane Grp Delay (d), s/veh	58.9	3.4	7.0	0.6	73.1	128.2
Lane Grp LOS	E	A	A	A	E	F
Approach Vol, veh/h		644	1178		424	
Approach Delay, s/veh		31.1	5.5		102.5	
Approach LOS		C	A		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	33.0	108.0	75.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	29.0	104.0	71.0			
Max Q Clear Time (g_c+I1), s	24.6	7.5	2.0			
Green Ext Time (p_c), s	1.2	3.1	10.2			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			31.1			
HCM 2010 LOS			C			
<b>Notes</b>						

























HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	407	73	31	917	12	156	118	59	15	11	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	14	1316	1119	43	1326	17	258	190	95	130	99	173
Arrive On Green	0.02	1.00	1.00	0.02	0.73	0.73	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1757	1845	1568	1757	1817	24	1357	1161	581	1175	603	1055
Grp Volume(v), veh/h	11	442	79	34	0	1010	170	0	192	16	0	33
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1840	1357	0	1742	1175	0	1658
Q Serve(g_s), s	0.8	0.0	0.0	2.3	0.0	40.1	14.9	0.0	12.6	1.6	0.0	2.1
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.3	0.0	40.1	17.0	0.0	12.6	14.2	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.33	1.00		0.64
Lane Grp Cap(c), veh/h	14	1316	1119	43	0	1343	258	0	285	130	0	271
V/C Ratio(X)	0.78	0.34	0.07	0.79	0.00	0.75	0.66	0.00	0.67	0.12	0.00	0.12
Avail Cap(c_a), veh/h	58	1316	1119	86	0	1343	314	0	357	178	0	340
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.52	0.00	0.52	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.9	0.0	0.0	59.2	0.0	9.9	50.8	0.0	47.9	54.6	0.0	43.5
Incr Delay (d2), s/veh	55.0	0.6	0.1	15.6	0.0	2.1	3.7	0.0	3.5	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	0.2	0.0	1.2	0.0	15.6	5.6	0.0	5.9	0.5	0.0	0.9
Lane Grp Delay (d), s/veh	114.9	0.6	0.1	74.7	0.0	11.9	54.4	0.0	51.4	55.0	0.0	43.7
Lane Grp LOS	F	A	A	E		B	D		D	E		D
Approach Vol, veh/h		532			1044			362				49
Approach Delay, s/veh		2.9			14.0			52.8				47.4
Approach LOS		A			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.0	91.0		7.0	93.0			24.0				24.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	87.0		6.0	89.0			25.0				25.0
Max Q Clear Time (g_c+I1), s	2.8	2.0		4.3	42.1			19.0				16.2
Green Ext Time (p_c), s	0.1	3.3		0.0	10.9			1.0				1.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.9								
HCM 2010 LOS				B								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	65	491	19	36	1342	42	54	82	94	44	29	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	91	2008	79	53	1949	61	74	117	134	60	59	170
Arrive On Green	0.05	0.57	0.57	0.03	0.55	0.55	0.04	0.15	0.15	0.03	0.14	0.14
Sat Flow, veh/h	1757	3526	139	1757	3558	112	1757	786	900	1757	421	1210
Grp Volume(v), veh/h	71	279	276	39	755	750	59	0	191	48	0	124
Grp Sat Flow(s),veh/h/ln	1757	1845	1820	1757	1845	1825	1757	0	1686	1757	0	1631
Q Serve(g_s), s	2.9	5.6	5.6	1.6	23.0	23.1	2.4	0.0	8.0	2.0	0.0	5.2
Cycle Q Clear(g_c), s	2.9	5.6	5.6	1.6	23.0	23.1	2.4	0.0	8.0	2.0	0.0	5.2
Prop In Lane	1.00		0.08	1.00		0.06	1.00		0.53	1.00		0.74
Lane Grp Cap(c), veh/h	91	1051	1037	53	1011	1000	74	0	251	60	0	229
V/C Ratio(X)	0.78	0.27	0.27	0.74	0.75	0.75	0.79	0.00	0.76	0.80	0.00	0.54
Avail Cap(c_a), veh/h	144	1181	1166	144	1181	1169	120	0	367	120	0	356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.4	8.0	8.0	35.3	12.7	12.7	34.8	0.0	30.0	35.2	0.0	29.4
Incr Delay (d2), s/veh	13.7	0.1	0.1	18.4	2.2	2.3	16.9	0.0	5.4	21.4	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	2.3	2.3	1.0	10.1	10.0	1.4	0.0	3.7	1.2	0.0	2.2
Lane Grp Delay (d), s/veh	48.1	8.1	8.2	53.8	14.9	15.0	51.7	0.0	35.4	56.6	0.0	31.4
Lane Grp LOS	D	A	A	D	B	B	D		D	E		C
Approach Vol, veh/h		626			1544			250				172
Approach Delay, s/veh		12.7			16.0			39.3				38.4
Approach LOS		B			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	7.8	45.8		6.2	44.2		7.1	14.9		6.5		14.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	47.0		6.0	47.0		5.0	16.0		5.0		16.0
Max Q Clear Time (g_c+I1), s	4.9	7.6		3.6	25.1		4.4	10.0		4.0		7.2
Green Ext Time (p_c), s	0.0	21.9		0.0	15.1		0.0	0.9		0.0		1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.9								
HCM 2010 LOS				B								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Volume (veh/h)	0	555	15	13	1355	0	30	0	40	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	4	2367	63	25	2825	0	53	0	86	4	4	0
Arrive On Green	0.00	0.66	0.66	0.01	0.77	0.00	0.03	0.00	0.05	0.00	0.00	0.00
Sat Flow, veh/h	1757	3578	95	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	311	308	14	1473	0	33	0	43	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1828	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	3.1	3.1	0.4	6.9	0.0	0.8	0.0	1.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	3.1	3.1	0.4	6.9	0.0	0.8	0.0	1.2	0.0	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	4	1220	1209	25	2825	0	53	0	86	4	4	0
V/C Ratio(X)	0.00	0.25	0.25	0.56	0.52	0.00	0.62	0.00	0.50	0.00	0.00	0.00
Avail Cap(c_a), veh/h	158	1988	1970	158	3976	0	237	0	634	158	663	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	3.1	3.1	21.8	2.0	0.0	21.3	0.0	20.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	17.9	0.1	0.0	11.4	0.0	4.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	0.9	0.9	0.3	1.3	0.0	0.5	0.0	0.5	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	3.2	3.2	39.8	2.2	0.0	32.8	0.0	24.9	0.0	0.0	0.0
Lane Grp LOS		A	A	D	A		C		C			
Approach Vol, veh/h		619			1487			76			0	
Approach Delay, s/veh		3.2			2.5			28.3			0.0	
Approach LOS		A			A			C				
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	0.0	33.5		4.6	38.1		5.3	6.4		0.0	1.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	4.0	48.0		4.0	48.0		6.0	18.0		4.0	16.0	
Max Q Clear Time (g_c+I1), s	0.0	5.1		2.4	8.9		2.8	3.2		0.0	0.0	
Green Ext Time (p_c), s	0.0	24.4		0.0	23.1		0.0	0.1		0.0	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				3.6								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy













Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	34	44	223	83	32	222	491	156	26	559	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	407	220	187	407	151	59	595	2865	886	41	2047	870
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.06	0.23	0.23	0.02	0.55	0.55
Sat Flow, veh/h	3408	1845	1568	3408	1266	492	3408	4058	1254	1757	3689	1568
Grp Volume(v), veh/h	124	37	48	242	0	125	241	484	220	28	608	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1623	1757	1845	1568
Q Serve(g_s), s	2.6	1.4	2.2	5.3	0.0	5.3	5.4	8.3	8.6	1.3	7.0	8.8
Cycle Q Clear(g_c), s	2.6	1.4	2.2	5.3	0.0	5.3	5.4	8.3	8.6	1.3	7.0	8.8
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.77	1.00		1.00
Lane Grp Cap(c), veh/h	407	220	187	407	0	210	595	2605	1146	41	2047	870
V/C Ratio(X)	0.30	0.17	0.26	0.59	0.00	0.60	0.41	0.19	0.19	0.69	0.30	0.36
Avail Cap(c_a), veh/h	773	419	356	945	0	488	859	2605	1146	177	2047	870
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	31.4	31.7	33.1	0.0	33.1	33.4	12.1	12.3	38.4	9.4	9.8
Incr Delay (d2), s/veh	0.4	0.4	0.7	1.4	0.0	2.7	0.4	0.2	0.4	18.5	0.4	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.7	0.9	2.3	0.0	2.5	2.5	4.3	4.0	0.8	3.0	3.4
Lane Grp Delay (d), s/veh	32.3	31.7	32.4	34.5	0.0	35.8	33.8	12.3	12.6	56.9	9.8	11.0
Lane Grp LOS	C	C	C	C		D	C	B	B	E	A	B
Approach Vol, veh/h		209			367			945			948	
Approach Delay, s/veh		32.2			34.9			17.9			11.6	
Approach LOS		C			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.5			13.5		17.8	60.0		5.8		48.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			22.0		20.0	56.0		8.0		44.0
Max Q Clear Time (g_c+I1), s		4.6			7.3		7.4	10.6		3.3		10.8
Green Ext Time (p_c), s		2.1			2.1		4.5	6.6		0.0		7.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.2								
HCM 2010 LOS				B								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps

Cumulative AM With Bypass  
 3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	236	276	480	559	451	316
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	737	339	629	3943	2724	772
Arrive On Green	0.22	0.22	0.06	0.24	0.49	0.49
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	257	300	522	608	490	343
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	7.2	20.8	17.0	9.8	5.5	16.0
Cycle Q Clear(g_c), s	7.2	20.8	17.0	9.8	5.5	16.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	737	339	629	3943	2724	772
V/C Ratio(X)	0.35	0.88	0.83	0.15	0.18	0.44
Avail Cap(c_a), veh/h	971	447	1032	3943	2724	772
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.96	0.96	0.91	0.91
Uniform Delay (d), s/veh	37.3	42.6	51.0	16.1	15.9	18.5
Incr Delay (d2), s/veh	0.3	15.3	2.9	0.1	0.1	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.1	1.4	8.1	5.0	2.5	6.6
Lane Grp Delay (d), s/veh	37.6	57.9	53.8	16.2	16.0	20.2
Lane Grp LOS	D	E	D	B	B	C
Approach Vol, veh/h	557			1130	833	
Approach Delay, s/veh	48.5			33.6	17.7	
Approach LOS	D			C	B	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			24.7	84.0	59.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			34.0	80.0	42.0	
Max Q Clear Time (g_c+I1), s			19.0	11.8	18.0	
Green Ext Time (p_c), s			1.7	12.6	9.9	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			31.6			
HCM 2010 LOS			C			
<b>Notes</b>						
























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	228	0	267	0	0	0	0	747	440	148	616	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	420	227	386				0	3881	1100	225	4448	0
Arrive On Green	0.12	0.00	0.12				0.00	1.00	1.00	0.13	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	248	0	290				0	812	478	161	670	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.5	0.0	9.8				0.0	0.0	0.0	5.0	0.0	0.0
Cycle Q Clear(g_c), s	7.5	0.0	9.8				0.0	0.0	0.0	5.0	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	420	227	386				0	3881	1100	225	4448	0
V/C Ratio(X)	0.59	0.00	0.75				0.00	0.21	0.43	0.72	0.15	0.00
Avail Cap(c_a), veh/h	747	404	687				0	3881	1100	498	4448	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.82	0.82	0.94	0.94	0.00
Uniform Delay (d), s/veh	45.4	0.0	46.4				0.0	0.0	0.0	46.5	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	3.0				0.0	0.1	1.0	4.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.3	0.0	4.1				0.0	0.0	0.3	2.2	0.0	0.0
Lane Grp Delay (d), s/veh	46.7	0.0	49.3				0.0	0.1	1.0	50.6	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		538						1290			831	
Approach Delay, s/veh		48.1						0.4			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		17.5						80.8		11.2		92.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		24.0						68.0		16.0		88.0
Max Q Clear Time (g_c+I1), s		11.8						2.0		7.0		2.0
Green Ext Time (p_c), s		1.7						21.1		0.3		22.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			13.0									
HCM 2010 LOS			B									
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
21: Somersville Rd & Delta Fair Blvd

Cumulative AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	288	126	5	45	345	452	91	397	13	150	352	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1568	814	30	808	849	721	278	1840	59	236	945	402
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.05	0.11	0.11	0.02	0.08	0.08
Sat Flow, veh/h	3408	1769	65	1757	1845	1568	1757	5332	172	3408	3689	1568
Grp Volume(v), veh/h	313	0	142	49	375	491	99	298	148	163	383	335
Grp Sat Flow(s),veh/h/ln	1704	0	1833	1757	1845	1568	1757	1845	1814	1704	1845	1568
Q Serve(g_s), s	5.2	0.0	4.3	1.5	13.2	23.5	5.2	7.0	7.1	4.5	9.4	20.1
Cycle Q Clear(g_c), s	5.2	0.0	4.3	1.5	13.2	23.5	5.2	7.0	7.1	4.5	9.4	20.1
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	1568	0	844	808	849	721	278	1273	626	236	945	402
V/C Ratio(X)	0.20	0.00	0.17	0.06	0.44	0.68	0.36	0.23	0.24	0.69	0.41	0.83
Avail Cap(c_a), veh/h	1568	0	844	808	849	721	278	1273	626	356	1157	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.75	0.75	0.99	0.99	0.99	0.98	0.98	0.98
Uniform Delay (d), s/veh	15.3	0.0	15.1	14.3	17.5	20.3	40.6	30.9	30.9	45.7	36.9	41.8
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	1.2	3.9	0.8	0.4	0.9	3.5	0.3	9.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.1	0.0	1.9	0.7	6.1	9.6	2.5	3.6	3.6	2.2	4.8	9.7
Lane Grp Delay (d), s/veh	15.4	0.0	15.2	14.4	18.7	24.1	41.4	31.3	31.8	49.2	37.1	51.6
Lane Grp LOS	B		B	B	B	C	D	C	C	D	D	D
Approach Vol, veh/h		455			915			545			881	
Approach Delay, s/veh		15.3			21.4			33.3			44.9	
Approach LOS		B			C			C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		48.0			48.0		19.1	37.0		10.6		28.5
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			44.0		13.0	33.0		10.0		30.0
Max Q Clear Time (g_c+I1), s		7.2			25.5		7.2	9.1		6.5		22.1
Green Ext Time (p_c), s		4.6			6.4		0.4	2.9		0.2		2.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	282	204	15	16	372	433	388	581	25	43	158	106
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	344	1602	681	27	468	398	462	1237	53	60	454	193
Arrive On Green	0.20	0.43	0.00	0.02	0.25	0.00	0.26	0.35	0.35	0.03	0.12	0.12
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3513	150	1757	3689	1568
Grp Volume(v), veh/h	307	222	0	17	404	0	422	332	327	47	172	115
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1818	1757	1845	1568
Q Serve(g_s), s	16.6	3.5	0.0	0.9	20.4	0.0	22.7	13.8	13.8	2.6	4.2	6.8
Cycle Q Clear(g_c), s	16.6	3.5	0.0	0.9	20.4	0.0	22.7	13.8	13.8	2.6	4.2	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	344	1602	681	27	468	398	462	649	640	60	454	193
V/C Ratio(X)	0.89	0.14	0.00	0.64	0.86	0.00	0.91	0.51	0.51	0.79	0.38	0.60
Avail Cap(c_a), veh/h	452	1897	806	90	569	484	596	778	767	145	607	258
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	16.6	0.0	47.6	34.7	0.0	34.8	24.9	24.9	46.6	39.2	40.4
Incr Delay (d2), s/veh	16.2	0.0	0.0	22.7	11.2	0.0	15.8	0.6	0.6	19.9	0.5	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.7	1.6	0.0	0.6	10.9	0.0	12.0	6.5	6.4	1.5	2.0	2.8
Lane Grp Delay (d), s/veh	54.3	16.6	0.0	70.3	45.9	0.0	50.6	25.5	25.5	66.5	39.7	43.3
Lane Grp LOS	D	B		E	D		D	C	C	E	D	D
Approach Vol, veh/h		529			421			1081			334	
Approach Delay, s/veh		38.5			46.9			35.3			44.7	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	23.0	46.2		5.5	28.7		29.6	38.2		7.3	16.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	25.0	50.0		5.0	30.0		33.0	41.0		8.0	16.0	
Max Q Clear Time (g_c+I1), s	18.6	5.5		2.9	22.4		24.7	15.8		4.6	8.8	
Green Ext Time (p_c), s	0.5	4.3		0.0	2.3		0.9	6.1		0.0	3.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.4								
HCM 2010 LOS				D								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

Cumulative AM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	186	370	0	4	1284	652	0	1	2	265	9	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	244	2398	0	7	1902	808	2	23	46	378	371	631
Arrive On Green	0.14	0.65	0.00	0.00	0.52	0.00	0.00	0.04	0.04	0.11	0.20	0.20
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	202	402	0	4	1396	0	0	0	3	288	10	77
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	9.3	3.6	0.0	0.2	24.5	0.0	0.0	0.0	0.1	6.8	0.4	1.7
Cycle Q Clear(g_c), s	9.3	3.6	0.0	0.2	24.5	0.0	0.0	0.0	0.1	6.8	0.4	1.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	244	2398	0	7	1902	808	2	0	70	378	371	631
V/C Ratio(X)	0.83	0.17	0.00	0.54	0.73	0.00	0.00	0.00	0.04	0.76	0.03	0.12
Avail Cap(c_a), veh/h	402	3068	0	85	2401	1020	85	0	358	534	600	1020
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	5.7	0.0	41.2	15.7	0.0	0.0	0.0	38.1	35.8	26.6	27.1
Incr Delay (d2), s/veh	7.2	0.0	0.0	48.9	0.9	0.0	0.0	0.0	0.3	4.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.6	1.4	0.0	0.2	10.7	0.0	0.0	0.0	0.1	3.1	0.2	0.6
Lane Grp Delay (d), s/veh	42.0	5.7	0.0	90.1	16.6	0.0	0.0	0.0	38.4	39.9	26.6	27.2
Lane Grp LOS	D	A		F	B				D	D	C	C
Approach Vol, veh/h		604			1400			3				375
Approach Delay, s/veh		17.9			16.8			38.4				37.0
Approach LOS		B			B			D				D
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	15.5	57.9		4.4	46.8		0.0	7.5		13.2		20.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	19.0	69.0		4.0	54.0		4.0	18.0		13.0		27.0
Max Q Clear Time (g_c+I1), s	11.3	5.6		2.2	26.5		0.0	2.1		8.8		3.7
Green Ext Time (p_c), s	0.3	23.9		0.0	16.3		0.0	0.2		0.4		0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.2								
HCM 2010 LOS				C								
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

Cumulative AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	31	175	59	55	412	223	137	461	57	69	114	11
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	300	995	324	498	844	452	676	760	94	335	871	740
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	743	2666	870	1110	2263	1213	1236	1610	199	836	1845	1568
Grp Volume(v), veh/h	34	130	124	60	365	325	149	0	563	75	124	12
Grp Sat Flow(s),veh/h/ln	743	1845	1691	1110	1845	1631	1236	0	1809	836	1845	1568
Q Serve(g_s), s	1.9	2.4	2.6	2.0	8.0	8.1	4.0	0.0	12.3	3.9	2.0	0.2
Cycle Q Clear(g_c), s	10.0	2.4	2.6	4.6	8.0	8.1	6.0	0.0	12.3	16.2	2.0	0.2
Prop In Lane	1.00		0.51	1.00		0.74	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	300	688	631	498	688	608	676	0	854	335	871	740
V/C Ratio(X)	0.11	0.19	0.20	0.12	0.53	0.54	0.22	0.00	0.66	0.22	0.14	0.02
Avail Cap(c_a), veh/h	642	1537	1409	1009	1537	1359	1745	0	2420	1058	2467	2097
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.6	10.9	10.9	12.5	12.6	12.7	9.4	0.0	10.4	16.7	7.7	7.2
Incr Delay (d2), s/veh	0.2	0.1	0.2	0.1	0.6	0.7	0.2	0.0	0.9	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	1.0	1.0	0.5	3.4	3.0	1.1	0.0	4.9	0.8	0.8	0.1
Lane Grp Delay (d), s/veh	16.8	11.0	11.1	12.6	13.3	13.4	9.6	0.0	11.3	17.0	7.8	7.3
Lane Grp LOS	B	B	B	B	B	B	A		B	B	A	A
Approach Vol, veh/h		288			750			712			211	
Approach Delay, s/veh		11.7			13.3			11.0			11.0	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		23.2			23.2			28.4			28.4	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		43.0			43.0			69.0			69.0	
Max Q Clear Time (g_c+I1), s		12.0			10.1			14.3			18.2	
Green Ext Time (p_c), s		7.2			7.3			6.2			6.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.0								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	194	474	2	10	1557	235	7	10	13	226	14	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	217	2438	9	19	1827	176	86	113	110	213	28	276
Arrive On Green	0.12	0.66	0.66	0.01	0.55	0.55	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3673	14	1757	3314	319	190	591	575	1367	145	1444
Grp Volume(v), veh/h	211	259	258	11	931	926	33	0	0	246	0	164
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1788	1356	0	0	1367	0	1590
Q Serve(g_s), s	10.7	4.9	4.9	0.6	40.8	42.9	0.1	0.0	0.0	8.6	0.0	8.3
Cycle Q Clear(g_c), s	10.7	4.9	4.9	0.6	40.8	42.9	8.4	0.0	0.0	17.0	0.0	8.3
Prop In Lane	1.00		0.01	1.00		0.18	0.24		0.42	1.00		0.91
Lane Grp Cap(c), veh/h	217	1225	1223	19	1017	986	309	0	0	213	0	303
V/C Ratio(X)	0.97	0.21	0.21	0.59	0.92	0.94	0.11	0.00	0.00	1.15	0.00	0.54
Avail Cap(c_a), veh/h	217	1225	1223	79	1035	1003	309	0	0	213	0	303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.9	5.9	5.9	43.9	18.1	18.6	29.8	0.0	0.0	41.9	0.0	32.5
Incr Delay (d2), s/veh	53.2	0.1	0.1	25.7	12.3	15.8	0.2	0.0	0.0	108.9	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.0	1.9	1.9	0.4	20.5	21.8	0.6	0.0	0.0	11.3	0.0	3.5
Lane Grp Delay (d), s/veh	92.2	5.9	5.9	69.5	30.4	34.4	29.9	0.0	0.0	150.8	0.0	34.5
Lane Grp LOS	F	A	A	E	C	C	C			F		C
Approach Vol, veh/h		728			1868			33				410
Approach Delay, s/veh		30.9			32.6			29.9				104.3
Approach LOS		C			C			C				F
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	15.0	63.2		5.0	53.1			21.0				21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	11.0	57.0		4.0	50.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	12.7	6.9		2.6	44.9			10.4				19.0
Green Ext Time (p_c), s	0.0	32.5		0.0	4.2			1.1				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				41.8								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd































Cumulative AM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	212	55	533	12	124	85	1002	1270	10	54	950	163
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	296	311	1666	27	282	264	1236	2412	1025	75	1538	263
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.36	0.65	0.65	0.04	0.33	0.33
Sat Flow, veh/h	1757	1845	3136	161	1675	1568	3408	3689	1568	1757	4607	788
Grp Volume(v), veh/h	230	60	579	148	0	92	1089	1380	11	59	827	383
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1837	0	1568	1704	1845	1568	1757	1845	1706
Q Serve(g_s), s	11.1	2.5	9.4	6.5	0.0	4.6	26.6	18.4	0.2	3.0	17.1	17.2
Cycle Q Clear(g_c), s	11.1	2.5	9.4	6.5	0.0	4.6	26.6	18.4	0.2	3.0	17.1	17.2
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	296	311	1666	309	0	264	1236	2412	1025	75	1232	570
V/C Ratio(X)	0.78	0.19	0.35	0.48	0.00	0.35	0.88	0.57	0.01	0.78	0.67	0.67
Avail Cap(c_a), veh/h	336	352	1737	330	0	282	1532	2612	1110	158	1285	594
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	31.8	12.0	33.5	0.0	32.7	26.5	8.5	5.4	42.2	25.4	25.5
Incr Delay (d2), s/veh	9.8	0.3	0.1	1.1	0.0	0.8	5.3	0.3	0.0	15.9	1.3	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.7	1.2	3.4	3.1	0.0	1.9	12.0	7.4	0.1	1.7	8.0	7.7
Lane Grp Delay (d), s/veh	45.2	32.1	12.1	34.6	0.0	33.5	31.9	8.8	5.4	58.0	26.7	28.3
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		869			240			2480			1269	
Approach Delay, s/veh		22.2			34.2			18.9			28.7	
Approach LOS		C			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		19.0			19.0		36.3	62.2		7.8		33.7
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			16.0		40.0	63.0		8.0		31.0
Max Q Clear Time (g_c+I1), s		13.1			8.5		28.6	20.4		5.0		19.2
Green Ext Time (p_c), s		1.8			3.0		3.7	30.8		0.0		10.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					22.8							
HCM 2010 LOS					C							
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 28: Kirker Pass Rd & Myrtle Dr

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	  
Volume (veh/h)	26	0	107	0	0	0	61	524	3	0	1677	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	177	0	158	500	186	158	84	2870	1220	3	3624	68
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.05	0.78	0.78	0.00	0.67	0.67
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5415	101
Grp Volume(v), veh/h	28	0	116	0	0	0	66	570	3	0	1242	615
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1827
Q Serve(g_s), s	1.0	0.0	4.7	0.0	0.0	0.0	2.5	2.7	0.0	0.0	11.1	11.1
Cycle Q Clear(g_c), s	1.0	0.0	4.7	0.0	0.0	0.0	2.5	2.7	0.0	0.0	11.1	11.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	177	0	158	500	186	158	84	2870	1220	3	2469	1223
V/C Ratio(X)	0.16	0.00	0.73	0.00	0.00	0.00	0.78	0.20	0.00	0.00	0.50	0.50
Avail Cap(c_a), veh/h	426	0	381	1202	448	381	266	3806	1617	107	3470	1718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	0.0	28.8	0.0	0.0	0.0	31.0	1.9	1.6	0.0	5.4	5.4
Incr Delay (d2), s/veh	0.4	0.0	6.4	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	0.0	2.1	0.0	0.0	0.0	1.4	0.7	0.0	0.0	3.8	3.9
Lane Grp Delay (d), s/veh	27.5	0.0	35.2	0.0	0.0	0.0	45.7	2.0	1.6	0.0	5.6	5.8
Lane Grp LOS	C		D				D	A	A		A	A
Approach Vol, veh/h		144			0			639			1857	
Approach Delay, s/veh		33.7			0.0			6.5			5.6	
Approach LOS		C						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2			1	6
Phs Duration (G+Y+Rc), s		10.6			10.6		7.2	55.3			0.0	48.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s		16.0			16.0		10.0	68.0			4.0	62.0
Max Q Clear Time (g_c+I1), s		6.7			0.0		4.5	4.7			0.0	13.1
Green Ext Time (p_c), s		0.4			0.0		0.0	36.0			0.0	31.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				7.4								
HCM 2010 LOS				A								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Cumulative AM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	68	75	136	412	421	98	73	425	86	55	1581	396
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	377	208	177	468	608	258	91	1976	387	77	1854	455
Arrive On Green	0.21	0.11	0.11	0.27	0.16	0.16	0.05	0.44	0.44	0.04	0.43	0.43
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4497	881	1757	4294	1054
Grp Volume(v), veh/h	74	82	148	448	458	107	79	377	178	60	1471	677
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1689	1757	1845	1659
Q Serve(g_s), s	4.0	4.8	10.8	29.2	13.8	6.2	5.2	7.4	7.7	3.9	43.9	45.6
Cycle Q Clear(g_c), s	4.0	4.8	10.8	29.2	13.8	6.2	5.2	7.4	7.7	3.9	43.9	45.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.52	1.00		0.64
Lane Grp Cap(c), veh/h	377	208	177	468	608	258	91	1621	742	77	1593	716
V/C Ratio(X)	0.20	0.39	0.84	0.96	0.75	0.41	0.87	0.23	0.24	0.78	0.92	0.95
Avail Cap(c_a), veh/h	377	254	216	468	1173	499	91	1621	742	136	1617	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	47.9	50.6	42.0	46.3	32.6	54.8	20.4	20.4	55.1	31.3	31.7
Incr Delay (d2), s/veh	0.3	1.2	20.6	30.8	1.9	1.1	55.3	0.1	0.2	15.4	9.3	20.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.8	2.4	5.4	17.2	6.7	2.5	3.8	3.4	3.3	2.1	22.3	23.1
Lane Grp Delay (d), s/veh	37.7	49.1	71.2	72.9	48.3	33.7	110.1	20.4	20.6	70.5	40.5	52.6
Lane Grp LOS	D	D	E	E	D	C	F	C	C	E	D	D
Approach Vol, veh/h		304			1013			634			2208	
Approach Delay, s/veh		57.1			57.6			31.7			45.1	
Approach LOS		E			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	29.0	17.1		35.0	23.2		10.0	55.1		9.1	54.2	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	10.0	16.0		31.0	37.0		6.0	48.0		9.0	51.0	
Max Q Clear Time (g_c+I1), s	6.0	12.8		31.2	15.8		7.2	9.7		5.9	47.6	
Green Ext Time (p_c), s	0.7	0.4		0.0	3.4		0.0	29.9		0.0	2.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				47.0								
HCM 2010 LOS				D								
<b>Notes</b>												





















HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd

Cumulative AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	225	384	37	485	1277	146	165	325	183	288	1115	553
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	301	1257	0	606	1751	0	234	1914	542	379	2149	609
Arrive On Green	0.09	0.23	0.00	0.18	0.32	0.00	0.07	0.35	0.35	0.11	0.39	0.39
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	245	417	0	527	1388	0	179	353	199	313	1212	601
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	8.2	7.3	0.0	17.4	26.5	0.0	6.0	5.2	11.0	10.4	19.9	44.0
Cycle Q Clear(g_c), s	8.2	7.3	0.0	17.4	26.5	0.0	6.0	5.2	11.0	10.4	19.9	44.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	301	1257	0	606	1751	0	234	1914	542	379	2149	609
V/C Ratio(X)	0.81	0.33	0.00	0.87	0.79	0.00	0.76	0.18	0.37	0.83	0.56	0.99
Avail Cap(c_a), veh/h	324	1257	0	765	1910	0	235	1914	542	500	2149	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	37.4	0.0	46.3	36.1	0.0	53.0	26.5	28.4	50.4	27.7	35.1
Incr Delay (d2), s/veh	13.8	0.2	0.0	8.9	2.2	0.0	13.8	0.0	0.4	8.4	0.3	33.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.2	3.5	0.0	8.4	12.8	0.0	3.1	2.4	4.4	5.0	9.2	22.8
Lane Grp Delay (d), s/veh	65.6	37.6	0.0	55.2	38.3	0.0	66.8	26.5	28.8	58.8	28.1	68.2
Lane Grp LOS	E	D		E	D		E	C	C	E	C	E
Approach Vol, veh/h		662			1915			731			2126	
Approach Delay, s/veh		48.0			43.0			37.0			43.9	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	14.2	30.3		24.6	40.7		12.0	44.1		16.9	49.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	25.0		26.0	40.0		8.0	36.0		17.0	45.0	
Max Q Clear Time (g_c+I1), s	10.2	9.3		19.4	28.5		8.0	13.0		12.4	46.0	
Green Ext Time (p_c), s	0.1	10.9		1.2	8.1		0.0	15.8		0.5	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				43.2								
HCM 2010 LOS				D								
<b>Notes</b>												














HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Cumulative AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	487	5	10	917	12	7	0	31	8	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	19	2136	20	20	2131	28	276	0	75	249	0	75
Arrive On Green	0.01	0.59	0.59	0.01	0.59	0.59	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1757	3649	34	1757	3634	47	1393	0	1568	1356	0	1568
Grp Volume(v), veh/h	10	267	267	11	506	504	8	0	34	9	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1839	1757	1845	1836	1393	0	1568	1356	0	1568
Q Serve(g_s), s	0.2	2.4	2.4	0.2	5.3	5.3	0.2	0.0	0.7	0.2	0.0	0.1
Cycle Q Clear(g_c), s	0.2	2.4	2.4	0.2	5.3	5.3	0.3	0.0	0.7	0.9	0.0	0.1
Prop In Lane	1.00		0.02	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	19	1080	1077	20	1082	1077	276	0	75	249	0	75
V/C Ratio(X)	0.54	0.25	0.25	0.54	0.47	0.47	0.03	0.00	0.45	0.04	0.00	0.05
Avail Cap(c_a), veh/h	416	4476	4462	416	4476	4456	952	0	835	907	0	835
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	3.4	3.4	16.6	4.0	4.0	15.5	0.0	15.7	16.1	0.0	15.4
Incr Delay (d2), s/veh	21.9	0.1	0.1	20.3	0.3	0.3	0.0	0.0	4.3	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.6	0.6	0.2	0.9	0.9	0.1	0.0	0.3	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	38.5	3.5	3.5	36.9	4.3	4.3	15.5	0.0	19.9	16.2	0.0	15.7
Lane Grp LOS	D	A	A	D	A	A	B		B	B		B
Approach Vol, veh/h		544			1021			42				13
Approach Delay, s/veh		4.2			4.6			19.1				16.0
Approach LOS		A			A			B				B
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	23.8		4.4	23.8			5.6				5.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	82.0		8.0	82.0			18.0				18.0
Max Q Clear Time (g_c+I1), s	2.2	4.4		2.2	7.3			2.7				2.9
Green Ext Time (p_c), s	0.0	12.6		0.0	12.5			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.9								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd

Cumulative AM With Bypass  
 3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			
Volume (veh/h)	110	321	770	86	108	326
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	157	2139	1360	151	479	428
Arrive On Green	0.09	0.58	0.42	0.42	0.27	0.27
Sat Flow, veh/h	1757	3689	3263	363	1757	1568
Grp Volume(v), veh/h	120	349	473	457	117	354
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1781	1757	1568
Q Serve(g_s), s	3.6	2.4	10.9	10.9	2.8	11.5
Cycle Q Clear(g_c), s	3.6	2.4	10.9	10.9	2.8	11.5
Prop In Lane	1.00			0.20	1.00	1.00
Lane Grp Cap(c), veh/h	157	2139	769	742	479	428
V/C Ratio(X)	0.77	0.16	0.62	0.62	0.24	0.83
Avail Cap(c_a), veh/h	453	3877	1326	1280	810	723
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	5.3	12.4	12.4	15.4	18.5
Incr Delay (d2), s/veh	7.6	0.0	0.8	0.8	0.3	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.8	4.5	4.4	1.2	0.5
Lane Grp Delay (d), s/veh	31.7	5.3	13.2	13.2	15.6	22.7
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		469	930		471	
Approach Delay, s/veh		12.1	13.2		20.9	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	8.8	35.5	26.6			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	57.0	39.0			
Max Q Clear Time (g_c+I1), s	5.6	4.4	12.9			
Green Ext Time (p_c), s	0.2	11.5	9.7			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			14.9			
HCM 2010 LOS			B			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Cumulative AM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	94	0	0	0	822	277	0	2	229	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	214	0	132	66	156	0	938	2974	0	2	884	102
Arrive On Green	0.08	0.00	0.08	0.00	0.00	0.00	0.53	0.81	0.00	0.00	0.27	0.27
Sat Flow, veh/h	1757	0	1568	1275	1845	0	1757	3689	0	1757	3249	374
Grp Volume(v), veh/h	50	0	102	0	0	0	893	301	0	2	140	138
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1275	1845	0	1757	1845	0	1757	1845	1779
Q Serve(g_s), s	2.9	0.0	7.0	0.0	0.0	0.0	52.6	1.9	0.0	0.1	6.5	6.7
Cycle Q Clear(g_c), s	2.9	0.0	7.0	0.0	0.0	0.0	52.6	1.9	0.0	0.1	6.5	6.7
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.21
Lane Grp Cap(c), veh/h	214	0	132	66	156	0	938	2974	0	2	502	484
V/C Ratio(X)	0.23	0.00	0.77	0.00	0.00	0.00	0.95	0.10	0.00	1.24	0.28	0.28
Avail Cap(c_a), veh/h	323	0	230	145	270	0	1223	2974	0	64	502	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.64	0.64	0.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	47.1	0.0	48.9	0.0	0.0	0.0	24.1	2.2	0.0	54.6	31.3	31.4
Incr Delay (d2), s/veh	0.6	0.0	9.1	0.0	0.0	0.0	9.8	0.0	0.0	384.2	1.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	0.0	3.1	0.0	0.0	0.0	24.6	0.7	0.0	0.2	3.2	3.2
Lane Grp Delay (d), s/veh	47.7	0.0	58.1	0.0	0.0	0.0	33.9	2.3	0.0	438.8	32.4	32.5
Lane Grp LOS	D		E				C	A		F	C	C
Approach Vol, veh/h		152			0			1194			280	
Approach Delay, s/veh		54.6			0.0			25.9			35.4	
Approach LOS		D						C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		13.2			13.2		62.3	92.0		4.0	33.7	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		16.0			16.0		76.0	88.0		4.0	16.0	
Max Q Clear Time (g_c+I1), s		9.0			0.0		54.6	3.9		2.1	8.7	
Green Ext Time (p_c), s		0.3			0.0		3.7	2.2		0.0	0.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					30.2							
HCM 2010 LOS					C							
<b>Notes</b>												



















HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

Cumulative AM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	376	154	24	500	8	621	7	32	9	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	23	562	227	40	850	14	864	9	898	211	42	27
Arrive On Green	0.01	0.22	0.22	0.02	0.23	0.23	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1757	2502	1009	1757	3619	60	1321	16	1568	208	74	47
Grp Volume(v), veh/h	13	300	276	26	277	275	683	0	35	14	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1667	1757	1845	1834	1337	0	1568	328	0	0
Q Serve(g_s), s	0.5	10.1	10.3	1.0	9.0	9.0	0.0	0.0	0.7	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.5	10.1	10.3	1.0	9.0	9.0	30.5	0.0	0.7	30.8	0.0	0.0
Prop In Lane	1.00		0.61	1.00		0.03	0.99		1.00	0.71		0.14
Lane Grp Cap(c), veh/h	23	415	375	40	433	431	873	0	898	280	0	0
V/C Ratio(X)	0.58	0.72	0.74	0.65	0.64	0.64	0.78	0.00	0.04	0.05	0.00	0.00
Avail Cap(c_a), veh/h	105	469	423	105	469	466	1263	0	1336	679	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.8	24.0	24.1	32.4	23.0	23.0	12.6	0.0	6.2	12.8	0.0	0.0
Incr Delay (d2), s/veh	21.2	4.8	5.8	16.0	2.6	2.6	2.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	5.0	4.7	0.6	4.3	4.3	9.0	0.0	0.2	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	54.0	28.8	29.9	48.4	25.6	25.7	14.7	0.0	6.3	12.9	0.0	0.0
Lane Grp LOS	D	C	C	D	C	C	B		A	B		
Approach Vol, veh/h		589			578			718				14
Approach Delay, s/veh		29.9			26.7			14.2				12.9
Approach LOS		C			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.9	19.0		5.5	19.7			42.3				42.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	17.0		4.0	17.0			57.0				57.0
Max Q Clear Time (g_c+I1), s	2.5	12.3		3.0	11.0			32.5				32.8
Green Ext Time (p_c), s	0.0	2.8		0.0	3.3			5.5				5.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp





















Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	127	262	58	506	762	392	258	796	321
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				164	358	82	644	1161	593	380	1960	833
Arrive On Green				0.17	0.17	0.17	0.32	0.84	0.84	0.22	0.53	0.00
Sat Flow, veh/h				967	2106	483	3408	2305	1177	1757	3689	1568
Grp Volume(v), veh/h				256	0	230	550	661	593	280	865	0
Grp Sat Flow(s),veh/h/ln				1796	0	1759	1704	1845	1637	1757	1845	1568
Q Serve(g_s), s				15.1	0.0	13.6	16.5	15.5	15.9	16.2	15.7	0.0
Cycle Q Clear(g_c), s				15.1	0.0	13.6	16.5	15.5	15.9	16.2	15.7	0.0
Prop In Lane				0.54		0.27	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h				305	0	299	644	929	825	380	1960	833
V/C Ratio(X)				0.84	0.00	0.77	0.85	0.71	0.72	0.74	0.44	0.00
Avail Cap(c_a), veh/h				378	0	371	843	929	825	483	1960	833
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(l)				1.00	0.00	1.00	0.66	0.66	0.66	1.00	1.00	0.00
Uniform Delay (d), s/veh				43.9	0.0	43.3	36.0	5.5	5.6	39.9	15.7	0.0
Incr Delay (d2), s/veh				12.9	0.0	7.5	4.6	3.1	3.6	4.4	0.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				8.0	0.0	6.7	7.0	4.0	3.7	7.7	7.2	0.0
Lane Grp Delay (d), s/veh				56.8	0.0	50.7	40.6	8.6	9.2	44.2	16.4	0.0
Lane Grp LOS				E		D	D	A	A	D	B	
Approach Vol, veh/h					486			1804			1145	
Approach Delay, s/veh					53.9			18.5			23.2	
Approach LOS					D			B			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1		6
Phs Duration (G+Y+Rc), s					22.6		24.6	59.0		27.6		62.0
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s					23.0		27.0	55.0		30.0		58.0
Max Q Clear Time (g_c+I1), s					17.1		18.5	17.9		18.2		17.7
Green Ext Time (p_c), s					1.5		2.1	11.8		2.5		7.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					25.1							
HCM 2010 LOS					C							
<b>Notes</b>												


























HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	575	0	817	0	0	0	0	939	114	83	577	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	725	761	1293				0	1708	207	206	1879	0
Arrive On Green	0.41	0.00	0.41				0.00	0.35	0.35	0.24	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4843	587	1757	3689	0
Grp Volume(v), veh/h	625	0	888				0	777	368	90	627	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1741	1757	1845	0
Q Serve(g_s), s	33.1	0.0	23.7				0.0	17.6	17.7	4.5	0.0	0.0
Cycle Q Clear(g_c), s	33.1	0.0	23.7				0.0	17.6	17.7	4.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.34	1.00		0.00
Lane Grp Cap(c), veh/h	725	761	1293				0	1301	614	206	1879	0
V/C Ratio(X)	0.86	0.00	0.69				0.00	0.60	0.60	0.44	0.33	0.00
Avail Cap(c_a), veh/h	1032	1084	1843				0	1301	614	206	1879	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.88	0.88	0.00
Uniform Delay (d), s/veh	27.4	0.0	24.6				0.0	27.1	27.1	36.2	0.0	0.0
Incr Delay (d2), s/veh	5.5	0.0	0.7				0.0	2.0	4.3	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.3	0.0	9.1				0.0	8.6	8.5	2.0	0.1	0.0
Lane Grp Delay (d), s/veh	32.8	0.0	25.2				0.0	29.1	31.4	37.4	0.4	0.0
Lane Grp LOS	C		C					C	C	D	A	
Approach Vol, veh/h		1513						1145			717	
Approach Delay, s/veh		28.4						29.9			5.1	
Approach LOS		C						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		46.1						40.0		16.0		56.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		60.0						36.0		12.0		52.0
Max Q Clear Time (g_c+I1), s		35.1						19.7		6.5		2.0
Green Ext Time (p_c), s		7.0						7.2		2.1		5.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			23.9									
HCM 2010 LOS			C									
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	226	834	160	97	317	215	66	582	144	484	879	281
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	273	928	178	117	809	344	302	676	287	542	1179	501
Arrive On Green	0.16	0.31	0.31	0.07	0.22	0.22	0.17	0.18	0.18	0.31	0.32	0.32
Sat Flow, veh/h	1757	3010	577	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	246	556	525	105	345	234	72	633	157	526	955	305
Grp Sat Flow(s),veh/h/ln	1757	1845	1743	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.5	35.8	35.8	7.1	9.7	8.5	4.2	20.3	9.1	35.5	28.5	13.3
Cycle Q Clear(g_c), s	16.5	35.8	35.8	7.1	9.7	8.5	4.2	20.3	9.1	35.5	28.5	13.3
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	569	537	117	809	344	302	676	287	542	1179	501
V/C Ratio(X)	0.90	0.98	0.98	0.90	0.43	0.68	0.24	0.94	0.55	0.97	0.81	0.61
Avail Cap(c_a), veh/h	307	569	537	117	809	344	302	676	287	542	1506	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	41.1	41.1	55.6	40.3	11.6	42.9	48.3	31.1	41.0	37.5	15.6
Incr Delay (d2), s/veh	25.8	31.8	33.0	52.5	0.4	5.4	0.4	20.4	2.2	31.3	2.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.5	21.7	20.7	4.9	4.6	3.7	2.0	11.5	3.8	20.5	13.8	5.2
Lane Grp Delay (d), s/veh	75.6	72.9	74.1	108.0	40.7	17.0	43.3	68.8	33.3	72.3	40.2	16.8
Lane Grp LOS	E	E	E	F	D	B	D	E	C	E	D	B
Approach Vol, veh/h		1327			684			862			1786	
Approach Delay, s/veh		73.9			42.9			60.2			45.6	
Approach LOS		E			D			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.7	41.0		12.0	30.3		24.7	26.0		41.0	42.3	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	21.0	37.0		8.0	24.0		10.0	22.0		37.0	49.0	
Max Q Clear Time (g_c+I1), s	18.5	37.8		9.1	11.7		6.2	22.3		37.5	30.5	
Green Ext Time (p_c), s	0.2	0.0		0.0	7.8		0.8	0.0		0.0	7.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				56.0								
HCM 2010 LOS				E								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Cumulative PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	62	55	3	287	117	115	38	736	877	103	569	127
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	220	231	197	427	231	197	78	2458	1045	141	2591	1101
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.67	0.67	0.08	0.70	0.70
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	67	60	3	312	127	125	41	800	953	112	618	138
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.3	2.8	0.2	8.3	6.1	7.1	2.1	8.7	48.5	5.9	5.6	2.7
Cycle Q Clear(g_c), s	3.3	2.8	0.2	8.3	6.1	7.1	2.1	8.7	48.5	5.9	5.6	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	231	197	427	231	197	78	2458	1045	141	2591	1101
V/C Ratio(X)	0.30	0.26	0.02	0.73	0.55	0.64	0.52	0.33	0.91	0.79	0.24	0.13
Avail Cap(c_a), veh/h	337	354	301	581	314	267	299	2633	1119	243	2591	1101
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	37.1	36.0	39.5	38.6	39.0	43.9	6.7	13.3	42.4	5.0	4.6
Incr Delay (d2), s/veh	0.8	0.6	0.0	3.0	2.0	3.4	5.3	0.1	10.8	9.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	1.3	0.1	3.7	2.9	3.0	1.1	3.5	19.8	3.0	2.2	0.9
Lane Grp Delay (d), s/veh	38.1	37.7	36.0	42.6	40.6	42.4	49.2	6.7	24.1	51.9	5.0	4.6
Lane Grp LOS	D	D	D	D	D	D	D	A	C	D	A	A
Approach Vol, veh/h		130			564			1794			868	
Approach Delay, s/veh		37.9			42.1			16.9			11.0	
Approach LOS		D			D			B			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		15.8			15.8		8.2	66.6		11.6		69.9
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		16.0	67.0		13.0		64.0
Max Q Clear Time (g_c+I1), s		5.3			10.3		4.1	50.5		7.9		7.6
Green Ext Time (p_c), s		2.3			1.5		0.0	12.0		0.1		28.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance

Cumulative PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	30	27	795	48	9	47	1453	1362	18	691	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	2	1	2	2	1	2	1
Cap, veh/h	526	552	469	1020	552	938	65	2249	1912	105	1945	827
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.04	0.61	0.61	0.53	0.53	0.53
Sat Flow, veh/h	1757	1845	1568	3408	1845	3136	1757	3689	3136	74	3689	1568
Grp Volume(v), veh/h	87	33	29	864	52	10	51	1579	1480	20	751	151
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	74	1845	1568
Q Serve(g_s), s	3.2	1.1	1.2	20.9	1.8	0.2	2.5	25.6	30.6	22.3	10.6	4.4
Cycle Q Clear(g_c), s	3.2	1.1	1.2	20.9	1.8	0.2	2.5	25.6	30.6	40.7	10.6	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	526	552	469	1020	552	938	65	2249	1912	105	1945	827
V/C Ratio(X)	0.17	0.06	0.06	0.85	0.09	0.01	0.79	0.70	0.77	0.19	0.39	0.18
Avail Cap(c_a), veh/h	526	552	469	1438	778	1323	120	2314	1967	105	1945	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	21.9	21.9	28.8	22.2	21.6	41.9	11.7	12.7	28.0	12.3	10.8
Incr Delay (d2), s/veh	0.1	0.0	0.1	3.5	0.1	0.0	18.8	0.9	1.9	0.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	0.5	0.4	9.3	0.8	0.1	1.5	10.8	11.4	0.4	4.5	1.6
Lane Grp Delay (d), s/veh	22.8	22.0	22.0	32.3	22.2	21.6	60.7	12.6	14.6	28.9	12.4	11.0
Lane Grp LOS	C	C	C	C	C	C	E	B	B	C	B	B
Approach Vol, veh/h		149			926			3110			922	
Approach Delay, s/veh		22.5			31.7			14.4			12.5	
Approach LOS		C			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2				6
Phs Duration (G+Y+Rc), s		30.2			30.2		7.2	57.5				50.2
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0			37.0		6.0	55.0				45.0
Max Q Clear Time (g_c+I1), s		5.2			22.9		4.5	32.6				42.7
Green Ext Time (p_c), s		3.4			3.4		0.0	20.9				2.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.4								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 6: Harbor St & Leland Rd

Cumulative PM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	102	864	175	191	274	121	82	277	298	263	458	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	141	1094	465	244	1311	557	114	700	298	325	852	247
Arrive On Green	0.08	0.30	0.30	0.14	0.36	0.36	0.07	0.19	0.19	0.18	0.31	0.31
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2752	797
Grp Volume(v), veh/h	111	939	190	208	298	132	89	301	324	286	333	310
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1704
Q Serve(g_s), s	5.2	20.3	8.2	9.7	4.8	5.0	4.2	6.1	16.0	13.4	12.8	13.0
Cycle Q Clear(g_c), s	5.2	20.3	8.2	9.7	4.8	5.0	4.2	6.1	16.0	13.4	12.8	13.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	141	1094	465	244	1311	557	114	700	298	325	571	527
V/C Ratio(X)	0.79	0.86	0.41	0.85	0.23	0.24	0.78	0.43	1.09	0.88	0.58	0.59
Avail Cap(c_a), veh/h	250	1181	502	271	1311	557	208	700	298	375	571	527
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	28.0	23.7	35.4	19.1	19.1	38.8	30.1	34.2	33.5	24.5	24.6
Incr Delay (d2), s/veh	9.2	6.2	0.6	20.5	0.1	0.2	10.8	0.4	78.0	19.0	1.5	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	10.2	3.2	5.7	2.2	1.9	2.2	2.8	12.7	7.6	6.1	5.7
Lane Grp Delay (d), s/veh	47.3	34.1	24.3	55.9	19.2	19.4	49.6	30.6	112.2	52.5	26.0	26.3
Lane Grp LOS	D	C	C	E	B	B	D	C	F	D	C	C
Approach Vol, veh/h		1240			638			714			929	
Approach Delay, s/veh		33.8			31.2			70.0			34.3	
Approach LOS		C			C			E			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	10.8	29.0		15.7	34.0		9.5	20.0		19.6		30.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	27.0		13.0	28.0		10.0	16.0		18.0		24.0
Max Q Clear Time (g_c+I1), s	7.2	22.3		11.7	7.0		6.2	18.0		15.4		15.0
Green Ext Time (p_c), s	0.1	2.8		0.1	10.4		0.1	0.0		0.2		4.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	40.8											
HCM 2010 LOS	D											
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

Cumulative PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	867	31	24	443	91	18	43	9	133	83	95
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	109	1223	44	33	1195	1016	29	79	17	173	106	122
Arrive On Green	0.06	0.69	0.69	0.02	0.65	0.65	0.02	0.05	0.05	0.10	0.14	0.14
Sat Flow, veh/h	1757	1770	64	1757	1845	1568	1757	1475	314	1757	786	900
Grp Volume(v), veh/h	86	0	976	26	482	99	20	0	57	145	0	193
Grp Sat Flow(s),veh/h/ln	1757	0	1833	1757	1845	1568	1757	0	1789	1757	0	1686
Q Serve(g_s), s	5.6	0.0	40.7	1.7	14.4	2.7	1.3	0.0	3.6	9.4	0.0	12.9
Cycle Q Clear(g_c), s	5.6	0.0	40.7	1.7	14.4	2.7	1.3	0.0	3.6	9.4	0.0	12.9
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	109	0	1268	33	1195	1016	29	0	96	173	0	228
V/C Ratio(X)	0.79	0.00	0.77	0.79	0.40	0.10	0.69	0.00	0.60	0.84	0.00	0.85
Avail Cap(c_a), veh/h	197	0	1268	61	1195	1016	76	0	247	213	0	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.00	0.53	0.62	0.62	0.62	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.5	0.0	11.8	56.6	9.7	7.7	56.6	0.0	53.5	51.3	0.0	48.8
Incr Delay (d2), s/veh	6.7	0.0	2.5	22.9	0.6	0.1	25.8	0.0	5.8	21.3	0.0	10.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	0.0	16.3	1.0	6.0	1.0	0.8	0.0	1.8	5.3	0.0	6.3
Lane Grp Delay (d), s/veh	60.2	0.0	14.3	79.4	10.3	7.8	82.5	0.0	59.3	72.5	0.0	58.8
Lane Grp LOS	E		B	E	B	A	F		E	E		E
Approach Vol, veh/h		1062			607			77				338
Approach Delay, s/veh		18.0			12.9			65.3				64.7
Approach LOS		B			B			E				E
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	11.2	84.0		6.2	79.0		5.9	10.2		15.4		19.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	13.0	80.0		4.0	71.0		5.0	16.0		14.0		25.0
Max Q Clear Time (g_c+I1), s	7.6	42.7		3.7	16.4		3.3	5.6		11.4		14.9
Green Ext Time (p_c), s	0.1	9.7		0.0	3.7		0.0	0.2		0.1		0.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 8: SR-4 WB Ramps & California Ave

Cumulative PM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	721	25	630	284	90	44	26	252	78	65	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	51	1362	47	1018	2412	1025	338	355	302	338	301	47
Arrive On Green	0.03	0.38	0.38	0.30	0.65	0.65	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3546	122	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	35	408	403	685	309	98	48	28	274	85	0	82
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.9	16.8	16.9	17.0	3.0	2.2	2.2	1.2	16.5	4.0	0.0	3.7
Cycle Q Clear(g_c), s	1.9	16.8	16.9	17.0	3.0	2.2	2.2	1.2	16.5	4.0	0.0	3.7
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	51	708	700	1018	2412	1025	338	355	302	338	0	347
V/C Ratio(X)	0.69	0.58	0.58	0.67	0.13	0.10	0.14	0.08	0.91	0.25	0.00	0.24
Avail Cap(c_a), veh/h	109	708	700	1132	2412	1025	346	364	309	338	0	347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.4	23.5	23.5	29.6	6.3	6.2	32.3	31.9	38.1	33.0	0.0	32.9
Incr Delay (d2), s/veh	15.2	3.4	3.4	1.1	0.1	0.1	0.2	0.1	28.4	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	8.4	8.3	7.4	1.3	0.8	1.0	0.6	8.8	1.8	0.0	1.7
Lane Grp Delay (d), s/veh	61.6	26.9	26.9	30.8	6.4	6.3	32.5	32.0	66.5	33.4	0.0	33.2
Lane Grp LOS	E	C	C	C	A	A	C	C	E	C		C
Approach Vol, veh/h		846			1092			350			167	
Approach Delay, s/veh		28.3			21.7			59.1			33.3	
Approach LOS		C			C			E			C	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.8	41.0		32.8	67.0			22.6			22.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	6.0	37.0		32.0	63.0			19.0			16.0	
Max Q Clear Time (g_c+I1), s	3.9	18.9		19.0	5.0			18.5			6.0	
Green Ext Time (p_c), s	0.7	5.0		2.4	2.6			0.1			1.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
9: Lovridge Rd & California Ave/N Park Blvd

Cumulative PM With Bypass




















3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	333	315	371	95	164	19	472	617	213	19	196	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	886	550	467	166	282	33	802	1120	387	80	874	372
Arrive On Green	0.26	0.30	0.30	0.05	0.09	0.09	0.24	0.43	0.43	0.05	0.24	0.24
Sat Flow, veh/h	3408	1845	1568	3408	3245	378	3408	2623	907	1757	3689	1568
Grp Volume(v), veh/h	362	342	403	103	100	99	513	472	431	21	213	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1778	1704	1845	1685	1757	1845	1568
Q Serve(g_s), s	7.8	14.1	21.5	2.6	4.6	4.7	12.0	17.4	17.4	1.0	4.1	16.7
Cycle Q Clear(g_c), s	7.8	14.1	21.5	2.6	4.6	4.7	12.0	17.4	17.4	1.0	4.1	16.7
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	886	550	467	166	160	154	802	787	719	80	874	372
V/C Ratio(X)	0.41	0.62	0.86	0.62	0.63	0.64	0.64	0.60	0.60	0.26	0.24	0.84
Avail Cap(c_a), veh/h	886	731	621	270	480	463	1080	960	877	318	1420	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	26.7	29.3	41.2	39.0	39.0	30.4	19.5	19.5	40.8	27.3	32.1
Incr Delay (d2), s/veh	0.3	1.2	9.4	3.7	4.0	4.4	0.9	0.7	0.8	1.7	0.1	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	6.6	9.5	1.2	2.3	2.3	5.2	7.9	7.2	0.5	1.9	7.1
Lane Grp Delay (d), s/veh	27.4	27.9	38.7	44.9	42.9	43.4	31.3	20.2	20.3	42.5	27.4	37.8
Lane Grp LOS	C	C	D	D	D	D	C	C	C	D	C	D
Approach Vol, veh/h		1107			302			1416			546	
Approach Delay, s/veh		31.7			43.8			24.3			34.0	
Approach LOS		C			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	27.0	30.3		8.3	11.7		24.8	41.7		8.0	24.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	19.0	35.0		7.0	23.0		28.0	46.0		16.0	34.0	
Max Q Clear Time (g_c+I1), s	9.8	23.5		4.6	6.7		14.0	19.4		3.0	18.7	
Green Ext Time (p_c), s	1.2	2.9		0.1	0.9		6.8	9.2		0.0	2.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.0								
HCM 2010 LOS				C								
<b>Notes</b>												



























HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	839	0	484	0	0	0	0	699	398	139	525	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1326	0	610				0	1525	648	306	1989	0
Arrive On Green	0.39	0.00	0.39				0.00	0.41	0.41	0.09	0.54	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	912	0	526				0	760	433	151	571	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	24.8	0.0	34.3				0.0	16.9	24.9	4.7	9.4	0.0
Cycle Q Clear(g_c), s	24.8	0.0	34.3				0.0	16.9	24.9	4.7	9.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1326	0	610				0	1525	648	306	1989	0
V/C Ratio(X)	0.69	0.00	0.86				0.00	0.50	0.67	0.49	0.29	0.00
Avail Cap(c_a), veh/h	1593	0	733				0	1525	648	306	1989	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	28.4	0.0	31.3				0.0	24.1	26.5	48.2	14.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	9.0				0.0	1.2	5.4	1.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.7	0.0	14.8				0.0	8.1	10.7	2.1	4.3	0.0
Lane Grp Delay (d), s/veh	29.3	0.0	40.3				0.0	25.3	31.8	49.3	14.3	0.0
Lane Grp LOS	C		D					C	C	D	B	
Approach Vol, veh/h		1438						1193			722	
Approach Delay, s/veh		33.3						27.7			21.6	
Approach LOS		C						C			C	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		47.3						50.0		14.0	64.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		52.0						46.0		10.0	60.0	
Max Q Clear Time (g_c+I1), s		36.3						26.9		6.7	11.4	
Green Ext Time (p_c), s		6.9						6.9		1.4	5.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.8									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	566	1166	212	223	428	148	193	468	159	260	389	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	719	1635	695	311	1193	507	244	756	321	355	627	266
Arrive On Green	0.21	0.44	0.44	0.09	0.32	0.32	0.14	0.20	0.20	0.10	0.17	0.17
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	615	1267	230	242	465	161	210	509	173	283	423	141
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	17.7	29.7	9.8	7.1	10.0	7.9	11.9	13.0	10.1	8.3	11.0	8.4
Cycle Q Clear(g_c), s	17.7	29.7	9.8	7.1	10.0	7.9	11.9	13.0	10.1	8.3	11.0	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	719	1635	695	311	1193	507	244	756	321	355	627	266
V/C Ratio(X)	0.86	0.77	0.33	0.78	0.39	0.32	0.86	0.67	0.54	0.80	0.67	0.53
Avail Cap(c_a), veh/h	1002	1843	783	401	1193	507	344	976	415	467	759	323
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	24.1	18.5	45.4	26.7	26.0	43.0	37.4	36.3	44.7	39.7	38.6
Incr Delay (d2), s/veh	5.4	1.9	0.3	7.2	0.2	0.4	14.3	1.2	1.4	7.1	1.8	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.2	13.8	3.7	3.4	4.7	3.1	6.3	6.3	4.1	4.0	5.3	3.4
Lane Grp Delay (d), s/veh	44.2	26.0	18.8	52.6	26.9	26.4	57.3	38.7	37.7	51.8	41.5	40.3
Lane Grp LOS	D	C	B	D	C	C	E	D	D	D	D	D
Approach Vol, veh/h		2112			868			892			847	
Approach Delay, s/veh		30.5			34.0			42.9			44.7	
Approach LOS		C			C			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	25.5	49.2		13.3	37.0		18.2	24.9		14.6	21.3	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	30.0	51.0		12.0	33.0		20.0	27.0		14.0	21.0	
Max Q Clear Time (g_c+I1), s	19.7	31.7		9.1	12.0		13.9	15.0		10.3	13.0	
Green Ext Time (p_c), s	1.8	13.5		0.2	14.4		0.3	5.7		0.3	4.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					36.0							
HCM 2010 LOS					D							
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd

Cumulative PM With Bypass  
 3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	151	794	321	212	352	291
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	313	1267	876	745	431	385
Arrive On Green	0.18	0.69	0.47	0.47	0.25	0.25
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	164	863	349	230	383	316
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	10.0	32.5	14.5	10.6	24.8	22.5
Cycle Q Clear(g_c), s	10.0	32.5	14.5	10.6	24.8	22.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	313	1267	876	745	431	385
V/C Ratio(X)	0.52	0.68	0.40	0.31	0.89	0.82
Avail Cap(c_a), veh/h	313	1267	876	745	611	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.92	0.92	1.00	1.00
Uniform Delay (d), s/veh	43.9	10.9	20.1	19.1	42.9	42.1
Incr Delay (d2), s/veh	0.5	1.0	1.2	1.0	11.3	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	12.8	6.6	4.2	12.4	0.7
Lane Grp Delay (d), s/veh	44.5	11.9	21.3	20.0	54.2	48.8
Lane Grp LOS	D	B	C	C	D	D
Approach Vol, veh/h		1027	579		699	
Approach Delay, s/veh		17.1	20.8		51.8	
Approach LOS		B	C		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.0	85.0	60.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	21.0	81.0	56.0			
Max Q Clear Time (g_c+I1), s	12.0	34.5	16.5			
Green Ext Time (p_c), s	4.4	8.6	3.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			28.5			
HCM 2010 LOS			C			
<b>Notes</b>						






















HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	1026	147	55	452	12	105	23	68	199	104	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	59	1214	1032	73	1193	32	229	82	244	250	305	54
Arrive On Green	0.03	0.66	0.66	0.04	0.67	0.67	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1757	1845	1568	1757	1789	47	1239	412	1218	1278	1527	270
Grp Volume(v), veh/h	8	1115	160	60	0	504	114	0	99	216	0	133
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1836	1239	0	1630	1278	0	1797
Q Serve(g_s), s	0.5	62.7	4.7	4.1	0.0	15.1	10.5	0.0	6.2	17.8	0.0	7.7
Cycle Q Clear(g_c), s	0.5	62.7	4.7	4.1	0.0	15.1	18.2	0.0	6.2	24.0	0.0	7.7
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.75	1.00		0.15
Lane Grp Cap(c), veh/h	59	1214	1032	73	0	1224	229	0	326	250	0	359
V/C Ratio(X)	0.14	0.92	0.16	0.82	0.00	0.41	0.50	0.00	0.30	0.87	0.00	0.37
Avail Cap(c_a), veh/h	59	1214	1032	73	0	1224	229	0	326	250	0	359
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	0.93	0.00	0.93	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	17.7	7.8	57.1	0.0	9.2	49.3	0.0	40.9	52.2	0.0	41.5
Incr Delay (d2), s/veh	0.6	8.1	0.2	47.3	0.0	1.0	1.7	0.0	0.5	25.7	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	27.5	1.6	2.8	0.0	6.2	3.5	0.0	2.6	8.5	0.0	3.6
Lane Grp Delay (d), s/veh	56.9	25.8	8.0	104.4	0.0	10.1	51.0	0.0	41.4	77.9	0.0	42.1
Lane Grp LOS	E	C	A	F		B	D		D	E		D
Approach Vol, veh/h		1283			564			213				349
Approach Delay, s/veh		23.8			20.2			46.5				64.3
Approach LOS		C			C			D				E
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	8.0	83.0		9.0	84.0			28.0				28.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	79.0		5.0	80.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	2.5	64.7		6.1	17.1			20.2				26.0
Green Ext Time (p_c), s	1.1	8.2		0.0	3.6			0.9				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	1355	54	88	822	49	31	44	54	37	73	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	47	2043	82	123	2148	127	48	75	92	54	121	58
Arrive On Green	0.03	0.58	0.58	0.07	0.62	0.62	0.03	0.10	0.10	0.03	0.10	0.10
Sat Flow, veh/h	1757	3524	141	1757	3449	205	1757	754	927	1757	1178	567
Grp Volume(v), veh/h	33	769	763	96	478	468	34	0	107	40	0	117
Grp Sat Flow(s),veh/h/ln	1757	1845	1820	1757	1845	1809	1757	0	1681	1757	0	1745
Q Serve(g_s), s	1.4	21.8	22.0	3.9	9.6	9.6	1.4	0.0	4.4	1.6	0.0	4.7
Cycle Q Clear(g_c), s	1.4	21.8	22.0	3.9	9.6	9.6	1.4	0.0	4.4	1.6	0.0	4.7
Prop In Lane	1.00		0.08	1.00		0.11	1.00		0.55	1.00		0.32
Lane Grp Cap(c), veh/h	47	1070	1055	123	1149	1126	48	0	167	54	0	179
V/C Ratio(X)	0.70	0.72	0.72	0.78	0.42	0.42	0.71	0.00	0.64	0.75	0.00	0.65
Avail Cap(c_a), veh/h	145	1194	1178	169	1220	1196	97	0	371	97	0	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.0	11.0	11.0	33.2	7.0	7.0	35.0	0.0	31.4	34.9	0.0	31.3
Incr Delay (d2), s/veh	17.2	1.9	2.0	14.7	0.2	0.2	17.3	0.0	4.0	18.4	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	9.3	9.3	2.2	3.8	3.7	0.8	0.0	2.1	1.0	0.0	2.2
Lane Grp Delay (d), s/veh	52.3	12.9	13.0	47.9	7.2	7.2	52.3	0.0	35.5	53.3	0.0	35.3
Lane Grp LOS	D	B	B	D	A	A	D		D	D		D
Approach Vol, veh/h		1565			1042			141				157
Approach Delay, s/veh		13.8			11.0			39.5				39.9
Approach LOS		B			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	5.9	46.1		9.1	49.2		6.0	11.2		6.2		11.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	47.0		7.0	48.0		4.0	16.0		4.0		16.0
Max Q Clear Time (g_c+I1), s	3.4	24.0		5.9	11.6		3.4	6.4		3.6		6.7
Green Ext Time (p_c), s	0.0	18.1		0.0	25.7		0.0	0.8		0.0		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				15.4								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr























Cumulative PM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	1384	28	33	881	0	13	0	22	0	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	3	2578	51	54	3025	0	25	0	50	3	3	0
Arrive On Green	0.00	0.72	0.72	0.03	0.82	0.00	0.01	0.00	0.03	0.00	0.00	0.00
Sat Flow, veh/h	1757	3605	72	1757	3689	0	1757	0	1568	1757	1845	0
Grp Volume(v), veh/h	0	769	765	36	958	0	14	0	24	0	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1832	1757	1845	0	1757	0	1568	1757	1845	0
Q Serve(g_s), s	0.0	11.0	11.1	1.1	3.4	0.0	0.4	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	11.0	11.1	1.1	3.4	0.0	0.4	0.0	0.8	0.0	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	3	1319	1310	54	3025	0	25	0	50	3	3	0
V/C Ratio(X)	0.00	0.58	0.58	0.66	0.32	0.00	0.57	0.00	0.48	0.00	0.00	0.00
Avail Cap(c_a), veh/h	130	1636	1625	162	3341	0	130	0	493	130	579	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	3.8	3.8	25.9	1.2	0.0	26.5	0.0	25.7	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.4	13.0	0.1	0.0	18.9	0.0	6.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.0	3.4	3.3	0.7	0.6	0.0	0.3	0.0	0.4	0.0	0.0	0.0
Lane Grp Delay (d), s/veh	0.0	4.2	4.2	38.9	1.2	0.0	45.4	0.0	32.5	0.0	0.0	0.0
Lane Grp LOS		A	A	D	A		D		C			
Approach Vol, veh/h		1534			994			38				0
Approach Delay, s/veh		4.2			2.6			37.3				0.0
Approach LOS		A			A			D				
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	0.0	42.7		5.7	48.4		4.8	5.7		0.0		1.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	4.0	48.0		5.0	49.0		4.0	17.0		4.0		17.0
Max Q Clear Time (g_c+I1), s	0.0	13.1		3.1	5.4		2.4	2.8		0.0		0.0
Green Ext Time (p_c), s	0.0	25.6		0.0	30.0		0.0	0.0		0.0		0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.1								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 18: Somersville Rd/Auto Center Dr & Century Blvd/Mahogany Wy













Cumulative PM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	381	140	262	217	71	25	448	557	132	27	827	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	717	388	330	717	275	96	583	2779	644	40	2149	481
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.29	1.00	1.00	0.02	0.49	0.49
Sat Flow, veh/h	3408	1845	1568	3408	1306	458	3408	4348	1008	1757	4381	980
Grp Volume(v), veh/h	414	152	285	236	0	104	487	511	237	29	756	345
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1764	1704	1845	1667	1757	1845	1672
Q Serve(g_s), s	10.2	6.7	16.5	5.5	0.0	4.6	12.6	0.0	0.0	1.5	12.3	12.4
Cycle Q Clear(g_c), s	10.2	6.7	16.5	5.5	0.0	4.6	12.6	0.0	0.0	1.5	12.3	12.4
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.60	1.00		0.59
Lane Grp Cap(c), veh/h	717	388	330	717	0	371	583	2358	1065	40	1810	820
V/C Ratio(X)	0.58	0.39	0.86	0.33	0.00	0.28	0.83	0.22	0.22	0.73	0.42	0.42
Avail Cap(c_a), veh/h	799	432	367	717	0	371	980	2358	1065	112	1810	820
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	31.9	35.8	31.4	0.0	31.1	32.3	0.0	0.0	45.6	15.3	15.3
Incr Delay (d2), s/veh	0.8	0.6	17.4	0.3	0.0	0.4	3.0	0.2	0.5	22.4	0.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	3.2	8.0	2.4	0.0	2.1	5.1	0.1	0.1	0.9	5.5	5.2
Lane Grp Delay (d), s/veh	34.1	32.5	53.2	31.7	0.0	31.5	35.3	0.2	0.5	68.0	16.0	16.9
Lane Grp LOS	C	C	D	C		C	D	A	A	E	B	B
Approach Vol, veh/h		851			340			1235			1130	
Approach Delay, s/veh		40.2			31.6			14.1			17.6	
Approach LOS		D			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		23.8			23.8		20.1	64.0		6.1		50.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		22.0			16.0		27.0	60.0		6.0		39.0
Max Q Clear Time (g_c+I1), s		18.5			7.5		14.6	2.0		3.5		14.4
Green Ext Time (p_c), s		1.3			3.4		1.5	21.4		0.0		14.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.2								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 19: Somersville Rd & WB SR-4 Ramps





















Cumulative PM With Bypass  
 3/16/2014

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	382	437	297	653	989	312
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	1131	520	668	3303	2021	573
Arrive On Green	0.33	0.33	0.39	1.00	0.37	0.37
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	415	475	323	710	1075	339
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	10.4	32.6	8.0	0.0	17.2	19.7
Cycle Q Clear(g_c), s	10.4	32.6	8.0	0.0	17.2	19.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1131	520	668	3303	2021	573
V/C Ratio(X)	0.37	0.91	0.48	0.21	0.53	0.59
Avail Cap(c_a), veh/h	1366	629	668	3303	2021	573
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.94	0.94	0.80	0.80
Uniform Delay (d), s/veh	28.5	35.9	29.9	0.0	28.1	28.8
Incr Delay (d2), s/veh	0.2	15.9	0.5	0.1	0.8	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	2.3	3.1	0.0	8.1	8.3
Lane Grp Delay (d), s/veh	28.7	51.9	30.4	0.1	28.9	32.4
Lane Grp LOS	C	D	C	A	C	C
Approach Vol, veh/h	890			1033	1414	
Approach Delay, s/veh	41.1			9.6	29.7	
Approach LOS	D			A	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			26.0	71.0	45.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			22.0	67.0	41.0	
Max Q Clear Time (g_c+I1), s			10.0	2.0	21.7	
Green Ext Time (p_c), s			4.8	7.5	9.0	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			26.5			
HCM 2010 LOS			C			
<b>Notes</b>						


























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	232	388	0	0	0	0	805	686	480	1039	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	541	293	498				0	3166	897	573	4283	0
Arrive On Green	0.16	0.16	0.16				0.00	1.00	1.00	0.34	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	299	252	422				0	875	746	522	1129	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	9.6	15.8	15.5				0.0	0.0	0.0	17.4	0.0	0.0
Cycle Q Clear(g_c), s	9.6	15.8	15.5				0.0	0.0	0.0	17.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	541	293	498				0	3166	897	573	4283	0
V/C Ratio(X)	0.55	0.86	0.85				0.00	0.28	0.83	0.91	0.26	0.00
Avail Cap(c_a), veh/h	573	310	528				0	3166	897	631	4283	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.77	0.77	0.84	0.84	0.00
Uniform Delay (d), s/veh	46.1	48.7	48.6				0.0	0.0	0.0	38.6	0.0	0.0
Incr Delay (d2), s/veh	1.0	20.2	11.8				0.0	0.2	6.9	14.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	9.1	7.1				0.0	0.0	1.7	7.9	0.1	0.0
Lane Grp Delay (d), s/veh	47.1	68.9	60.4				0.0	0.2	6.9	53.1	0.1	0.0
Lane Grp LOS	D	E	E					A	A	D	A	
Approach Vol, veh/h		973						1621			1651	
Approach Delay, s/veh		58.5						3.3			16.9	
Approach LOS		E						A			B	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		22.9						72.0		24.0		96.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		20.0						66.0		22.0		92.0
Max Q Clear Time (g_c+I1), s		17.8						2.0		19.4		2.0
Green Ext Time (p_c), s		1.0						37.3		0.6		43.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			21.2									
HCM 2010 LOS			C									
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
21: Somersville Rd & Delta Fair Blvd

Cumulative PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	438	371	35	49	143	410	56	654	26	429	517	245
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1133	552	52	584	613	521	77	1671	66	661	1718	730
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.09	0.63	0.63	0.32	0.78	0.78
Sat Flow, veh/h	3408	1660	157	1757	1845	1568	1757	5290	208	3408	3689	1568
Grp Volume(v), veh/h	476	0	441	53	155	446	61	495	244	466	562	266
Grp Sat Flow(s),veh/h/ln	1704	0	1817	1757	1845	1568	1757	1845	1808	1704	1845	1568
Q Serve(g_s), s	8.2	0.0	16.3	1.6	4.7	20.2	2.6	5.1	5.2	9.1	3.4	4.0
Cycle Q Clear(g_c), s	8.2	0.0	16.3	1.6	4.7	20.2	2.6	5.1	5.2	9.1	3.4	4.0
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	1133	0	604	584	613	521	77	1165	571	661	1718	730
V/C Ratio(X)	0.42	0.00	0.73	0.09	0.25	0.86	0.79	0.42	0.43	0.70	0.33	0.36
Avail Cap(c_a), veh/h	1570	0	837	584	613	521	208	1165	571	897	1718	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.95	0.95	0.96	0.96	0.96	0.93	0.93	0.93
Uniform Delay (d), s/veh	19.7	0.0	22.4	17.5	18.5	23.7	34.3	10.5	10.5	23.8	4.9	5.0
Incr Delay (d2), s/veh	0.2	0.0	2.1	0.1	0.2	12.6	15.5	1.1	2.2	1.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	0.0	7.4	0.7	2.1	9.4	1.4	2.0	2.1	3.5	1.2	1.2
Lane Grp Delay (d), s/veh	19.9	0.0	24.4	17.5	18.7	36.3	49.8	11.6	12.8	25.3	5.0	5.2
Lane Grp LOS	B		C	B	B	D	D	B	B	C	A	A
Approach Vol, veh/h		917			654			800			1294	
Approach Delay, s/veh		22.1			30.6			14.9			12.3	
Approach LOS		C			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		29.3			29.3		7.3	28.0		18.7		39.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0			25.0		9.0	24.0		20.0		35.0
Max Q Clear Time (g_c+I1), s		18.3			22.2		4.6	7.2		11.1		6.0
Green Ext Time (p_c), s		7.0			1.9		0.0	4.5		3.6		7.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				18.6								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 22: Somersville Rd & Buchanan Rd

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	330	492	655	36	225	129	225	345	25	264	493	271
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	404	1418	603	49	336	286	286	752	54	330	908	386
Arrive On Green	0.23	0.38	0.00	0.03	0.18	0.00	0.16	0.22	0.22	0.19	0.25	0.25
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3402	244	1757	3689	1568
Grp Volume(v), veh/h	359	535	0	39	245	0	245	203	199	287	536	295
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1802	1757	1845	1568
Q Serve(g_s), s	17.7	9.3	0.0	2.0	11.2	0.0	12.1	8.6	8.7	14.2	11.5	15.6
Cycle Q Clear(g_c), s	17.7	9.3	0.0	2.0	11.2	0.0	12.1	8.6	8.7	14.2	11.5	15.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	404	1418	603	49	336	286	286	408	398	330	908	386
V/C Ratio(X)	0.89	0.38	0.00	0.80	0.73	0.00	0.86	0.50	0.50	0.87	0.59	0.76
Avail Cap(c_a), veh/h	648	1979	841	137	453	385	451	453	443	530	1072	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	19.8	0.0	43.3	34.5	0.0	36.4	30.5	30.5	35.3	29.8	31.3
Incr Delay (d2), s/veh	9.1	0.2	0.0	25.0	3.9	0.0	9.3	0.9	1.0	8.9	0.6	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.5	4.0	0.0	1.2	5.6	0.0	6.1	4.0	4.0	7.0	5.4	6.8
Lane Grp Delay (d), s/veh	42.4	20.0	0.0	68.3	38.4	0.0	45.7	31.4	31.5	44.1	30.4	37.7
Lane Grp LOS	D	B		E	D		D	C	C	D	C	D
Approach Vol, veh/h		894			284			647			1118	
Approach Delay, s/veh		29.0			42.5			36.9			35.8	
Approach LOS		C			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	24.6	38.4		6.5	20.3		18.6	23.8		20.8	26.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	33.0	48.0		7.0	22.0		23.0	22.0		27.0	26.0	
Max Q Clear Time (g_c+I1), s	19.7	11.3		4.0	13.2		14.1	10.7		16.2	17.6	
Green Ext Time (p_c), s	0.9	5.4		0.0	3.1		0.5	5.4		0.6	4.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				34.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 24: James Donlon Blvd & Somersville Rd

Cumulative PM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	1239	0	2	700	364	0	7	4	797	5	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	139	1796	0	4	1513	643	2	51	25	995	700	1190
Arrive On Green	0.08	0.49	0.00	0.00	0.41	0.00	0.00	0.04	0.04	0.29	0.38	0.38
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	1161	581	3408	1845	3136
Grp Volume(v), veh/h	109	1347	0	2	761	0	0	0	12	866	5	174
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1742	1704	1845	1568
Q Serve(g_s), s	5.6	26.9	0.0	0.1	14.0	0.0	0.0	0.0	0.6	22.0	0.2	3.3
Cycle Q Clear(g_c), s	5.6	26.9	0.0	0.1	14.0	0.0	0.0	0.0	0.6	22.0	0.2	3.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	139	1796	0	4	1513	643	2	0	76	995	700	1190
V/C Ratio(X)	0.79	0.75	0.00	0.53	0.50	0.00	0.00	0.00	0.16	0.87	0.01	0.15
Avail Cap(c_a), veh/h	289	2023	0	77	1578	671	77	0	306	1271	931	1582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	18.9	0.0	45.4	20.0	0.0	0.0	0.0	42.0	30.6	17.6	18.6
Incr Delay (d2), s/veh	9.4	1.4	0.0	81.8	0.3	0.0	0.0	0.0	1.0	5.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.8	12.1	0.0	0.1	6.3	0.0	0.0	0.0	0.3	10.0	0.1	1.2
Lane Grp Delay (d), s/veh	50.6	20.3	0.0	127.2	20.3	0.0	0.0	0.0	43.0	36.2	17.6	18.6
Lane Grp LOS	D	C		F	C				D	D	B	B
Approach Vol, veh/h		1456			763			12				1045
Approach Delay, s/veh		22.6			20.5			43.0				33.2
Approach LOS		C			C			D				C
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.2	48.4		4.2	41.4		0.0	8.0		30.6		38.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	15.0	50.0		4.0	39.0		4.0	16.0		34.0		46.0
Max Q Clear Time (g_c+I1), s	7.6	28.9		2.1	16.0		0.0	2.6		24.0		5.3
Green Ext Time (p_c), s	0.1	15.5		0.0	16.5		0.0	0.6		2.6		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay	25.6											
HCM 2010 LOS	C											
<b>Notes</b>												




















HCM 2010 Signalized Intersection Summary  
 25: Buchanan Rd & Delta Fair Blvd

Cumulative PM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	432	163	100	228	80	90	275	27	277	453	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	435	1003	375	295	1030	352	370	825	80	502	919	781
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1031	2562	958	773	2631	899	858	1656	161	1037	1845	1568
Grp Volume(v), veh/h	70	337	310	109	172	163	98	0	328	301	492	43
Grp Sat Flow(s),veh/h/ln	1031	1845	1676	773	1845	1686	858	0	1816	1037	1845	1568
Q Serve(g_s), s	3.6	9.9	10.0	8.9	4.5	4.7	6.4	0.0	8.0	18.1	13.2	1.0
Cycle Q Clear(g_c), s	8.3	9.9	10.0	18.9	4.5	4.7	19.6	0.0	8.0	26.1	13.2	1.0
Prop In Lane	1.00		0.57	1.00		0.53	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	435	722	656	295	722	660	370	0	905	502	919	781
V/C Ratio(X)	0.16	0.47	0.47	0.37	0.24	0.25	0.26	0.00	0.36	0.60	0.54	0.06
Avail Cap(c_a), veh/h	701	1196	1087	494	1196	1093	712	0	1629	915	1654	1406
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	16.4	16.5	23.5	14.8	14.9	19.1	0.0	11.1	19.1	12.4	9.4
Incr Delay (d2), s/veh	0.2	0.5	0.5	0.8	0.2	0.2	0.4	0.0	0.2	1.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.9	4.4	4.1	1.7	2.0	1.9	1.3	0.0	3.3	4.6	5.6	0.4
Lane Grp Delay (d), s/veh	17.8	16.9	17.0	24.3	15.0	15.1	19.5	0.0	11.4	20.3	12.9	9.4
Lane Grp LOS	B	B	B	C	B	B	B		B	C	B	A
Approach Vol, veh/h		717			444			426			836	
Approach Delay, s/veh		17.0			17.3			13.2			15.4	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		32.4			32.4			40.1			40.1	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		47.0			47.0			65.0			65.0	
Max Q Clear Time (g_c+I1), s		12.0			20.9			21.6			28.1	
Green Ext Time (p_c), s		8.0			7.5			8.1			8.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				15.9								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	1621	8	27	636	124	4	19	8	246	21	129
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	157	2150	11	42	1561	305	71	283	110	397	55	332
Arrive On Green	0.09	0.59	0.59	0.02	0.52	0.52	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1757	3667	19	1757	3000	586	89	1173	455	1361	226	1376
Grp Volume(v), veh/h	124	886	885	29	425	401	34	0	0	267	0	163
Grp Sat Flow(s),veh/h/ln	1757	1845	1841	1757	1845	1741	1717	0	0	1361	0	1602
Q Serve(g_s), s	5.6	30.8	30.9	1.3	11.6	11.6	0.0	0.0	0.0	15.2	0.0	6.9
Cycle Q Clear(g_c), s	5.6	30.8	30.9	1.3	11.6	11.6	1.2	0.0	0.0	16.4	0.0	6.9
Prop In Lane	1.00		0.01	1.00		0.34	0.12		0.26	1.00		0.86
Lane Grp Cap(c), veh/h	157	1081	1079	42	960	906	464	0	0	397	0	387
V/C Ratio(X)	0.79	0.82	0.82	0.70	0.44	0.44	0.07	0.00	0.00	0.67	0.00	0.42
Avail Cap(c_a), veh/h	283	1144	1142	87	960	906	558	0	0	474	0	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	13.3	13.3	39.1	12.1	12.1	23.7	0.0	0.0	30.0	0.0	25.8
Incr Delay (d2), s/veh	8.4	4.6	4.7	18.8	0.3	0.3	0.1	0.0	0.0	2.9	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.8	13.9	13.9	0.8	4.9	4.7	0.5	0.0	0.0	5.4	0.0	2.8
Lane Grp Delay (d), s/veh	44.4	17.9	18.0	57.9	12.4	12.4	23.7	0.0	0.0	32.9	0.0	26.6
Lane Grp LOS	D	B	B	E	B	B	C			C		C
Approach Vol, veh/h		1895			855			34				430
Approach Delay, s/veh		19.7			13.9			23.7				30.5
Approach LOS		B			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	11.2	51.3		5.9	46.0			23.5				23.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	13.0	50.0		4.0	41.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	7.6	32.9		3.3	13.6			3.2				18.4
Green Ext Time (p_c), s	0.1	14.4		0.0	22.1			2.0				1.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.6								
HCM 2010 LOS				B								
<b>Notes</b>												






























HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	158	135	1155	13	66	77	791	842	10	80	1274	256
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	300	315	1426	51	261	268	969	2353	1000	112	1868	374
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.28	0.64	0.64	0.06	0.42	0.42
Sat Flow, veh/h	1757	1845	3136	298	1532	1568	3408	3689	1568	1757	4478	898
Grp Volume(v), veh/h	172	147	1255	86	0	84	860	915	11	87	1141	522
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1830	0	1568	1704	1845	1568	1757	1845	1686
Q Serve(g_s), s	8.4	6.7	16.0	3.8	0.0	4.4	22.7	11.2	0.2	4.6	24.5	24.5
Cycle Q Clear(g_c), s	8.4	6.7	16.0	3.8	0.0	4.4	22.7	11.2	0.2	4.6	24.5	24.5
Prop In Lane	1.00		1.00	0.16		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	300	315	1426	312	0	268	969	2353	1000	112	1539	703
V/C Ratio(X)	0.57	0.47	0.88	0.28	0.00	0.31	0.89	0.39	0.01	0.78	0.74	0.74
Avail Cap(c_a), veh/h	300	315	1426	312	0	268	1127	2361	1003	225	1613	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	35.0	23.2	33.8	0.0	34.1	32.1	8.2	6.2	43.3	23.1	23.1
Incr Delay (d2), s/veh	2.6	1.1	6.7	0.5	0.0	0.7	8.0	0.1	0.0	11.1	1.8	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.9	3.2	14.1	1.8	0.0	1.8	10.7	4.5	0.1	2.4	11.3	10.8
Lane Grp Delay (d), s/veh	38.4	36.1	29.9	34.3	0.0	34.7	40.1	8.3	6.2	54.3	24.8	26.9
Lane Grp LOS	D	D	C	C		C	D	A	A	D	C	C
Approach Vol, veh/h		1574			170			1786			1750	
Approach Delay, s/veh		31.4			34.5			23.6			26.9	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1	6	
Phs Duration (G+Y+Rc), s		20.0			20.0		30.7	63.8		10.0	43.1	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s		16.0			16.0		31.0	60.0		12.0	41.0	
Max Q Clear Time (g_c+I1), s		18.0			6.4		24.7	13.2		6.6	26.5	
Green Ext Time (p_c), s		0.0			5.6		2.0	32.5		0.1	12.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 28: Kirker Pass Rd & Myrtle Dr
























Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			 	  
Volume (veh/h)	56	0	47	2	0	1	55	2064	3	0	691	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	103	0	92	291	108	92	76	3072	1306	2	3999	58
Arrive On Green	0.06	0.00	0.06	0.06	0.00	0.06	0.04	0.83	0.83	0.00	0.73	0.73
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5440	80
Grp Volume(v), veh/h	61	0	51	2	0	1	60	2243	3	0	509	253
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1831
Q Serve(g_s), s	2.5	0.0	2.3	0.0	0.0	0.0	2.5	19.1	0.0	0.0	3.1	3.1
Cycle Q Clear(g_c), s	2.5	0.0	2.3	0.0	0.0	0.0	2.5	19.1	0.0	0.0	3.1	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	103	0	92	291	108	92	76	3072	1306	2	2712	1345
V/C Ratio(X)	0.59	0.00	0.55	0.01	0.00	0.01	0.79	0.73	0.00	0.00	0.19	0.19
Avail Cap(c_a), veh/h	382	0	341	1076	401	341	215	3406	1448	95	3156	1566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	0.0	33.7	32.6	0.0	32.7	34.9	2.6	1.0	0.0	3.0	3.0
Incr Delay (d2), s/veh	5.3	0.0	5.1	0.0	0.0	0.0	16.1	0.7	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	1.1	0.0	0.0	0.0	1.4	5.0	0.0	0.0	1.1	1.1
Lane Grp Delay (d), s/veh	39.1	0.0	38.9	32.7	0.0	32.7	50.9	3.4	1.0	0.0	3.0	3.1
Lane Grp LOS	D		D	C		C	D	A	A		A	A
Approach Vol, veh/h	112						3		2306		762	
Approach Delay, s/veh	39.0						32.7		4.6		3.0	
Approach LOS	D						C		A		A	
<b>Timer</b>												
Assigned Phs	4						8		5		2	
Phs Duration (G+Y+Rc), s	8.3						8.3		7.2		65.3	
Change Period (Y+Rc), s	4.0						4.0		4.0		4.0	
Max Green Setting (Gmax), s	16.0						16.0		9.0		68.0	
Max Q Clear Time (g_c+I1), s	4.5						2.0		4.5		21.1	
Green Ext Time (p_c), s	0.3						0.3		0.0		40.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			5.5									
HCM 2010 LOS			A									
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	308	327	177	222	143	46	160	1405	397	63	486	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	484	421	223	274	243	103	206	1921	537	87	1906	231
Arrive On Green	0.28	0.19	0.19	0.16	0.07	0.07	0.12	0.46	0.46	0.05	0.39	0.39
Sat Flow, veh/h	1757	2271	1206	1757	3689	1568	1757	4164	1164	1757	4843	587
Grp Volume(v), veh/h	335	287	260	241	155	50	174	1351	608	68	400	193
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1639	1757	1845	1741
Q Serve(g_s), s	18.5	16.2	16.7	14.5	4.4	2.9	10.5	33.6	34.3	4.1	8.0	8.2
Cycle Q Clear(g_c), s	18.5	16.2	16.7	14.5	4.4	2.9	10.5	33.6	34.3	4.1	8.0	8.2
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.71	1.00		0.34
Lane Grp Cap(c), veh/h	484	342	302	274	243	103	206	1702	756	87	1452	685
V/C Ratio(X)	0.69	0.84	0.86	0.88	0.64	0.48	0.84	0.79	0.80	0.78	0.28	0.28
Avail Cap(c_a), veh/h	484	392	347	341	546	232	325	1809	804	114	1452	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	42.5	42.7	44.6	49.2	36.7	46.7	24.7	24.9	50.8	22.3	22.4
Incr Delay (d2), s/veh	4.2	13.5	17.3	19.2	2.8	3.5	11.1	2.4	5.7	22.4	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.8	9.0	8.5	8.0	2.2	1.4	5.4	15.9	15.0	2.4	3.7	3.6
Lane Grp Delay (d), s/veh	39.3	56.0	60.0	63.8	52.0	40.2	57.8	27.1	30.6	73.2	22.4	22.6
Lane Grp LOS	D	E	E	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		882			446			2133			661	
Approach Delay, s/veh		50.8			57.1			30.6			27.7	
Approach LOS		D			E			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	33.8	24.0		20.9	11.1		16.7	53.9		9.3	46.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	23.0		21.0	16.0		20.0	53.0		7.0	40.0	
Max Q Clear Time (g_c+I1), s	20.5	18.7		16.5	6.4		12.5	36.3		6.1	10.2	
Green Ext Time (p_c), s	1.2	1.3		0.4	0.7		0.3	13.5		0.0	23.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				37.3								
HCM 2010 LOS				D								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 30: Ygnacio Valley Rd & Clayton Blvd

Cumulative PM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	645	946	30	251	443	150	145	1607	594	272	433	225
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	767	1423	0	329	713	0	216	2240	635	353	2462	698
Arrive On Green	0.23	0.26	0.00	0.10	0.13	0.00	0.06	0.40	0.40	0.10	0.44	0.44
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	701	1028	0	273	482	0	158	1747	646	296	471	245
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	23.3	19.7	0.0	9.1	9.7	0.0	5.3	31.9	47.0	9.9	6.0	11.9
Cycle Q Clear(g_c), s	23.3	19.7	0.0	9.1	9.7	0.0	5.3	31.9	47.0	9.9	6.0	11.9
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	767	1423	0	329	713	0	216	2240	635	353	2462	698
V/C Ratio(X)	0.91	0.72	0.00	0.83	0.68	0.00	0.73	0.78	1.02	0.84	0.19	0.35
Avail Cap(c_a), veh/h	822	1525	0	352	763	0	294	2240	635	382	2462	698
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	39.3	0.0	51.5	48.3	0.0	53.4	30.1	34.6	51.1	19.5	21.2
Incr Delay (d2), s/veh	14.1	1.6	0.0	14.4	2.2	0.0	6.0	1.8	40.3	14.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	11.6	9.5	0.0	4.7	4.8	0.0	2.5	15.3	25.5	5.1	2.8	4.6
Lane Grp Delay (d), s/veh	57.9	40.9	0.0	65.9	50.5	0.0	59.4	31.9	74.8	65.4	19.6	21.5
Lane Grp LOS	E	D		E	D		E	C	F	E	B	C
Approach Vol, veh/h		1729			755			2551			1012	
Approach Delay, s/veh		47.8			56.1			44.5			33.5	
Approach LOS		D			E			D			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	30.1	33.9		15.2	19.0		11.4	51.0		16.0	55.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	32.0		12.0	16.0		10.0	47.0		13.0	50.0	
Max Q Clear Time (g_c+I1), s	25.3	21.7		11.1	11.7		7.3	49.0		11.9	13.9	
Green Ext Time (p_c), s	0.8	6.8		0.1	3.3		0.1	0.0		0.1	28.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				45.0								
HCM 2010 LOS				D								
<b>Notes</b>												














HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Cumulative PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	1282	14	32	563	38	20	0	31	40	0	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	42	2421	26	53	2294	154	223	0	126	216	0	126
Arrive On Green	0.02	0.66	0.66	0.03	0.67	0.67	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1757	3643	39	1757	3420	229	1364	0	1568	1356	0	1568
Grp Volume(v), veh/h	26	705	703	35	330	323	22	0	34	43	0	27
Grp Sat Flow(s),veh/h/ln	1757	1845	1838	1757	1845	1804	1364	0	1568	1356	0	1568
Q Serve(g_s), s	0.8	11.1	11.1	1.1	3.8	3.8	0.8	0.0	1.1	1.6	0.0	0.9
Cycle Q Clear(g_c), s	0.8	11.1	11.1	1.1	3.8	3.8	1.7	0.0	1.1	2.7	0.0	0.9
Prop In Lane	1.00		0.02	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	42	1226	1221	53	1237	1210	223	0	126	216	0	126
V/C Ratio(X)	0.62	0.58	0.58	0.66	0.27	0.27	0.10	0.00	0.27	0.20	0.00	0.21
Avail Cap(c_a), veh/h	263	2832	2821	263	2832	2770	573	0	528	564	0	528
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	4.9	4.9	25.6	3.5	3.5	23.8	0.0	23.1	24.4	0.0	23.0
Incr Delay (d2), s/veh	13.8	0.4	0.4	12.9	0.1	0.1	0.2	0.0	1.1	0.4	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	2.9	2.9	0.6	1.0	0.9	0.3	0.0	0.4	0.6	0.0	0.4
Lane Grp Delay (d), s/veh	39.6	5.3	5.3	38.5	3.6	3.6	24.0	0.0	24.2	24.8	0.0	23.8
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		1434			688			56				70
Approach Delay, s/veh		5.9			5.4			24.1				24.4
Approach LOS		A			A			C				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.3	39.5		5.6	39.8			8.3				8.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	82.0		8.0	82.0			18.0				18.0
Max Q Clear Time (g_c+I1), s	2.8	13.1		3.1	5.8			3.7				4.7
Green Ext Time (p_c), s	0.0	22.4		0.0	22.8			0.4				0.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				6.8								
HCM 2010 LOS				A								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
 32: Delta Fair Blvd & Century Blvd

Cumulative PM With Bypass  
 3/16/2014

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			
Volume (veh/h)	417	1312	482	164	175	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	512	2448	838	283	399	356
Arrive On Green	0.29	0.66	0.32	0.32	0.23	0.23
Sat Flow, veh/h	1757	3689	2639	892	1757	1568
Grp Volume(v), veh/h	453	1426	365	337	190	315
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1687	1757	1568
Q Serve(g_s), s	18.0	15.5	12.3	12.4	6.8	14.2
Cycle Q Clear(g_c), s	18.0	15.5	12.3	12.4	6.8	14.2
Prop In Lane	1.00			0.53	1.00	1.00
Lane Grp Cap(c), veh/h	512	2448	585	535	399	356
V/C Ratio(X)	0.88	0.58	0.62	0.63	0.48	0.89
Avail Cap(c_a), veh/h	842	3234	632	578	433	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	6.7	21.2	21.3	24.5	27.3
Incr Delay (d2), s/veh	6.6	0.2	1.7	1.9	0.9	20.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.5	5.8	5.7	5.2	3.1	2.0
Lane Grp Delay (d), s/veh	31.3	7.0	22.9	23.2	25.4	47.3
Lane Grp LOS	C	A	C	C	C	D
Approach Vol, veh/h		1879	702		505	
Approach Delay, s/veh		12.8	23.1		39.0	
Approach LOS		B	C		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.3	52.4	27.2			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	35.0	64.0	25.0			
Max Q Clear Time (g_c+I1), s	20.0	17.5	14.4			
Green Ext Time (p_c), s	1.3	26.0	8.7			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			19.4			
HCM 2010 LOS			B			
<b>Notes</b>						





















HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	129	9	552	19	1	2	240	500	14	21	417	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	717	12	699	172	249	498	371	1363	38	35	614	74
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.21	0.38	0.38	0.02	0.19	0.19
Sat Flow, veh/h	1394	26	1546	800	550	1100	1757	3573	99	1757	3230	390
Grp Volume(v), veh/h	140	0	610	21	0	3	261	280	278	23	258	250
Grp Sat Flow(s),veh/h/ln	1394	0	1572	800	0	1650	1757	1845	1827	1757	1845	1776
Q Serve(g_s), s	5.0	0.0	28.5	2.0	0.0	0.1	11.3	9.1	9.1	1.1	10.8	10.9
Cycle Q Clear(g_c), s	5.1	0.0	28.5	30.4	0.0	0.1	11.3	9.1	9.1	1.1	10.8	10.9
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.05	1.00		0.22
Lane Grp Cap(c), veh/h	717	0	711	172	0	746	371	704	697	35	351	338
V/C Ratio(X)	0.20	0.00	0.86	0.12	0.00	0.00	0.70	0.40	0.40	0.66	0.73	0.74
Avail Cap(c_a), veh/h	904	0	921	279	0	968	687	1217	1205	129	631	607
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.72	0.72	0.72	0.93	0.93	0.93
Uniform Delay (d), s/veh	13.7	0.0	20.1	33.7	0.0	12.3	29.9	18.5	18.5	39.8	31.2	31.3
Incr Delay (d2), s/veh	0.1	0.0	6.5	0.3	0.0	0.0	1.8	1.2	1.2	17.7	11.9	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.7	0.0	11.8	0.4	0.0	0.0	5.1	4.2	4.2	0.6	6.1	6.0
Lane Grp Delay (d), s/veh	13.8	0.0	26.6	34.0	0.0	12.3	31.7	19.7	19.7	57.6	43.2	44.0
Lane Grp LOS	B		C	C		B	C	B	B	E	D	D
Approach Vol, veh/h		750			24			819			531	
Approach Delay, s/veh		24.2			31.3			23.5			44.2	
Approach LOS		C			C			C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		41.0			41.0		21.3	35.2		5.6		19.6
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		48.0			48.0		32.0	54.0		6.0		28.0
Max Q Clear Time (g_c+I1), s		30.5			32.4		13.3	11.1		3.1		12.9
Green Ext Time (p_c), s		4.8			4.6		4.1	4.7		0.0		2.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd



















Cumulative PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	928	571	128	384	10	185	20	34	15	11	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	31	1126	660	171	2130	56	274	21	393	59	39	11
Arrive On Green	0.02	0.52	0.52	0.10	0.60	0.60	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1757	2183	1280	1757	3578	94	783	86	1568	0	157	45
Grp Volume(v), veh/h	20	845	785	139	215	213	223	0	37	36	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1619	1757	1845	1828	869	0	1568	201	0	0
Q Serve(g_s), s	1.0	36.0	40.1	6.8	4.7	4.7	0.0	0.0	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	36.0	40.1	6.8	4.7	4.7	22.0	0.0	1.6	22.0	0.0	0.0
Prop In Lane	1.00		0.79	1.00		0.05	0.90		1.00	0.44		0.22
Lane Grp Cap(c), veh/h	31	951	835	171	1098	1088	295	0	393	110	0	0
V/C Ratio(X)	0.65	0.89	0.94	0.81	0.20	0.20	0.75	0.00	0.09	0.33	0.00	0.00
Avail Cap(c_a), veh/h	100	966	848	200	1098	1088	295	0	393	110	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	42.9	19.0	20.0	38.9	8.1	8.1	33.2	0.0	25.3	27.4	0.0	0.0
Incr Delay (d2), s/veh	20.5	10.1	18.1	19.4	0.1	0.1	10.5	0.0	0.1	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	18.1	19.2	4.0	1.9	1.9	5.8	0.0	0.6	0.7	0.0	0.0
Lane Grp Delay (d), s/veh	63.4	29.1	38.1	58.2	8.2	8.2	43.7	0.0	25.4	29.1	0.0	0.0
Lane Grp LOS	E	C	D	E	A	A	D		C	C		
Approach Vol, veh/h		1650			567			260				36
Approach Delay, s/veh		33.8			20.5			41.1				29.1
Approach LOS		C			C			D				C
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.5	49.3		12.6	56.3			26.0				26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	5.0	46.0		10.0	51.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	3.0	42.1		8.8	6.7			24.0				24.0
Green Ext Time (p_c), s	0.0	3.2		0.0	25.0			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.5								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Cumulative Plus Project AM With Bypass





















3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	161	323	194	745	827	155	268	829	324
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				201	417	265	893	1305	244	358	1376	585
Arrive On Green				0.25	0.25	0.25	0.44	0.72	0.72	0.20	0.37	0.00
Sat Flow, veh/h				789	1636	1041	3408	3025	565	1757	3689	1568
Grp Volume(v), veh/h				400	0	337	810	548	519	291	901	0
Grp Sat Flow(s),veh/h/ln				1805	0	1661	1704	1845	1745	1757	1845	1568
Q Serve(g_s), s				23.1	0.0	20.6	24.1	18.0	18.0	17.2	22.1	0.0
Cycle Q Clear(g_c), s				23.1	0.0	20.6	24.1	18.0	18.0	17.2	22.1	0.0
Prop In Lane				0.44		0.63	1.00		0.32	1.00		1.00
Lane Grp Cap(c), veh/h				460	0	423	893	796	753	358	1376	585
V/C Ratio(X)				0.87	0.00	0.80	0.91	0.69	0.69	0.81	0.65	0.00
Avail Cap(c_a), veh/h				530	0	488	1126	796	753	468	1376	585
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.57	0.57	0.57	1.00	1.00	0.00
Uniform Delay (d), s/veh				38.9	0.0	37.9	29.4	11.2	11.2	41.4	28.3	0.0
Incr Delay (d2), s/veh				13.2	0.0	7.8	5.6	2.8	3.0	8.1	2.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				12.4	0.0	9.7	9.9	6.3	6.0	8.5	10.7	0.0
Lane Grp Delay (d), s/veh				52.0	0.0	45.8	34.9	14.0	14.2	49.5	30.8	0.0
Lane Grp LOS				D		D	C	B	B	D	C	
Approach Vol, veh/h					737			1877			1192	
Approach Delay, s/veh					49.2			23.1			35.4	
Approach LOS					D			C			D	
<b>Timer</b>												
Assigned Phs					8		5	2		1	6	
Phs Duration (G+Y+Rc), s					31.8		32.6	51.0		26.2	44.6	
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s					32.0		36.0	47.0		29.0	40.0	
Max Q Clear Time (g_c+I1), s					25.1		26.1	20.0		19.2	24.1	
Green Ext Time (p_c), s					2.6		2.4	8.2		3.0	6.7	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					32.0							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave

Cumulative Plus Project AM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	329	0	483	0	0	0	0	1088	276	281	675	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	418	438	745				0	1644	417	473	2548	0
Arrive On Green	0.24	0.00	0.24				0.00	0.39	0.39	0.54	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4262	1081	1757	3689	0
Grp Volume(v), veh/h	358	0	525				0	1024	459	305	734	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1654	1757	1845	0
Q Serve(g_s), s	21.8	0.0	17.1				0.0	26.3	26.3	13.7	0.0	0.0
Cycle Q Clear(g_c), s	21.8	0.0	17.1				0.0	26.3	26.3	13.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.65	1.00		0.00
Lane Grp Cap(c), veh/h	418	438	745				0	1423	638	473	2548	0
V/C Ratio(X)	0.86	0.00	0.70				0.00	0.72	0.72	0.65	0.29	0.00
Avail Cap(c_a), veh/h	551	579	984				0	1423	638	473	2548	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.67	0.67	0.00
Uniform Delay (d), s/veh	40.7	0.0	38.9				0.0	29.1	29.1	22.0	0.0	0.0
Incr Delay (d2), s/veh	10.1	0.0	1.5				0.0	3.2	6.9	2.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.8	0.0	6.9				0.0	12.7	12.1	5.2	0.1	0.0
Lane Grp Delay (d), s/veh	50.8	0.0	40.4				0.0	32.3	36.0	24.0	0.2	0.0
Lane Grp LOS	D		D					C		D	C	A
Approach Vol, veh/h		883						1483			1039	
Approach Delay, s/veh		44.6						33.4			7.2	
Approach LOS		D						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1		6
Phs Duration (G+Y+Rc), s		30.5						47.0		34.0		81.0
Change Period (Y+Rc), s		4.0						4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0						43.0		30.0		77.0
Max Q Clear Time (g_c+I1), s		23.8						28.3		15.7		2.0
Green Ext Time (p_c), s		2.8						8.8		5.3		7.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			28.3									
HCM 2010 LOS			C									
<b>Notes</b>												






























HCM 2010 Signalized Intersection Summary  
 3: Railroad Ave & Leland Rd

Cumulative Plus Project AM With Bypass  
 3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	478	4	92	584	287	130	806	59	143	354	273
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	339	1304	10	127	871	370	402	1090	463	189	643	273
Arrive On Green	0.19	0.36	0.36	0.07	0.24	0.24	0.23	0.30	0.30	0.11	0.17	0.17
Sat Flow, veh/h	1757	3656	28	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	299	262	262	100	635	312	141	876	64	155	385	297
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	15.8	10.2	10.2	5.3	15.1	13.6	6.4	20.9	2.2	8.2	9.2	11.0
Cycle Q Clear(g_c), s	15.8	10.2	10.2	5.3	15.1	13.6	6.4	20.9	2.2	8.2	9.2	11.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	658	656	127	871	370	402	1090	463	189	643	273
V/C Ratio(X)	0.88	0.40	0.40	0.79	0.73	0.84	0.35	0.80	0.14	0.82	0.60	1.09
Avail Cap(c_a), veh/h	498	774	772	240	1006	428	402	1394	592	276	1316	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.4	23.0	23.0	43.5	33.6	19.5	30.8	31.0	14.9	41.6	36.3	17.4
Incr Delay (d2), s/veh	12.1	0.4	0.4	10.1	2.3	12.7	0.5	2.7	0.1	11.8	0.9	54.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.1	4.7	4.7	2.7	7.2	6.4	2.9	10.0	1.1	4.3	4.4	8.3
Lane Grp Delay (d), s/veh	49.5	23.4	23.4	53.6	35.9	32.2	31.4	33.8	15.1	53.4	37.2	71.8
Lane Grp LOS	D	C	C	D	D	C	C	C	B	D	D	F
Approach Vol, veh/h		823			1047			1081			837	
Approach Delay, s/veh		32.9			36.5			32.3			52.4	
Approach LOS		C			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.4	38.0		10.9	26.5		25.8	32.2		14.3	20.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	27.0	40.0		13.0	26.0		17.0	36.0		15.0	34.0	
Max Q Clear Time (g_c+I1), s	17.8	12.2		7.3	17.1		8.4	22.9		10.2	13.0	
Green Ext Time (p_c), s	0.6	10.3		0.1	5.4		0.6	5.3		0.2	3.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.0								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd






























Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 				 			 	
Volume (veh/h)	94	102	30	865	57	113	8	841	336	198	579	73
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	583	612	521	1132	612	521	85	1390	591	257	1753	745
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.05	0.38	0.38	0.15	0.48	0.48
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	102	111	33	940	62	123	9	914	365	215	629	79
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.4	3.5	1.2	21.1	1.9	4.7	0.4	17.0	15.7	9.9	8.9	2.3
Cycle Q Clear(g_c), s	3.4	3.5	1.2	21.1	1.9	4.7	0.4	17.0	15.7	9.9	8.9	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	583	612	521	1132	612	521	85	1390	591	257	1753	745
V/C Ratio(X)	0.17	0.18	0.06	0.83	0.10	0.24	0.11	0.66	0.62	0.84	0.36	0.11
Avail Cap(c_a), veh/h	583	612	521	1643	889	756	339	1690	718	424	1868	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.6	19.7	18.9	25.6	19.2	20.1	37.8	21.4	21.0	34.4	13.8	12.0
Incr Delay (d2), s/veh	0.1	0.1	0.1	2.5	0.1	0.2	0.5	0.7	1.1	7.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	1.6	0.5	8.7	0.8	1.8	0.2	7.6	6.1	4.8	3.9	0.8
Lane Grp Delay (d), s/veh	19.8	19.8	19.0	28.0	19.2	20.3	38.3	22.1	22.1	41.8	13.9	12.1
Lane Grp LOS	B	B	B	C	B	C	D	C	C	D	B	B
Approach Vol, veh/h		246			1125			1288			923	
Approach Delay, s/veh		19.7			26.7			22.2			20.2	
Approach LOS		B			C			C			C	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		31.5			31.5		8.0	35.3		16.2		43.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			40.0		16.0	38.0		20.0		42.0
Max Q Clear Time (g_c+I1), s		5.5			23.1		2.4	19.0		11.9		10.9
Green Ext Time (p_c), s		4.3			4.4		0.0	12.2		0.4		16.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				22.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance





























Cumulative Plus Project AM With Bypass

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



















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 		 		 	 		 	
Volume (veh/h)	130	46	44	1275	15	332	14	755	539	53	1250	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	2	1	2	2	1	2	1
Cap, veh/h	801	841	715	1554	841	1430	24	1687	1434	192	1476	627
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.01	0.46	0.46	0.40	0.40	0.40
Sat Flow, veh/h	1757	1845	1568	3408	1845	3136	1757	3689	3136	377	3689	1568
Grp Volume(v), veh/h	141	50	48	1386	16	361	15	821	586	58	1359	48
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	377	1845	1568
Q Serve(g_s), s	4.4	1.4	1.6	34.4	0.4	6.5	0.8	14.3	11.5	11.7	32.3	1.7
Cycle Q Clear(g_c), s	4.4	1.4	1.6	34.4	0.4	6.5	0.8	14.3	11.5	20.7	32.3	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	801	841	715	1554	841	1430	24	1687	1434	192	1476	627
V/C Ratio(X)	0.18	0.06	0.07	0.89	0.02	0.25	0.62	0.49	0.41	0.30	0.92	0.08
Avail Cap(c_a), veh/h	801	841	715	1738	941	1599	76	1801	1531	193	1481	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.8	14.0	14.1	23.0	13.8	15.4	45.2	17.5	16.7	26.5	26.3	17.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	5.8	0.0	0.1	22.8	0.2	0.2	0.9	9.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.6	0.6	15.5	0.2	2.5	0.5	6.4	4.4	1.1	16.5	0.7
Lane Grp Delay (d), s/veh	14.9	14.1	14.1	28.8	13.8	15.5	68.0	17.7	16.9	27.4	36.0	17.2
Lane Grp LOS	B	B	B	C	B	B	E	B	B	C	D	B
Approach Vol, veh/h		239			1763			1422			1465	
Approach Delay, s/veh		14.6			26.0			17.9			35.0	
Approach LOS		B			C			B			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2				6
Phs Duration (G+Y+Rc), s		46.0			46.0		5.3	46.2				40.9
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0				4.0
Max Green Setting (Gmax), s		16.0			47.0		4.0	45.0				37.0
Max Q Clear Time (g_c+I1), s		6.4			36.4		2.8	16.3				34.3
Green Ext Time (p_c), s		5.9			5.7		0.0	23.0				2.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd

Cumulative Plus Project AM With Bypass  
3/16/2014





























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	156	601	129	115	535	199	218	657	241	249	314	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	206	870	370	156	765	325	281	1118	475	313	849	286
Arrive On Green	0.12	0.24	0.24	0.09	0.21	0.21	0.16	0.30	0.30	0.18	0.32	0.32
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2641	891
Grp Volume(v), veh/h	170	653	140	125	582	216	237	714	262	271	236	222
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1687
Q Serve(g_s), s	7.8	13.6	6.2	5.8	12.2	10.4	10.8	13.8	11.5	12.4	8.2	8.5
Cycle Q Clear(g_c), s	7.8	13.6	6.2	5.8	12.2	10.4	10.8	13.8	11.5	12.4	8.2	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	206	870	370	156	765	325	281	1118	475	313	593	542
V/C Ratio(X)	0.82	0.75	0.38	0.80	0.76	0.66	0.84	0.64	0.55	0.87	0.40	0.41
Avail Cap(c_a), veh/h	256	939	399	192	805	342	447	1118	475	405	593	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	29.3	26.4	36.8	30.8	30.0	33.7	24.8	24.0	32.9	21.8	21.9
Incr Delay (d2), s/veh	16.1	3.2	0.6	17.4	4.1	4.5	8.2	2.8	4.5	14.5	2.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.4	6.6	2.4	3.3	6.1	4.4	5.4	6.7	5.0	6.7	4.0	3.8
Lane Grp Delay (d), s/veh	51.6	32.4	27.1	54.3	34.8	34.5	41.9	27.6	28.6	47.5	23.8	24.1
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		963			923			1213			729	
Approach Delay, s/veh		35.0			37.4			30.6			32.7	
Approach LOS		D			D			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.7	23.5		11.3	21.1		17.2	29.0		18.7	30.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	21.0		9.0	18.0		21.0	25.0		19.0	23.0	
Max Q Clear Time (g_c+I1), s	9.8	15.6		7.8	14.2		12.8	15.8		14.4	10.5	
Green Ext Time (p_c), s	0.1	3.9		0.0	2.8		0.4	5.5		0.3	6.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				33.8								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	127	442	5	2	772	98	103	110	3	145	36	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	163	1141	12	24	1009	858	136	231	6	184	43	208
Arrive On Green	0.09	0.63	0.63	0.01	0.55	0.55	0.08	0.13	0.13	0.10	0.16	0.16
Sat Flow, veh/h	1757	1822	19	1757	1845	1568	1757	1792	45	1757	275	1334
Grp Volume(v), veh/h	138	0	485	2	839	107	112	0	123	158	0	228
Grp Sat Flow(s),veh/h/ln	1757	0	1841	1757	1845	1568	1757	0	1837	1757	0	1609
Q Serve(g_s), s	9.8	0.0	16.9	0.1	47.7	2.6	7.9	0.0	7.9	11.2	0.0	17.6
Cycle Q Clear(g_c), s	9.8	0.0	16.9	0.1	47.7	2.6	7.9	0.0	7.9	11.2	0.0	17.6
Prop In Lane	1.00		0.01	1.00		1.00	1.00		0.02	1.00		0.83
Lane Grp Cap(c), veh/h	163	0	1153	24	1009	858	136	0	236	184	0	251
V/C Ratio(X)	0.84	0.00	0.42	0.08	0.83	0.12	0.82	0.00	0.52	0.86	0.00	0.91
Avail Cap(c_a), veh/h	195	0	1153	56	1009	858	153	0	236	209	0	255
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.00	0.74	0.24	0.24	0.24	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.3	0.0	12.0	61.4	23.7	5.5	57.3	0.0	51.3	55.6	0.0	52.4
Incr Delay (d2), s/veh	19.0	0.0	0.8	0.3	2.1	0.1	26.6	0.0	2.0	26.3	0.0	33.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	7.3	0.1	21.3	1.6	4.6	0.0	3.9	6.4	0.0	9.7
Lane Grp Delay (d), s/veh	75.3	0.0	12.8	61.8	25.8	5.6	83.9	0.0	53.4	81.9	0.0	85.6
Lane Grp LOS	E		B	E	C	A	F		D	F		F
Approach Vol, veh/h		623			948			235				386
Approach Delay, s/veh		26.6			23.6			67.9				84.1
Approach LOS		C			C			E				F
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	15.7	83.0		5.7	73.0		13.8	20.2		17.2		23.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	14.0	79.0		4.0	69.0		11.0	16.0		15.0		20.0
Max Q Clear Time (g_c+I1), s	11.8	18.9		2.1	49.7		9.9	9.9		13.2		19.6
Green Ext Time (p_c), s	0.1	3.4		0.1	6.4		0.0	0.5		0.1		0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				39.9								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave























Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 				 	 	 	
Volume (veh/h)	36	300	24	729	370	150	23	55	86	85	104	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	62	991	79	1561	2643	1123	189	198	168	189	168	25
Arrive On Green	0.04	0.29	0.29	0.46	0.72	0.72	0.11	0.11	0.11	0.11	0.11	0.11
Sat Flow, veh/h	1757	3374	268	3408	3689	1568	1757	1845	1568	1757	1567	236
Grp Volume(v), veh/h	39	177	175	792	402	163	25	60	93	92	0	130
Grp Sat Flow(s),veh/h/ln	1757	1845	1797	1704	1845	1568	1757	1845	1568	1757	0	1803
Q Serve(g_s), s	1.9	6.4	6.5	14.0	3.0	2.8	1.1	2.6	4.8	4.2	0.0	5.9
Cycle Q Clear(g_c), s	1.9	6.4	6.5	14.0	3.0	2.8	1.1	2.6	4.8	4.2	0.0	5.9
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	62	542	528	1561	2643	1123	189	198	168	189	0	194
V/C Ratio(X)	0.63	0.33	0.33	0.51	0.15	0.15	0.13	0.30	0.55	0.49	0.00	0.67
Avail Cap(c_a), veh/h	144	542	528	1721	2643	1123	371	390	331	371	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	23.5	23.5	16.3	3.8	3.8	34.4	35.1	36.1	35.8	0.0	36.6
Incr Delay (d2), s/veh	10.0	1.6	1.7	0.1	0.1	0.1	0.3	0.8	2.8	1.9	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	3.1	3.1	5.7	1.1	0.9	0.5	1.2	2.0	2.0	0.0	2.9
Lane Grp Delay (d), s/veh	50.5	25.1	25.2	16.4	3.9	4.0	34.7	35.9	38.9	37.7	0.0	40.5
Lane Grp LOS	D	C	C	B	A	A	C	D	D	D		D
Approach Vol, veh/h		391			1357			178			222	
Approach Delay, s/veh		27.7			11.2			37.3			39.4	
Approach LOS		C			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8			4	
Phs Duration (G+Y+Rc), s	7.0	29.0		43.0	65.0			13.1			13.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	7.0	25.0		43.0	61.0			18.0			18.0	
Max Q Clear Time (g_c+I1), s	3.9	8.5		16.0	5.0			6.8			7.9	
Green Ext Time (p_c), s	1.1	1.8		3.3	3.6			1.3			1.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.3								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd

Cumulative Plus Project AM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	66	291	49	151	3	637	329	96	8	240	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	435	306	260	100	244	4	792	1711	490	65	1567	666
Arrive On Green	0.13	0.17	0.17	0.03	0.07	0.07	0.23	0.62	0.62	0.04	0.42	0.42
Sat Flow, veh/h	3408	1845	1568	3408	3612	66	3408	2759	790	1757	3689	1568
Grp Volume(v), veh/h	124	72	316	53	84	83	692	238	224	9	261	621
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1833	1704	1845	1705	1757	1845	1568
Q Serve(g_s), s	3.6	3.7	18.0	1.7	4.8	4.8	21.2	6.1	6.2	0.5	4.7	40.9
Cycle Q Clear(g_c), s	3.6	3.7	18.0	1.7	4.8	4.8	21.2	6.1	6.2	0.5	4.7	40.9
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	435	306	260	100	125	124	792	1144	1058	65	1567	666
V/C Ratio(X)	0.29	0.24	1.21	0.53	0.67	0.67	0.87	0.21	0.21	0.14	0.17	0.93
Avail Cap(c_a), veh/h	435	306	260	126	272	270	912	1144	1058	259	1803	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	39.2	45.2	51.9	49.4	49.4	40.1	9.0	9.0	50.5	19.3	29.7
Incr Delay (d2), s/veh	0.4	0.4	126.2	4.3	6.1	6.2	8.5	0.1	0.1	1.0	0.0	16.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	1.8	16.3	0.8	2.5	2.5	10.2	2.7	2.5	0.3	2.2	18.9
Lane Grp Delay (d), s/veh	43.2	39.6	171.4	56.2	55.4	55.6	48.6	9.1	9.1	51.5	19.4	46.6
Lane Grp LOS	D	D	F	E	E	E	D	A	A	D	B	D
Approach Vol, veh/h		512			220			1154			891	
Approach Delay, s/veh		121.8			55.7			32.8			38.6	
Approach LOS		F			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	17.8	22.0		7.2	11.3		29.2	71.2		8.0	50.1	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	18.0		4.0	16.0		29.0	66.0		16.0	53.0	
Max Q Clear Time (g_c+I1), s	5.6	20.0		3.7	6.8		23.2	8.2		2.5	42.9	
Green Ext Time (p_c), s	0.0	0.0		0.0	0.5		2.0	6.5		0.0	3.2	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				52.9								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps

























Cumulative Plus Project AM With Bypass

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










Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	455	0	407	0	0	0	0	743	201	141	520	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1111	0	511				0	1843	783	217	2214	0
Arrive On Green	0.33	0.00	0.33				0.00	0.50	0.50	0.06	0.60	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	495	0	442				0	808	218	153	565	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	12.4	0.0	28.7				0.0	15.2	8.8	4.8	7.8	0.0
Cycle Q Clear(g_c), s	12.4	0.0	28.7				0.0	15.2	8.8	4.8	7.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1111	0	511				0	1843	783	217	2214	0
V/C Ratio(X)	0.45	0.00	0.86				0.00	0.44	0.28	0.71	0.26	0.00
Avail Cap(c_a), veh/h	1479	0	680				0	1843	783	378	2214	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.91	0.91	0.00
Uniform Delay (d), s/veh	28.8	0.0	34.3				0.0	17.4	15.8	49.7	10.2	0.0
Incr Delay (d2), s/veh	0.3	0.0	8.9				0.0	0.8	0.9	3.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	5.3	0.0	12.4				0.0	7.0	3.5	2.2	3.5	0.0
Lane Grp Delay (d), s/veh	29.1	0.0	43.1				0.0	18.1	16.6	53.5	10.5	0.0
Lane Grp LOS	C		D					B	B	D	B	
Approach Vol, veh/h		937						1026			718	
Approach Delay, s/veh		35.7						17.8			19.7	
Approach LOS		D						B			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		39.3						58.1		10.9	69.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		47.0						49.0		12.0	65.0	
Max Q Clear Time (g_c+I1), s		30.7						17.2		6.8	9.8	
Green Ext Time (p_c), s		4.7						13.3		0.2	15.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	199	257	180	189	739	197	256	621	139	198	383	170
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	304	1198	509	290	1184	503	326	1143	486	303	786	334
Arrive On Green	0.09	0.32	0.32	0.09	0.32	0.32	0.19	0.31	0.31	0.09	0.21	0.21
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	216	279	196	205	803	214	278	675	151	215	416	185
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	5.1	4.6	8.1	4.9	15.8	9.0	12.8	12.9	6.1	5.1	8.4	8.8
Cycle Q Clear(g_c), s	5.1	4.6	8.1	4.9	15.8	9.0	12.8	12.9	6.1	5.1	8.4	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1198	509	290	1184	503	326	1143	486	303	786	334
V/C Ratio(X)	0.71	0.23	0.38	0.71	0.68	0.43	0.85	0.59	0.31	0.71	0.53	0.55
Avail Cap(c_a), veh/h	531	1679	713	490	1634	695	631	1811	770	531	1060	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	20.6	21.8	37.2	24.6	22.3	32.9	24.4	22.0	37.0	29.1	29.3
Incr Delay (d2), s/veh	3.1	0.1	0.5	3.1	0.7	0.6	6.4	0.5	0.4	3.1	0.6	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.4	2.1	3.1	2.2	7.1	3.5	6.2	5.9	2.4	2.3	3.9	3.5
Lane Grp Delay (d), s/veh	40.1	20.7	22.2	40.3	25.3	22.9	39.3	24.8	22.4	40.1	29.7	30.7
Lane Grp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		691			1222			1104			816	
Approach Delay, s/veh		27.2			27.4			28.1			32.7	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.4	31.1		11.1	30.8		19.5	29.9		11.4	21.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	13.0	38.0		12.0	37.0		30.0	41.0		13.0	24.0	
Max Q Clear Time (g_c+I1), s	7.1	10.1		6.9	17.8		14.8	14.9		7.1	10.8	
Green Ext Time (p_c), s	0.3	10.7		0.3	9.0		0.7	10.0		0.3	7.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				28.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 12: Buchanan Rd & Loveridge Rd






















						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	295	313	868	336	203	208
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	365	1462	1022	868	257	229
Arrive On Green	0.21	0.79	1.00	1.00	0.15	0.15
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	321	340	943	365	221	226
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	23.0	6.1	0.0	0.0	16.0	18.7
Cycle Q Clear(g_c), s	23.0	6.1	0.0	0.0	16.0	18.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	365	1462	1022	868	257	229
V/C Ratio(X)	0.88	0.23	0.92	0.42	0.86	0.99
Avail Cap(c_a), veh/h	365	1462	1022	868	257	229
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.47	0.47	1.00	1.00
Uniform Delay (d), s/veh	49.9	3.4	0.0	0.0	54.2	55.4
Incr Delay (d2), s/veh	18.3	0.3	8.1	0.7	24.4	55.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.1	2.2	2.3	0.2	9.0	18.6
Lane Grp Delay (d), s/veh	68.3	3.8	8.1	0.7	78.6	110.7
Lane Grp LOS	E	A	A	A	E	F
Approach Vol, veh/h		661	1308		447	
Approach Delay, s/veh		35.1	6.1		94.8	
Approach LOS		D	A		F	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	31.0	107.0	76.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	27.0	103.0	72.0			
Max Q Clear Time (g_c+I1), s	25.0	8.1	2.0			
Green Ext Time (p_c), s	0.7	3.2	12.0			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			30.4			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
13: Ventura Dr & Buchanan Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	444	73	31	1037	12	156	118	59	15	11	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	15	1328	1129	43	1339	15	251	186	93	123	96	169
Arrive On Green	0.02	1.00	1.00	0.02	0.74	0.74	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1757	1845	1568	1757	1820	21	1357	1161	581	1175	603	1055
Grp Volume(v), veh/h	11	483	79	34	0	1140	170	0	192	16	0	33
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1841	1357	0	1742	1175	0	1658
Q Serve(g_s), s	0.8	0.0	0.0	2.4	0.0	53.7	15.4	0.0	13.0	1.6	0.0	2.1
Cycle Q Clear(g_c), s	0.8	0.0	0.0	2.4	0.0	53.7	17.5	0.0	13.0	14.6	0.0	2.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.33	1.00		0.64
Lane Grp Cap(c), veh/h	15	1328	1129	43	0	1355	251	0	278	123	0	265
V/C Ratio(X)	0.74	0.36	0.07	0.79	0.00	0.84	0.68	0.00	0.69	0.13	0.00	0.12
Avail Cap(c_a), veh/h	56	1328	1129	84	0	1355	273	0	307	142	0	292
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.44	0.00	0.44	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.3	0.0	0.0	60.7	0.0	11.5	52.5	0.0	49.6	56.5	0.0	45.0
Incr Delay (d2), s/veh	45.7	0.7	0.1	13.2	0.0	3.0	5.9	0.0	5.7	0.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.2	0.0	1.2	0.0	21.7	5.8	0.0	6.4	0.5	0.0	0.9
Lane Grp Delay (d), s/veh	107.0	0.7	0.1	73.8	0.0	14.4	58.4	0.0	55.3	57.0	0.0	45.2
Lane Grp LOS	F	A	A	E		B	E		E	E		D
Approach Vol, veh/h		573			1174			362				49
Approach Delay, s/veh		2.6			16.1			56.8				49.1
Approach LOS		A			B			E				D
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.1	94.0		7.1	96.0			24.0				24.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	90.0		6.0	92.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	2.8	2.0		4.4	55.7			19.5				16.6
Green Ext Time (p_c), s	0.2	3.6		0.0	13.3			0.5				0.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

Cumulative Plus Project AM With Bypass  
 3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	532	19	36	1470	42	54	82	94	44	29	85
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	91	2062	75	52	2001	57	75	115	132	60	58	167
Arrive On Green	0.05	0.58	0.58	0.03	0.56	0.56	0.04	0.15	0.15	0.03	0.14	0.14
Sat Flow, veh/h	1757	3538	128	1757	3569	102	1757	786	900	1757	421	1210
Grp Volume(v), veh/h	71	301	298	39	824	820	59	0	191	48	0	124
Grp Sat Flow(s),veh/h/ln	1757	1845	1822	1757	1845	1827	1757	0	1686	1757	0	1631
Q Serve(g_s), s	3.1	6.3	6.3	1.7	27.4	27.6	2.6	0.0	8.4	2.1	0.0	5.5
Cycle Q Clear(g_c), s	3.1	6.3	6.3	1.7	27.4	27.6	2.6	0.0	8.4	2.1	0.0	5.5
Prop In Lane	1.00		0.07	1.00		0.06	1.00		0.53	1.00		0.74
Lane Grp Cap(c), veh/h	91	1075	1062	52	1034	1024	75	0	247	60	0	225
V/C Ratio(X)	0.78	0.28	0.28	0.76	0.80	0.80	0.79	0.00	0.77	0.80	0.00	0.55
Avail Cap(c_a), veh/h	137	1123	1110	137	1123	1112	114	0	350	114	0	338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.2	8.0	8.0	37.2	13.5	13.5	36.6	0.0	31.7	37.0	0.0	31.0
Incr Delay (d2), s/veh	15.3	0.1	0.1	19.8	3.8	4.0	18.5	0.0	6.8	21.1	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.7	2.6	2.6	1.0	12.1	12.1	1.5	0.0	4.0	1.3	0.0	2.3
Lane Grp Delay (d), s/veh	51.5	8.2	8.2	57.0	17.3	17.5	55.2	0.0	38.5	58.1	0.0	33.1
Lane Grp LOS	D	A	A	E	B	B	E		D	E		C
Approach Vol, veh/h		670			1683			250				172
Approach Delay, s/veh		12.8			18.3			42.4				40.1
Approach LOS		B			B			D				D
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	8.0	49.0		6.3	47.3		7.3	15.3		6.6		14.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	6.0	47.0		6.0	47.0		5.0	16.0		5.0		16.0
Max Q Clear Time (g_c+I1), s	5.1	8.3		3.7	29.6		4.6	10.4		4.1		7.5
Green Ext Time (p_c), s	0.0	24.6		0.0	13.7		0.0	0.9		0.0		1.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.5								
HCM 2010 LOS				C								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↙	↗
Volume (veh/h)	549	12	36	911	34	107
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	958	814	50	1069	625	558
Arrive On Green	0.52	0.52	0.03	0.58	0.36	0.36
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	597	13	39	990	37	116
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	28.5	0.5	2.7	60.2	1.7	6.4
Cycle Q Clear(g_c), s	28.5	0.5	2.7	60.2	1.7	6.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	958	814	50	1069	625	558
V/C Ratio(X)	0.62	0.02	0.79	0.93	0.06	0.21
Avail Cap(c_a), veh/h	999	849	99	1163	625	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	14.4	59.7	23.6	26.2	27.7
Incr Delay (d2), s/veh	1.1	0.0	23.1	11.9	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.7	0.2	1.6	28.8	0.8	2.6
Lane Grp Delay (d), s/veh	22.3	14.4	82.9	35.5	26.4	28.6
Lane Grp LOS	C	B	F	D	C	C
Approach Vol, veh/h	610			1029	153	
Approach Delay, s/veh	22.1			37.2	28.1	
Approach LOS	C			D	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	68.2		7.5	75.7		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	67.0		7.0	78.0		
Max Q Clear Time (g_c+I1), s	30.5		4.7	62.2		
Green Ext Time (p_c), s	14.9		0.0	9.5		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			31.3			
HCM 2010 LOS			C			
<b>Notes</b>						























HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr

Cumulative Plus Project AM With Bypass













3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	41	555	15	13	1355	4	30	23	40	11	15	128
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	59	2117	56	24	2102	6	48	90	155	21	22	189
Arrive On Green	0.03	0.59	0.59	0.01	0.57	0.57	0.03	0.15	0.15	0.01	0.13	0.13
Sat Flow, veh/h	1757	3578	95	1757	3678	10	1757	610	1049	1757	164	1428
Grp Volume(v), veh/h	45	311	308	14	739	738	33	0	68	12	0	155
Grp Sat Flow(s),veh/h/ln	1757	1845	1828	1757	1845	1843	1757	0	1659	1757	0	1593
Q Serve(g_s), s	1.7	5.6	5.6	0.5	19.5	19.5	1.3	0.0	2.5	0.5	0.0	6.4
Cycle Q Clear(g_c), s	1.7	5.6	5.6	0.5	19.5	19.5	1.3	0.0	2.5	0.5	0.0	6.4
Prop In Lane	1.00		0.05	1.00		0.01	1.00		0.63	1.00		0.90
Lane Grp Cap(c), veh/h	59	1091	1081	24	1054	1053	48	0	245	21	0	210
V/C Ratio(X)	0.76	0.28	0.29	0.58	0.70	0.70	0.69	0.00	0.28	0.57	0.00	0.74
Avail Cap(c_a), veh/h	129	1329	1317	103	1302	1301	129	0	415	103	0	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.6	6.8	6.8	33.3	10.4	10.4	32.8	0.0	25.8	33.4	0.0	28.4
Incr Delay (d2), s/veh	17.9	0.1	0.1	20.4	1.3	1.3	16.1	0.0	0.6	22.3	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.0	2.2	2.2	0.4	8.2	8.2	0.8	0.0	1.0	0.3	0.0	2.8
Lane Grp Delay (d), s/veh	50.5	7.0	7.0	53.8	11.7	11.7	48.9	0.0	26.4	55.7	0.0	33.3
Lane Grp LOS	D	A	A	D	B	B	D		C	E		C
Approach Vol, veh/h		664			1491			101				167
Approach Delay, s/veh		9.9			12.1			33.7				34.9
Approach LOS		A			B			C				C
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	6.3	44.2		4.9	42.9		5.9	14.0		4.8		13.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	5.0	49.0		4.0	48.0		5.0	17.0		4.0		16.0
Max Q Clear Time (g_c+I1), s	3.7	7.6		2.5	21.5		3.3	4.5		2.5		8.4
Green Ext Time (p_c), s	0.0	22.7		0.0	17.4		0.0	1.0		0.0		0.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				14.0								
HCM 2010 LOS				B								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	640	16	22	885	62	89
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	783	666	193	1066	589	526
Arrive On Green	0.42	0.42	0.11	0.58	0.34	0.34
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	696	17	24	962	67	97
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	32.2	0.6	1.1	42.5	2.4	4.0
Cycle Q Clear(g_c), s	32.2	0.6	1.1	42.5	2.4	4.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	783	666	193	1066	589	526
V/C Ratio(X)	0.89	0.03	0.12	0.90	0.11	0.18
Avail Cap(c_a), veh/h	1517	1290	209	1817	589	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	15.5	37.1	17.2	21.2	21.7
Incr Delay (d2), s/veh	3.7	0.0	0.3	3.8	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	14.7	0.2	0.5	17.7	1.1	1.6
Lane Grp Delay (d), s/veh	28.2	15.5	37.4	21.0	21.6	22.5
Lane Grp LOS	C	B	D	C	C	C
Approach Vol, veh/h	713			986	164	
Approach Delay, s/veh	27.9			21.4	22.1	
Approach LOS	C			C	C	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	43.2		14.2	57.4		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	76.0		11.0	91.0		
Max Q Clear Time (g_c+I1), s	34.2		3.1	44.5		
Green Ext Time (p_c), s	5.0		4.0	8.9		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			24.0			
HCM 2010 LOS			C			
<b>Notes</b>						





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	114	34	46	225	83	32	228	522	162	26	568	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	410	222	189	410	152	59	594	2879	871	41	2045	869
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.06	0.23	0.23	0.02	0.55	0.55
Sat Flow, veh/h	3408	1845	1568	3408	1266	492	3408	4082	1234	1757	3689	1568
Grp Volume(v), veh/h	124	37	50	245	0	125	248	511	232	28	617	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1758	1704	1845	1627	1757	1845	1568
Q Serve(g_s), s	2.6	1.4	2.3	5.4	0.0	5.3	5.6	8.8	9.1	1.3	7.1	8.8
Cycle Q Clear(g_c), s	2.6	1.4	2.3	5.4	0.0	5.3	5.6	8.8	9.1	1.3	7.1	8.8
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.76	1.00		1.00
Lane Grp Cap(c), veh/h	410	222	189	410	0	211	594	2602	1147	41	2045	869
V/C Ratio(X)	0.30	0.17	0.27	0.60	0.00	0.59	0.42	0.20	0.20	0.69	0.30	0.36
Avail Cap(c_a), veh/h	773	418	355	944	0	487	859	2602	1147	177	2045	869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	31.3	31.7	33.1	0.0	33.1	33.5	12.4	12.5	38.5	9.5	9.8
Incr Delay (d2), s/veh	0.4	0.4	0.7	1.4	0.0	2.6	0.5	0.2	0.4	18.5	0.4	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	0.7	0.9	2.4	0.0	2.5	2.6	4.5	4.2	0.8	3.0	3.4
Lane Grp Delay (d), s/veh	32.3	31.7	32.5	34.5	0.0	35.7	34.0	12.5	12.9	57.0	9.9	11.0
Lane Grp LOS	C	C	C	C		D	C	B	B	E	A	B
Approach Vol, veh/h		211			370			991			957	
Approach Delay, s/veh		32.2			34.9			18.0			11.6	
Approach LOS		C			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		13.5			13.5		17.8	60.0		5.8		48.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			22.0		20.0	56.0		8.0		44.0
Max Q Clear Time (g_c+I1), s		4.6			7.4		7.6	11.1		3.3		10.8
Green Ext Time (p_c), s		2.1			2.1		4.7	7.1		0.0		7.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.2								
HCM 2010 LOS				B								
<b>Notes</b>												



						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	236	293	553	602	464	316
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	775	357	716	3882	2522	715
Arrive On Green	0.23	0.23	0.07	0.23	0.46	0.46
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	257	318	601	654	504	343
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	7.1	22.1	19.6	10.6	6.1	17.2
Cycle Q Clear(g_c), s	7.1	22.1	19.6	10.6	6.1	17.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	775	357	716	3882	2522	715
V/C Ratio(X)	0.33	0.89	0.84	0.17	0.20	0.48
Avail Cap(c_a), veh/h	999	459	1120	3882	2522	715
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.91	0.91
Uniform Delay (d), s/veh	36.3	42.2	50.5	17.0	18.3	21.3
Incr Delay (d2), s/veh	0.2	16.1	3.2	0.1	0.2	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.1	1.6	9.4	5.4	2.8	7.1
Lane Grp Delay (d), s/veh	36.6	58.3	53.8	17.1	18.5	23.4
Lane Grp LOS	D	E	D	B	B	C
Approach Vol, veh/h	575			1255	847	
Approach Delay, s/veh	48.6			34.7	20.5	
Approach LOS	D			C	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			27.7	83.0	55.3	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			37.0	79.0	38.0	
Max Q Clear Time (g_c+I1), s			21.6	12.6	19.2	
Green Ext Time (p_c), s			2.1	13.5	9.2	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			33.2			
HCM 2010 LOS			C			
<b>Notes</b>						
























HCM 2010 Signalized Intersection Summary  
 20: Somersville Rd & EB SR-4 Ramps

Cumulative Plus Project AM With Bypass  
 3/16/2014

























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	228	0	290	0	0	0	0	863	495	148	646	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	439	238	404				0	3868	1096	223	4427	0
Arrive On Green	0.13	0.00	0.13				0.00	1.00	1.00	0.13	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	248	0	315				0	938	538	161	702	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	7.7	0.0	10.9				0.0	0.0	0.0	5.1	0.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	10.9				0.0	0.0	0.0	5.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	439	238	404				0	3868	1096	223	4427	0
V/C Ratio(X)	0.56	0.00	0.78				0.00	0.24	0.49	0.72	0.16	0.00
Avail Cap(c_a), veh/h	666	361	613				0	3868	1096	485	4427	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	0.79	0.79	0.94	0.94	0.00
Uniform Delay (d), s/veh	46.0	0.0	47.4				0.0	0.0	0.0	47.9	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	3.6				0.0	0.1	1.2	4.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	0.0	4.6				0.0	0.0	0.4	2.3	0.0	0.0
Lane Grp Delay (d), s/veh	47.2	0.0	51.1				0.0	0.1	1.2	52.0	0.1	0.0
Lane Grp LOS	D		D					A	A	D	A	
Approach Vol, veh/h		563						1476			863	
Approach Delay, s/veh		49.3						0.5			9.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		18.5						82.6		11.4	94.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		22.0						70.0		16.0	90.0	
Max Q Clear Time (g_c+I1), s		12.9						2.0		7.1	2.0	
Green Ext Time (p_c), s		1.6						25.8		0.3	27.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			12.7									
HCM 2010 LOS			B									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
21: Somersville Rd & Delta Fair Blvd























Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	288	126	7	47	345	452	97	568	19	150	405	308
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1533	776	45	790	830	705	292	1892	64	236	954	405
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.05	0.12	0.12	0.02	0.09	0.09
Sat Flow, veh/h	3408	1726	101	1757	1845	1568	1757	5322	180	3408	3689	1568
Grp Volume(v), veh/h	313	0	145	51	375	491	105	427	211	163	440	335
Grp Sat Flow(s),veh/h/ln	1704	0	1827	1757	1845	1568	1757	1845	1813	1704	1845	1568
Q Serve(g_s), s	5.3	0.0	4.5	1.6	13.4	24.0	5.5	10.2	10.2	4.5	10.9	20.1
Cycle Q Clear(g_c), s	5.3	0.0	4.5	1.6	13.4	24.0	5.5	10.2	10.2	4.5	10.9	20.1
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	1533	0	822	790	830	705	292	1312	645	236	954	405
V/C Ratio(X)	0.20	0.00	0.18	0.06	0.45	0.70	0.36	0.33	0.33	0.69	0.46	0.83
Avail Cap(c_a), veh/h	1533	0	822	790	830	705	292	1312	645	356	1157	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.75	0.75	0.99	0.99	0.99	0.98	0.98	0.98
Uniform Delay (d), s/veh	15.9	0.0	15.7	14.9	18.2	21.1	40.3	31.7	31.7	45.7	37.4	41.6
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.1	1.3	4.3	0.7	0.7	1.3	3.5	0.3	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	0.0	2.0	0.7	6.2	9.8	2.6	5.2	5.3	2.2	5.5	9.6
Lane Grp Delay (d), s/veh	16.0	0.0	15.8	15.0	19.5	25.3	41.0	32.3	33.0	49.2	37.7	50.9
Lane Grp LOS	B		B	B	B	C	D	C	C	D	D	D
Approach Vol, veh/h		458			917			743			938	
Approach Delay, s/veh		16.0			22.4			33.8			44.4	
Approach LOS		B			C			C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		47.0			47.0		19.9	38.0		10.6		28.7
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			43.0		14.0	34.0		10.0		30.0
Max Q Clear Time (g_c+I1), s		7.3			26.0		7.5	12.2		6.5		22.1
Green Ext Time (p_c), s		4.6			6.2		0.5	4.2		0.2		2.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
22: Somersville Rd & Buchanan Rd






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	425	244	37	27	384	433	416	699	58	43	197	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	464	1714	729	37	409	347	449	1156	96	60	452	192
Arrive On Green	0.26	0.46	0.00	0.02	0.22	0.00	0.26	0.34	0.34	0.03	0.12	0.12
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3362	279	1757	3689	1568
Grp Volume(v), veh/h	462	265	0	29	417	0	452	417	406	47	214	161
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1796	1757	1845	1568
Q Serve(g_s), s	30.8	4.9	0.0	1.9	26.0	0.0	30.0	22.5	22.5	3.1	6.3	11.8
Cycle Q Clear(g_c), s	30.8	4.9	0.0	1.9	26.0	0.0	30.0	22.5	22.5	3.1	6.3	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	464	1714	729	37	409	347	449	634	617	60	452	192
V/C Ratio(X)	1.00	0.15	0.00	0.79	1.02	0.00	1.01	0.66	0.66	0.78	0.47	0.84
Avail Cap(c_a), veh/h	464	1714	729	90	409	347	449	634	617	120	534	227
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	18.1	0.0	57.2	45.7	0.0	43.7	32.6	32.7	56.2	48.0	50.4
Incr Delay (d2), s/veh	40.6	0.0	0.0	30.5	49.9	0.0	44.2	2.5	2.6	19.2	0.8	20.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	18.7	2.1	0.0	1.2	18.0	0.0	19.0	11.0	10.7	1.7	3.1	5.8
Lane Grp Delay (d), s/veh	83.8	18.2	0.0	87.7	95.6	0.0	87.9	35.1	35.2	75.5	48.7	70.8
Lane Grp LOS	F	B		F	F		F	D	D	E	D	E
Approach Vol, veh/h		727			446			1275			422	
Approach Delay, s/veh		59.9			95.1			53.8			60.1	
Approach LOS		E			F			D			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	35.0	58.6		6.4	30.0		34.0	44.4		8.0	18.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	31.0	51.0		6.0	26.0		30.0	39.0		8.0	17.0	
Max Q Clear Time (g_c+I1), s	32.8	6.9		3.9	28.0		32.0	24.5		5.1	13.8	
Green Ext Time (p_c), s	0.0	4.8		0.0	0.0		0.0	6.3		0.0	0.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				62.7								
HCM 2010 LOS				E								
<b>Notes</b>												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	175	11	4	1660	314	59
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	239	213	804	2786	2786	1184
Arrive On Green	0.14	0.14	0.76	0.76	0.76	0.76
Sat Flow, veh/h	1757	1568	967	3689	3689	1568
Grp Volume(v), veh/h	190	12	4	1804	341	64
Grp Sat Flow(s),veh/h/ln	1757	1568	967	1845	1845	1568
Q Serve(g_s), s	7.7	0.5	0.1	17.2	1.8	0.8
Cycle Q Clear(g_c), s	7.7	0.5	1.9	17.2	1.8	0.8
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	239	213	804	2786	2786	1184
V/C Ratio(X)	0.79	0.06	0.00	0.65	0.12	0.05
Avail Cap(c_a), veh/h	574	512	1232	4418	4418	1878
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	27.6	2.7	4.3	2.4	2.3
Incr Delay (d2), s/veh	5.9	0.1	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	0.2	0.0	5.9	0.6	0.2
Lane Grp Delay (d), s/veh	36.7	27.7	2.7	4.6	2.4	2.3
Lane Grp LOS	D	C	A	A	A	A
Approach Vol, veh/h	202			1808	405	
Approach Delay, s/veh	36.1			4.6	2.4	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				59.5	59.5	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				88.0	88.0	
Max Q Clear Time (g_c+I1), s				19.2	3.8	
Green Ext Time (p_c), s				36.3	39.6	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			6.8			
HCM 2010 LOS			A			
<b>Notes</b>						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	186	370	0	4	1284	660	0	1	2	289	9	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	243	2383	0	7	1888	802	2	23	46	404	383	651
Arrive On Green	0.14	0.65	0.00	0.00	0.51	0.00	0.00	0.04	0.04	0.12	0.21	0.21
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	550	1100	3408	1845	3136
Grp Volume(v), veh/h	202	402	0	4	1396	0	0	0	3	314	10	77
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1650	1704	1845	1568
Q Serve(g_s), s	9.4	3.7	0.0	0.2	25.1	0.0	0.0	0.0	0.1	7.5	0.4	1.7
Cycle Q Clear(g_c), s	9.4	3.7	0.0	0.2	25.1	0.0	0.0	0.0	0.1	7.5	0.4	1.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	243	2383	0	7	1888	802	2	0	69	404	383	651
V/C Ratio(X)	0.83	0.17	0.00	0.54	0.74	0.00	0.00	0.00	0.04	0.78	0.03	0.12
Avail Cap(c_a), veh/h	396	3018	0	83	2362	1004	83	0	333	566	591	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.4	5.9	0.0	41.9	16.2	0.0	0.0	0.0	38.8	36.1	26.6	27.1
Incr Delay (d2), s/veh	7.7	0.0	0.0	48.9	1.0	0.0	0.0	0.0	0.3	4.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.7	1.4	0.0	0.2	11.1	0.0	0.0	0.0	0.1	3.5	0.2	0.6
Lane Grp Delay (d), s/veh	43.1	6.0	0.0	90.9	17.1	0.0	0.0	0.0	39.1	40.6	26.6	27.2
Lane Grp LOS	D	A		F	B				D	D	C	C
Approach Vol, veh/h		604			1400			3			401	
Approach Delay, s/veh		18.4			17.3			39.1			37.7	
Approach LOS		B			B			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	15.7	58.5		4.4	47.2		0.0	7.5		14.0	21.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	19.0	69.0		4.0	54.0		4.0	17.0		14.0	27.0	
Max Q Clear Time (g_c+I1), s	11.4	5.7		2.2	27.1		0.0	2.1		9.5	3.7	
Green Ext Time (p_c), s	0.3	23.9		0.0	16.1		0.0	0.2		0.5	0.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.0								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd





















Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	49	230	59	55	429	223	137	461	57	69	114	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	301	1118	280	478	901	465	653	748	93	315	857	728
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	730	2849	714	1051	2296	1184	1230	1610	199	836	1845	1568
Grp Volume(v), veh/h	53	160	154	60	374	334	149	0	563	75	124	17
Grp Sat Flow(s),veh/h/ln	730	1845	1719	1051	1845	1636	1230	0	1809	836	1845	1568
Q Serve(g_s), s	3.3	3.2	3.3	2.3	8.6	8.7	4.4	0.0	13.5	4.3	2.2	0.3
Cycle Q Clear(g_c), s	12.1	3.2	3.3	5.6	8.6	8.7	6.6	0.0	13.5	17.8	2.2	0.3
Prop In Lane	1.00		0.42	1.00		0.72	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	301	724	674	478	724	642	653	0	841	315	857	728
V/C Ratio(X)	0.18	0.22	0.23	0.13	0.52	0.52	0.23	0.00	0.67	0.24	0.14	0.02
Avail Cap(c_a), veh/h	577	1420	1323	875	1420	1259	1601	0	2235	959	2278	1936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	11.3	11.3	13.2	12.9	13.0	10.5	0.0	11.6	18.5	8.6	8.1
Incr Delay (d2), s/veh	0.3	0.2	0.2	0.1	0.6	0.7	0.2	0.0	0.9	0.4	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	1.3	1.3	0.5	3.5	3.2	1.2	0.0	5.4	0.9	0.8	0.1
Lane Grp Delay (d), s/veh	17.8	11.4	11.5	13.3	13.5	13.6	10.7	0.0	12.6	18.9	8.7	8.1
Lane Grp LOS	B	B	B	B	B	B	B		B	B	A	A
Approach Vol, veh/h		367			768			712				216
Approach Delay, s/veh		12.4			13.5			12.2				12.2
Approach LOS		B			B			B				B
<b>Timer</b>												
Assigned Phs		4			8			2				6
Phs Duration (G+Y+Rc), s		25.9			25.9			30.0				30.0
Change Period (Y+Rc), s		4.0			4.0			4.0				4.0
Max Green Setting (Gmax), s		43.0			43.0			69.0				69.0
Max Q Clear Time (g_c+I1), s		14.1			10.7			15.5				19.8
Green Ext Time (p_c), s		7.9			8.1			6.2				6.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.7								
HCM 2010 LOS				B								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd
























Cumulative Plus Project AM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	200	492	2	10	1563	235	7	10	13	226	14	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	236	2442	9	19	1795	172	86	111	108	211	27	275
Arrive On Green	0.13	0.66	0.66	0.01	0.54	0.54	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3673	14	1757	3316	317	187	586	570	1367	144	1446
Grp Volume(v), veh/h	217	269	268	11	934	930	33	0	0	246	0	166
Grp Sat Flow(s),veh/h/ln	1757	1845	1842	1757	1845	1789	1343	0	0	1367	0	1590
Q Serve(g_s), s	10.9	5.1	5.1	0.6	42.1	44.4	0.1	0.0	0.0	8.5	0.0	8.4
Cycle Q Clear(g_c), s	10.9	5.1	5.1	0.6	42.1	44.4	8.5	0.0	0.0	17.0	0.0	8.4
Prop In Lane	1.00		0.01	1.00		0.18	0.24		0.42	1.00		0.91
Lane Grp Cap(c), veh/h	236	1226	1225	19	998	968	305	0	0	211	0	302
V/C Ratio(X)	0.92	0.22	0.22	0.59	0.94	0.96	0.11	0.00	0.00	1.17	0.00	0.55
Avail Cap(c_a), veh/h	236	1226	1225	79	1011	981	305	0	0	211	0	302
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	5.9	5.9	44.0	19.1	19.6	29.9	0.0	0.0	42.1	0.0	32.7
Incr Delay (d2), s/veh	37.6	0.1	0.1	25.7	15.2	19.7	0.2	0.0	0.0	115.0	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	7.3	2.0	2.0	0.4	21.9	23.4	0.6	0.0	0.0	11.5	0.0	3.5
Lane Grp Delay (d), s/veh	75.8	6.0	6.0	69.7	34.2	39.2	30.1	0.0	0.0	157.0	0.0	34.8
Lane Grp LOS	E	A	A	E	C	D	C			F		C
Approach Vol, veh/h		754			1875			33				412
Approach Delay, s/veh		26.1			36.9			30.1				107.8
Approach LOS		C			D			C				F
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	16.0	63.4		5.0	52.4			21.0				21.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	12.0	57.0		4.0	49.0			17.0				17.0
Max Q Clear Time (g_c+I1), s	12.9	7.1		2.6	46.4			10.5				19.0
Green Ext Time (p_c), s	0.0	32.9		0.0	2.0			1.1				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				43.7								
HCM 2010 LOS				D								
<b>Notes</b>												
























































HCM 2010 Signalized Intersection Summary  
 27: Lone Tree Way & James Donlon Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	218	55	545	12	124	85	1006	1270	10	54	950	165
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	300	315	1674	28	286	267	1238	2407	1023	76	1527	264
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.36	0.65	0.65	0.04	0.33	0.33
Sat Flow, veh/h	1757	1845	3136	161	1675	1568	3408	3689	1568	1757	4598	795
Grp Volume(v), veh/h	237	60	592	148	0	92	1093	1380	11	59	828	384
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1837	0	1568	1704	1845	1568	1757	1845	1704
Q Serve(g_s), s	11.6	2.5	9.7	6.5	0.0	4.6	26.9	18.6	0.2	3.0	17.3	17.4
Cycle Q Clear(g_c), s	11.6	2.5	9.7	6.5	0.0	4.6	26.9	18.6	0.2	3.0	17.3	17.4
Prop In Lane	1.00		1.00	0.09		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	300	315	1674	313	0	267	1238	2407	1023	76	1225	566
V/C Ratio(X)	0.79	0.19	0.35	0.47	0.00	0.34	0.88	0.57	0.01	0.78	0.68	0.68
Avail Cap(c_a), veh/h	333	350	1734	328	0	280	1522	2595	1103	157	1277	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	31.9	12.0	33.5	0.0	32.7	26.7	8.6	5.4	42.5	25.8	25.8
Incr Delay (d2), s/veh	11.1	0.3	0.1	1.1	0.0	0.8	5.5	0.3	0.0	15.9	1.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	6.1	1.2	3.5	3.1	0.0	1.9	12.3	7.6	0.1	1.7	8.1	7.7
Lane Grp Delay (d), s/veh	46.7	32.1	12.1	34.6	0.0	33.5	32.3	8.9	5.5	58.3	27.1	28.7
Lane Grp LOS	D	C	B	C		C	C	A	A	E	C	C
Approach Vol, veh/h		889			240			2484			1271	
Approach Delay, s/veh		22.7			34.2			19.2			29.1	
Approach LOS		C			C			B			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		19.3			19.3		36.5	62.5		7.9		33.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		17.0			16.0		40.0	63.0		8.0		31.0
Max Q Clear Time (g_c+I1), s		13.6			8.5		28.9	20.6		5.0		19.4
Green Ext Time (p_c), s		1.7			3.0		3.6	30.7		0.0		10.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.1								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr

Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	26	0	107	0	0	0	61	559	3	0	1786	31
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	176	0	157	495	184	157	84	2897	1231	3	3687	65
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.05	0.79	0.79	0.00	0.68	0.68
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5422	95
Grp Volume(v), veh/h	28	0	116	0	0	0	66	608	3	0	1320	655
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1828
Q Serve(g_s), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	3.0	0.0	0.0	12.4	12.5
Cycle Q Clear(g_c), s	1.0	0.0	5.0	0.0	0.0	0.0	2.6	3.0	0.0	0.0	12.4	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	176	0	157	495	184	157	84	2897	1231	3	2509	1243
V/C Ratio(X)	0.16	0.00	0.74	0.00	0.00	0.00	0.78	0.21	0.00	0.00	0.53	0.53
Avail Cap(c_a), veh/h	403	0	360	1136	423	360	252	3596	1528	101	3279	1625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	30.5	0.0	0.0	0.0	32.8	1.9	1.6	0.0	5.6	5.6
Incr Delay (d2), s/veh	0.4	0.0	6.7	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.5	0.0	2.2	0.0	0.0	0.0	1.5	0.8	0.0	0.0	4.5	4.5
Lane Grp Delay (d), s/veh	29.1	0.0	37.2	0.0	0.0	0.0	47.3	2.0	1.6	0.0	5.7	5.9
Lane Grp LOS	C		D				D	A	A		A	A
Approach Vol, veh/h		144			0			677			1975	
Approach Delay, s/veh		35.6			0.0			6.4			5.8	
Approach LOS		D						A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		11.0			11.0		7.3	58.8		0.0		51.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		10.0	68.0		4.0		62.0
Max Q Clear Time (g_c+I1), s		7.0			0.0		4.6	5.0		0.0		14.5
Green Ext Time (p_c), s		0.4			0.0		0.0	39.6		0.0		33.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				7.5								
HCM 2010 LOS				A								
<b>Notes</b>												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	72	75	136	412	421	98	73	456	86	55	1678	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	361	208	177	450	602	256	90	2052	376	77	1919	454
Arrive On Green	0.21	0.11	0.11	0.26	0.16	0.16	0.05	0.45	0.45	0.04	0.44	0.44
Sat Flow, veh/h	1757	1845	1568	1757	3689	1568	1757	4553	834	1757	4329	1024
Grp Volume(v), veh/h	78	82	148	448	458	107	79	400	189	60	1547	720
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1697	1757	1845	1664
Q Serve(g_s), s	4.3	4.8	10.8	29.8	13.9	6.2	5.2	7.8	8.1	4.0	47.1	49.7
Cycle Q Clear(g_c), s	4.3	4.8	10.8	29.8	13.9	6.2	5.2	7.8	8.1	4.0	47.1	49.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.49	1.00		0.62
Lane Grp Cap(c), veh/h	361	208	177	450	602	256	90	1663	765	77	1636	738
V/C Ratio(X)	0.22	0.39	0.84	1.00	0.76	0.42	0.88	0.24	0.25	0.78	0.95	0.98
Avail Cap(c_a), veh/h	361	252	214	450	1071	455	90	1663	765	135	1638	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	48.3	50.9	43.5	46.8	33.0	55.2	19.8	19.9	55.4	31.3	32.0
Incr Delay (d2), s/veh	0.3	1.2	21.0	41.2	2.0	1.1	57.0	0.1	0.2	15.4	11.8	27.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.0	2.4	5.4	18.6	6.8	2.5	3.8	3.6	3.5	2.1	24.4	26.1
Lane Grp Delay (d), s/veh	39.0	49.5	72.0	84.7	48.8	34.1	112.2	19.9	20.1	70.9	43.1	58.9
Lane Grp LOS	D	D	E	F	D	C	F	B	C	E	D	E
Approach Vol, veh/h		308			1013			668			2327	
Approach Delay, s/veh		57.6			63.2			30.9			48.7	
Approach LOS		E			E			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	28.1	17.2		34.0	23.1		10.0	56.8		9.1	55.9	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	12.0	16.0		30.0	34.0		6.0	49.0		9.0	52.0	
Max Q Clear Time (g_c+I1), s	6.3	12.8		31.8	15.9		7.2	10.1		6.0	51.7	
Green Ext Time (p_c), s	0.9	0.4		0.0	3.2		0.0	31.7		0.0	0.3	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				50.0								
HCM 2010 LOS				D								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
30: Ygnacio Valley Rd & Clayton Blvd












Cumulative Plus Project AM With Bypass  
3/16/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	231	384	37	485	1277	150	165	346	183	300	1182	571
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	307	1262	0	605	1747	0	234	1887	535	393	2146	608
Arrive On Green	0.09	0.23	0.00	0.18	0.32	0.00	0.07	0.34	0.34	0.12	0.39	0.39
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	251	417	0	527	1388	0	179	376	199	326	1285	621
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Cycle Q Clear(g_c), s	8.4	7.3	0.0	17.5	26.6	0.0	6.0	5.6	11.1	10.9	21.5	45.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	307	1262	0	605	1747	0	234	1887	535	393	2146	608
V/C Ratio(X)	0.82	0.33	0.00	0.87	0.79	0.00	0.77	0.20	0.37	0.83	0.60	1.02
Avail Cap(c_a), veh/h	323	1262	0	764	1907	0	235	1887	535	529	2146	608
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	37.4	0.0	46.4	36.3	0.0	53.1	27.0	28.9	50.2	28.3	35.5
Incr Delay (d2), s/veh	14.6	0.2	0.0	8.9	2.2	0.0	13.9	0.1	0.4	8.0	0.5	42.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.5	0.0	8.4	12.8	0.0	3.1	2.6	4.5	5.2	10.1	24.7
Lane Grp Delay (d), s/veh	66.4	37.5	0.0	55.3	38.5	0.0	67.0	27.1	29.3	58.2	28.8	77.6
Lane Grp LOS	E	D		E	D		E	C	C	E	C	F
Approach Vol, veh/h		668			1915			754			2232	
Approach Delay, s/veh		48.4			43.1			37.2			46.7	
Approach LOS		D			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	14.4	30.5		24.6	40.6		12.0	43.6		17.4	49.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	11.0	25.0		26.0	40.0		8.0	35.0		18.0	45.0	
Max Q Clear Time (g_c+I1), s	10.4	9.3		19.5	28.6		8.0	13.1		12.9	47.0	
Green Ext Time (p_c), s	0.1	10.9		1.2	8.1		0.0	16.0		0.5	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				44.4								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd






















Cumulative Plus Project AM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	692	5	10	999	12	7	0	31	8	0	4
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	18	2346	16	20	2335	28	241	0	72	215	0	72
Arrive On Green	0.01	0.64	0.64	0.01	0.64	0.64	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1757	3661	24	1757	3638	44	1393	0	1568	1356	0	1568
Grp Volume(v), veh/h	10	379	378	11	551	548	8	0	34	9	0	4
Grp Sat Flow(s),veh/h/ln	1757	1845	1840	1757	1845	1837	1393	0	1568	1356	0	1568
Q Serve(g_s), s	0.2	3.7	3.7	0.2	6.1	6.1	0.2	0.0	0.8	0.3	0.0	0.1
Cycle Q Clear(g_c), s	0.2	3.7	3.7	0.2	6.1	6.1	0.3	0.0	0.8	1.1	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1182	1179	20	1184	1179	241	0	72	215	0	72
V/C Ratio(X)	0.54	0.32	0.32	0.54	0.47	0.47	0.03	0.00	0.47	0.04	0.00	0.06
Avail Cap(c_a), veh/h	354	3758	3749	354	3758	3742	843	0	749	800	0	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	3.2	3.2	19.5	3.6	3.6	18.3	0.0	18.5	19.0	0.0	18.1
Incr Delay (d2), s/veh	22.4	0.2	0.2	20.8	0.3	0.3	0.1	0.0	4.8	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.2	0.8	0.8	0.2	1.3	1.3	0.1	0.0	0.4	0.1	0.0	0.0
Lane Grp Delay (d), s/veh	42.0	3.4	3.4	40.4	3.9	3.9	18.4	0.0	23.3	19.1	0.0	18.5
Lane Grp LOS	D	A	A	D	A	A	B		C	B		B
Approach Vol, veh/h		767			1110			42				13
Approach Delay, s/veh		3.9			4.3			22.3				18.9
Approach LOS		A			A			C				B
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	4.4	29.5		4.5	29.5			5.8				5.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	81.0		8.0	81.0			19.0				19.0
Max Q Clear Time (g_c+I1), s	2.2	5.7		2.2	8.1			2.8				3.1
Green Ext Time (p_c), s	0.0	17.5		0.0	17.5			0.1				0.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				4.6								
HCM 2010 LOS				A								
<b>Notes</b>												

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	110	325	782	116	118	326
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	157	2170	1345	199	475	424
Arrive On Green	0.09	0.59	0.43	0.43	0.27	0.27
Sat Flow, veh/h	1757	3689	3141	466	1757	1568
Grp Volume(v), veh/h	120	353	499	477	128	354
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1762	1757	1568
Q Serve(g_s), s	3.8	2.5	12.0	12.0	3.2	12.0
Cycle Q Clear(g_c), s	3.8	2.5	12.0	12.0	3.2	12.0
Prop In Lane	1.00			0.26	1.00	1.00
Lane Grp Cap(c), veh/h	157	2170	790	755	475	424
V/C Ratio(X)	0.77	0.16	0.63	0.63	0.27	0.84
Avail Cap(c_a), veh/h	435	3789	1306	1248	747	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	5.3	12.7	12.7	16.2	19.4
Incr Delay (d2), s/veh	7.6	0.0	0.8	0.9	0.3	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.9	5.0	4.8	1.4	0.6
Lane Grp Delay (d), s/veh	32.8	5.3	13.5	13.5	16.5	24.8
Lane Grp LOS	C	A	B	B	B	C
Approach Vol, veh/h		473	976		482	
Approach Delay, s/veh		12.3	13.5		22.6	
Approach LOS		B	B		C	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	9.0	37.2	28.2			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	14.0	58.0	40.0			
Max Q Clear Time (g_c+I1), s	5.8	4.5	14.0			
Green Ext Time (p_c), s	0.2	12.4	10.2			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			15.5			
HCM 2010 LOS			B			
<b>Notes</b>						





















HCM 2010 Signalized Intersection Summary  
 33: Somersville Rd & Fairview Dr

Cumulative Plus Project AM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	46	0	114	0	0	0	882	478	0	2	291	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	237	0	154	65	181	0	1001	2932	0	2	746	68
Arrive On Green	0.10	0.00	0.10	0.00	0.00	0.00	0.57	0.79	0.00	0.00	0.22	0.22
Sat Flow, veh/h	1757	0	1568	1250	1845	0	1757	3689	0	1757	3332	304
Grp Volume(v), veh/h	50	0	124	0	0	0	959	520	0	2	174	171
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1250	1845	0	1757	1845	0	1757	1845	1791
Q Serve(g_s), s	2.9	0.0	8.6	0.0	0.0	0.0	57.3	3.7	0.0	0.1	9.0	9.1
Cycle Q Clear(g_c), s	2.9	0.0	8.6	0.0	0.0	0.0	57.3	3.7	0.0	0.1	9.0	9.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.00	1.00		0.17
Lane Grp Cap(c), veh/h	237	0	154	65	181	0	1001	2932	0	2	413	401
V/C Ratio(X)	0.21	0.00	0.81	0.00	0.00	0.00	0.96	0.18	0.00	1.26	0.42	0.43
Avail Cap(c_a), veh/h	319	0	227	123	267	0	1190	2932	0	63	413	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	0.40	0.40	0.00	0.76	0.76	0.76
Uniform Delay (d), s/veh	46.4	0.0	48.9	0.0	0.0	0.0	22.6	2.7	0.0	55.4	36.8	36.9
Incr Delay (d2), s/veh	0.4	0.0	12.3	0.0	0.0	0.0	8.1	0.1	0.0	390.0	2.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	4.0	0.0	0.0	0.0	26.2	1.3	0.0	0.2	4.5	4.4
Lane Grp Delay (d), s/veh	46.8	0.0	61.2	0.0	0.0	0.0	30.7	2.8	0.0	445.3	39.2	39.4
Lane Grp LOS	D		E				C	A		F	D	D
Approach Vol, veh/h		174			0			1479			347	
Approach Delay, s/veh		57.1			0.0			20.9			41.6	
Approach LOS		E						C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		14.9			14.9		67.1	92.0		3.9		28.8
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		75.0	88.0		4.0		17.0
Max Q Clear Time (g_c+I1), s		10.6			0.0		59.3	5.7		2.1		11.1
Green Ext Time (p_c), s		0.3			0.0		3.8	4.1		0.0		1.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					27.6							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

Cumulative Plus Project AM With Bypass  
 3/16/2014



















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	376	174	24	500	8	681	7	32	9	2	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	22	493	225	39	779	13	903	9	959	190	38	24
Arrive On Green	0.01	0.21	0.21	0.02	0.22	0.22	0.61	0.61	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1757	2400	1096	1757	3619	60	1320	14	1568	176	62	40
Grp Volume(v), veh/h	13	313	285	26	277	275	748	0	35	14	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1651	1757	1845	1834	1334	0	1568	278	0	0
Q Serve(g_s), s	0.6	12.2	12.4	1.1	10.4	10.4	0.0	0.0	0.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.6	12.2	12.4	1.1	10.4	10.4	37.9	0.0	0.7	38.2	0.0	0.0
Prop In Lane	1.00		0.66	1.00		0.03	0.99		1.00	0.71		0.14
Lane Grp Cap(c), veh/h	22	379	339	39	397	395	912	0	959	253	0	0
V/C Ratio(X)	0.58	0.83	0.84	0.66	0.70	0.70	0.82	0.00	0.04	0.06	0.00	0.00
Avail Cap(c_a), veh/h	94	395	353	94	397	395	1140	0	1216	486	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.7	28.4	28.5	36.3	27.1	27.1	13.0	0.0	5.8	15.0	0.0	0.0
Incr Delay (d2), s/veh	22.0	13.1	15.8	17.5	5.3	5.3	4.0	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.4	6.9	6.6	0.7	5.3	5.3	11.8	0.0	0.2	0.2	0.0	0.0
Lane Grp Delay (d), s/veh	58.8	41.5	44.4	53.8	32.4	32.4	16.9	0.0	5.8	15.0	0.0	0.0
Lane Grp LOS	E	D	D	D	C	C	B		A	B		
Approach Vol, veh/h		611			578			783				14
Approach Delay, s/veh		43.2			33.4			16.4				15.0
Approach LOS		D			C			B				B
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	4.9	19.4		5.7	20.1			49.8				49.8
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	16.0		4.0	16.0			58.0				58.0
Max Q Clear Time (g_c+I1), s	2.6	14.4		3.1	12.4			39.9				40.2
Green Ext Time (p_c), s	0.0	1.0		0.0	2.2			5.6				5.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				29.6								
HCM 2010 LOS				C								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
 1: Railroad Ave & SR-4 WB OnRamp

Cumulative Plus Project PM With Bypass





















3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	127	262	58	532	775	392	258	820	321
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln				190.0	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes				0	2	0	2	2	0	1	2	1
Cap, veh/h				164	358	82	673	1170	587	379	1928	819
Arrive On Green				0.17	0.17	0.17	0.33	0.84	0.84	0.22	0.52	0.00
Sat Flow, veh/h				967	2106	483	3408	2320	1164	1757	3689	1568
Grp Volume(v), veh/h				256	0	230	578	668	600	280	891	0
Grp Sat Flow(s),veh/h/ln				1796	0	1759	1704	1845	1639	1757	1845	1568
Q Serve(g_s), s				15.1	0.0	13.6	17.3	15.8	16.2	16.2	16.6	0.0
Cycle Q Clear(g_c), s				15.1	0.0	13.6	17.3	15.8	16.2	16.2	16.6	0.0
Prop In Lane				0.54		0.27	1.00		0.71	1.00		1.00
Lane Grp Cap(c), veh/h				305	0	299	673	930	827	379	1928	819
V/C Ratio(X)				0.84	0.00	0.77	0.86	0.72	0.73	0.74	0.46	0.00
Avail Cap(c_a), veh/h				379	0	371	875	930	827	483	1928	819
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.65	0.65	0.65	1.00	1.00	0.00
Uniform Delay (d), s/veh				43.8	0.0	43.2	35.1	5.5	5.6	39.9	16.4	0.0
Incr Delay (d2), s/veh				12.9	0.0	7.5	4.6	3.1	3.6	4.4	0.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln				8.0	0.0	6.7	7.3	4.0	3.7	7.7	7.6	0.0
Lane Grp Delay (d), s/veh				56.7	0.0	50.7	39.8	8.6	9.2	44.3	17.2	0.0
Lane Grp LOS				E		D	D	A	A	D	B	
Approach Vol, veh/h					486			1846			1171	
Approach Delay, s/veh					53.8			18.6			23.7	
Approach LOS					D			B			C	
<b>Timer</b>												
Assigned Phs					8		5	2		1		6
Phs Duration (G+Y+Rc), s					22.5		25.5	59.0		27.5		61.0
Change Period (Y+Rc), s					4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s					23.0		28.0	55.0		30.0		57.0
Max Q Clear Time (g_c+I1), s					17.1		19.3	18.2		18.2		18.6
Green Ext Time (p_c), s					1.5		2.2	12.0		2.6		7.7
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay					25.2							
HCM 2010 LOS					C							
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 2: SR-4 EB OffRamp/SR-4 EB OnRamp & Railroad Ave
























Cumulative Plus Project PM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	575	0	863	0	0	0	0	978	114	83	601	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	190.0	184.5	184.5	0.0
Lanes	1	1	2				0	3	0	1	2	0
Cap, veh/h	725	761	1294				0	1734	202	203	1882	0
Arrive On Green	0.41	0.00	0.41				0.00	0.36	0.36	0.23	1.00	0.00
Sat Flow, veh/h	1757	1845	3136				0	4867	567	1757	3689	0
Grp Volume(v), veh/h	625	0	938				0	805	382	90	653	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1568				0	1845	1745	1757	1845	0
Q Serve(g_s), s	33.7	0.0	26.0				0.0	18.7	18.7	4.6	0.0	0.0
Cycle Q Clear(g_c), s	33.7	0.0	26.0				0.0	18.7	18.7	4.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.32	1.00		0.00
Lane Grp Cap(c), veh/h	725	761	1294				0	1314	621	203	1882	0
V/C Ratio(X)	0.86	0.00	0.72				0.00	0.61	0.61	0.44	0.35	0.00
Avail Cap(c_a), veh/h	998	1048	1781				0	1314	621	203	1882	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.86	0.86	0.00
Uniform Delay (d), s/veh	27.8	0.0	25.6				0.0	27.5	27.6	37.1	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.9				0.0	2.1	4.5	1.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.6	0.0	10.2				0.0	8.9	8.8	2.0	0.1	0.0
Lane Grp Delay (d), s/veh	33.7	0.0	26.5				0.0	29.7	32.0	38.4	0.4	0.0
Lane Grp LOS	C		C					C	C	D	A	
Approach Vol, veh/h		1563						1187			743	
Approach Delay, s/veh		29.4						30.4			5.0	
Approach LOS		C						C			A	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		46.9						41.0		16.0	57.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		59.0						37.0		12.0	53.0	
Max Q Clear Time (g_c+I1), s		35.7						20.7		6.6	2.0	
Green Ext Time (p_c), s		7.2						7.5		2.2	5.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			24.6									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
3: Railroad Ave & Leland Rd

























Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	226	869	177	97	336	224	76	612	144	501	932	281
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	2	1	1	2	1
Cap, veh/h	273	921	187	103	785	334	291	727	309	529	1228	522
Arrive On Green	0.16	0.31	0.31	0.06	0.21	0.21	0.17	0.20	0.20	0.30	0.33	0.33
Sat Flow, veh/h	1757	2978	604	1757	3689	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	246	585	552	105	365	243	83	665	157	545	1013	305
Grp Sat Flow(s),veh/h/ln	1757	1845	1738	1757	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	16.4	37.0	37.0	7.0	10.3	9.2	4.9	21.1	9.0	36.0	30.2	12.9
Cycle Q Clear(g_c), s	16.4	37.0	37.0	7.0	10.3	9.2	4.9	21.1	9.0	36.0	30.2	12.9
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	571	538	103	785	334	291	727	309	529	1228	522
V/C Ratio(X)	0.90	1.02	1.03	1.02	0.47	0.73	0.29	0.91	0.51	1.03	0.82	0.58
Avail Cap(c_a), veh/h	294	571	538	103	785	334	291	740	315	529	1481	629
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.6	41.3	41.3	56.3	41.1	12.4	43.7	47.0	30.5	41.8	36.7	14.7
Incr Delay (d2), s/veh	27.8	44.1	45.7	94.5	0.4	7.8	0.5	15.7	1.3	47.2	3.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.6	24.4	23.3	5.9	5.0	4.1	2.3	11.6	3.7	23.1	14.6	5.0
Lane Grp Delay (d), s/veh	77.4	85.4	87.0	150.8	41.6	20.3	44.2	62.7	31.8	89.0	40.0	15.7
Lane Grp LOS	E	F	F	F	D	C	D	E	C	F	D	B
Approach Vol, veh/h		1383			713			905			1863	
Approach Delay, s/veh		84.6			50.4			55.7			50.4	
Approach LOS		F			D			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	22.6	41.0		11.0	29.4		23.8	27.6		40.0	43.8	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	20.0	37.0		7.0	24.0		12.0	24.0		36.0	48.0	
Max Q Clear Time (g_c+I1), s	18.4	39.0		9.0	12.3		6.9	23.1		38.0	32.2	
Green Ext Time (p_c), s	0.1	0.0		0.0	7.8		1.1	0.5		0.0	7.6	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				61.1								
HCM 2010 LOS				E								
<b>Notes</b>												

























HCM 2010 Signalized Intersection Summary  
4: Railroad Ave & Buchanan Rd

Cumulative Plus Project PM With Bypass

3/16/2014





























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	55	3	299	117	127	38	764	897	124	618	127
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	1	1	2	1	1	2	1
Cap, veh/h	224	235	200	435	235	200	77	2411	1025	166	2599	1104
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.04	0.65	0.65	0.09	0.70	0.70
Sat Flow, veh/h	1757	1845	1568	3408	1845	1568	1757	3689	1568	1757	3689	1568
Grp Volume(v), veh/h	67	60	3	325	127	138	41	830	975	135	672	138
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	1757	1845	1568
Q Serve(g_s), s	3.3	2.8	0.2	8.9	6.2	8.1	2.2	9.7	55.1	7.3	6.4	2.8
Cycle Q Clear(g_c), s	3.3	2.8	0.2	8.9	6.2	8.1	2.2	9.7	55.1	7.3	6.4	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	235	200	435	235	200	77	2411	1025	166	2599	1104
V/C Ratio(X)	0.30	0.26	0.02	0.75	0.54	0.69	0.53	0.34	0.95	0.81	0.26	0.12
Avail Cap(c_a), veh/h	327	343	292	564	305	259	291	2518	1070	254	2599	1104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	38.0	36.9	40.7	39.5	40.4	45.2	7.5	15.3	42.9	5.2	4.6
Incr Delay (d2), s/veh	0.7	0.6	0.0	4.0	1.9	5.1	5.5	0.1	16.7	10.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	1.3	0.1	4.0	3.0	3.5	1.1	3.9	24.0	3.8	2.4	0.9
Lane Grp Delay (d), s/veh	39.0	38.6	36.9	44.7	41.4	45.5	50.8	7.6	32.1	53.8	5.2	4.7
Lane Grp LOS	D	D	D	D	D	D	D	A	C	D	A	A
Approach Vol, veh/h		130			590			1846			945	
Approach Delay, s/veh		38.8			44.2			21.5			12.1	
Approach LOS		D			D			C			B	
<b>Timer</b>												
Assigned Phs		2			6		3	8		7		4
Phs Duration (G+Y+Rc), s		16.3			16.3		8.3	67.2		13.2		72.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0			16.0		16.0	66.0		14.0		64.0
Max Q Clear Time (g_c+I1), s		5.3			10.9		4.2	57.1		9.3		8.4
Green Ext Time (p_c), s		2.4			1.4		0.0	6.1		0.1		30.4
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.4								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
5: Kirker Pass Rd & Montreux Entrance






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	30	27	843	48	37	47	1473	1444	67	703	139
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	1	2	1	2	2	1	2	1
Cap, veh/h	537	564	479	1041	564	958	65	2249	1912	97	1957	832
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.04	0.61	0.61	0.53	0.53	0.53
Sat Flow, veh/h	1757	1845	1568	3408	1845	3136	1757	3689	3136	66	3689	1568
Grp Volume(v), veh/h	87	33	29	916	52	40	51	1601	1570	73	764	151
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1704	1845	1568	1757	1845	1568	66	1845	1568
Q Serve(g_s), s	3.4	1.2	1.2	24.1	1.9	0.8	2.7	28.2	36.9	29.3	11.6	4.7
Cycle Q Clear(g_c), s	3.4	1.2	1.2	24.1	1.9	0.8	2.7	28.2	36.9	50.0	11.6	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	537	564	479	1041	564	958	65	2249	1912	97	1957	832
V/C Ratio(X)	0.16	0.06	0.06	0.88	0.09	0.04	0.79	0.71	0.82	0.75	0.39	0.18
Avail Cap(c_a), veh/h	537	564	479	1229	665	1131	75	2270	1929	97	1957	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	23.2	23.2	31.1	23.4	23.0	45.0	12.7	14.4	43.0	13.1	11.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	6.8	0.1	0.0	37.4	1.1	3.0	28.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.5	0.6	0.5	11.2	0.9	0.3	1.9	11.9	13.9	2.5	5.0	1.8
Lane Grp Delay (d), s/veh	24.1	23.2	23.2	37.8	23.5	23.0	82.4	13.7	17.3	71.1	13.2	11.6
Lane Grp LOS	C	C	C	D	C	C	F	B	B	E	B	B
Approach Vol, veh/h		149			1008			3222			988	
Approach Delay, s/veh		23.7			36.5			16.6			17.3	
Approach LOS		C			D			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2			6	
Phs Duration (G+Y+Rc), s		32.8			32.8		7.5	61.5			54.0	
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0			4.0	
Max Green Setting (Gmax), s		16.0			34.0		4.0	58.0			50.0	
Max Q Clear Time (g_c+I1), s		5.4			26.1		4.7	38.9			52.0	
Green Ext Time (p_c), s		3.7			2.7		0.0	18.4			0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				20.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
6: Harbor St & Leland Rd





























Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Volume (veh/h)	102	905	186	191	297	121	87	277	298	263	458	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Cap, veh/h	141	1089	463	239	1296	551	121	754	320	321	875	253
Arrive On Green	0.08	0.30	0.30	0.14	0.35	0.35	0.07	0.20	0.20	0.18	0.32	0.32
Sat Flow, veh/h	1757	3689	1568	1757	3689	1568	1757	3689	1568	1757	2752	797
Grp Volume(v), veh/h	111	984	202	208	323	132	95	301	324	286	333	310
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1568	1757	1845	1704
Q Serve(g_s), s	5.5	22.6	9.2	10.2	5.5	5.3	4.7	6.2	18.0	14.0	13.2	13.4
Cycle Q Clear(g_c), s	5.5	22.6	9.2	10.2	5.5	5.3	4.7	6.2	18.0	14.0	13.2	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.47
Lane Grp Cap(c), veh/h	141	1089	463	239	1296	551	121	754	320	321	586	542
V/C Ratio(X)	0.79	0.90	0.44	0.87	0.25	0.24	0.78	0.40	1.01	0.89	0.57	0.57
Avail Cap(c_a), veh/h	239	1131	481	239	1296	551	199	754	320	339	586	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	29.8	25.1	37.3	20.3	20.2	40.3	30.4	35.0	35.1	25.0	25.0
Incr Delay (d2), s/veh	9.4	10.0	0.6	27.1	0.1	0.2	10.5	0.3	53.1	23.5	1.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.8	11.9	3.6	6.4	2.5	2.0	2.4	2.9	11.8	8.2	6.2	5.9
Lane Grp Delay (d), s/veh	49.2	39.9	25.8	64.4	20.4	20.5	50.8	30.7	88.1	58.6	26.3	26.5
Lane Grp LOS	D	D	C	E	C	C	D	C	F	E	C	C
Approach Vol, veh/h		1297			663			720			929	
Approach Delay, s/veh		38.5			34.2			59.2			36.3	
Approach LOS		D			C			E			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.1	30.0		16.0	34.9		10.1	22.0		20.1		32.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	12.0	27.0		12.0	27.0		10.0	18.0		17.0		25.0
Max Q Clear Time (g_c+I1), s	7.5	24.6		12.2	7.5		6.7	20.0		16.0		15.4
Green Ext Time (p_c), s	0.1	1.4		0.0	10.5		0.1	0.0		0.1		4.9
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				41.3								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
7: Buchanan Rd & Harbor St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	79	908	31	24	467	96	18	43	9	144	83	95
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Cap, veh/h	109	1218	42	33	1187	1009	35	74	16	185	107	122
Arrive On Green	0.06	0.69	0.69	0.02	0.64	0.64	0.02	0.05	0.05	0.11	0.14	0.14
Sat Flow, veh/h	1757	1773	61	1757	1845	1568	1757	1475	314	1757	786	900
Grp Volume(v), veh/h	86	0	1021	26	508	104	20	0	57	157	0	193
Grp Sat Flow(s),veh/h/ln	1757	0	1834	1757	1845	1568	1757	0	1789	1757	0	1686
Q Serve(g_s), s	5.6	0.0	45.2	1.7	15.6	2.9	1.3	0.0	3.6	10.1	0.0	12.9
Cycle Q Clear(g_c), s	5.6	0.0	45.2	1.7	15.6	2.9	1.3	0.0	3.6	10.1	0.0	12.9
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.18	1.00		0.53
Lane Grp Cap(c), veh/h	109	0	1260	33	1187	1009	35	0	90	185	0	229
V/C Ratio(X)	0.79	0.00	0.81	0.80	0.43	0.10	0.58	0.00	0.64	0.85	0.00	0.84
Avail Cap(c_a), veh/h	199	0	1260	61	1187	1009	76	0	249	229	0	381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.00	0.47	0.60	0.60	0.60	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.2	0.0	12.7	56.2	10.1	7.8	55.9	0.0	53.6	50.5	0.0	48.5
Incr Delay (d2), s/veh	5.9	0.0	2.8	22.5	0.7	0.1	14.4	0.0	7.3	21.0	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.7	0.0	18.8	1.0	6.6	1.0	0.7	0.0	1.9	5.7	0.0	6.2
Lane Grp Delay (d), s/veh	59.1	0.0	15.5	78.8	10.8	8.0	70.3	0.0	60.9	71.5	0.0	57.0
Lane Grp LOS	E		B	E	B	A	E		E	E		E
Approach Vol, veh/h		1107			638			77				350
Approach Delay, s/veh		18.9			13.1			63.3				63.5
Approach LOS		B			B			E				E
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7		4
Phs Duration (G+Y+Rc), s	11.1	83.0		6.1	78.0		6.3	9.8		16.1		19.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	13.0	79.0		4.0	70.0		5.0	16.0		15.0		26.0
Max Q Clear Time (g_c+I1), s	7.6	47.2		3.7	17.6		3.3	5.6		12.1		14.9
Green Ext Time (p_c), s	0.1	10.2		0.0	4.0		0.0	0.2		0.1		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				25.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
8: SR-4 WB Ramps & California Ave























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 					 		 
Volume (veh/h)	32	721	25	650	284	90	44	26	252	78	65	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	2	2	1	1	1	1	1	1	0
Cap, veh/h	51	1325	46	1054	2412	1025	338	355	302	338	301	47
Arrive On Green	0.03	0.37	0.37	0.31	0.65	0.65	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1757	3546	122	3408	3689	1568	1757	1845	1568	1757	1560	242
Grp Volume(v), veh/h	35	408	403	707	309	98	48	28	274	85	0	82
Grp Sat Flow(s),veh/h/ln	1757	1845	1823	1704	1845	1568	1757	1845	1568	1757	0	1802
Q Serve(g_s), s	1.9	17.1	17.1	17.4	3.1	2.2	2.2	1.2	16.5	4.0	0.0	3.7
Cycle Q Clear(g_c), s	1.9	17.1	17.1	17.4	3.1	2.2	2.2	1.2	16.5	4.0	0.0	3.7
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.13
Lane Grp Cap(c), veh/h	51	689	681	1054	2412	1025	338	355	302	338	0	347
V/C Ratio(X)	0.68	0.59	0.59	0.67	0.13	0.10	0.14	0.08	0.91	0.25	0.00	0.24
Avail Cap(c_a), veh/h	109	689	681	1167	2412	1025	346	364	309	338	0	347
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.3	24.3	24.3	29.0	6.3	6.2	32.3	31.9	38.1	33.0	0.0	32.9
Incr Delay (d2), s/veh	14.9	3.7	3.8	1.1	0.1	0.1	0.2	0.1	28.5	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	8.5	8.4	7.5	1.3	0.8	1.0	0.6	8.8	1.8	0.0	1.7
Lane Grp Delay (d), s/veh	61.3	28.0	28.0	30.1	6.4	6.3	32.5	32.0	66.5	33.4	0.0	33.3
Lane Grp LOS	E	C	C	C	A	A	C	C	E	C		C
Approach Vol, veh/h		846			1114			350				167
Approach Delay, s/veh		29.4			21.4			59.1				33.3
Approach LOS		C			C			E				C
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	6.8	40.0		33.8	67.0			22.6				22.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	6.0	36.0		33.0	63.0			19.0				16.0
Max Q Clear Time (g_c+I1), s	3.9	19.1		19.4	5.1			18.5				6.0
Green Ext Time (p_c), s	0.7	4.8		2.5	2.6			0.1				1.5
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.3								
HCM 2010 LOS				C								
<b>Notes</b>												



HCM 2010 Signalized Intersection Summary  
9: Loveridge Rd & California Ave/N Park Blvd

Cumulative Plus Project PM With Bypass

























3/16/2014













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	333	315	371	95	164	19	492	617	213	19	196	287
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	1	2	2	0	2	2	0	1	2	1
Cap, veh/h	884	548	465	166	280	33	821	1133	392	78	869	369
Arrive On Green	0.26	0.30	0.30	0.05	0.09	0.09	0.24	0.43	0.43	0.04	0.24	0.24
Sat Flow, veh/h	3408	1845	1568	3408	3245	378	3408	2623	907	1757	3689	1568
Grp Volume(v), veh/h	362	342	403	103	100	99	535	472	431	21	213	312
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1778	1704	1845	1685	1757	1845	1568
Q Serve(g_s), s	7.9	14.4	21.9	2.7	4.7	4.8	12.7	17.6	17.6	1.0	4.2	17.1
Cycle Q Clear(g_c), s	7.9	14.4	21.9	2.7	4.7	4.8	12.7	17.6	17.6	1.0	4.2	17.1
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.54	1.00		1.00
Lane Grp Cap(c), veh/h	884	548	465	166	159	153	821	797	728	78	869	369
V/C Ratio(X)	0.41	0.62	0.87	0.62	0.63	0.64	0.65	0.59	0.59	0.27	0.25	0.84
Avail Cap(c_a), veh/h	884	718	610	265	472	455	1099	944	862	313	1354	575
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	27.3	29.9	42.0	39.7	39.8	30.7	19.5	19.5	41.5	27.9	32.8
Incr Delay (d2), s/veh	0.3	1.2	10.0	3.8	4.1	4.5	0.9	0.7	0.8	1.8	0.1	6.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.4	6.7	9.7	1.2	2.4	2.4	5.5	8.0	7.3	0.5	1.9	7.3
Lane Grp Delay (d), s/veh	27.9	28.5	39.9	45.7	43.8	44.2	31.6	20.2	20.3	43.4	28.0	39.6
Lane Grp LOS	C	C	D	D	D	D	C	C	C	D	C	D
Approach Vol, veh/h		1107			302			1438			546	
Approach Delay, s/veh		32.5			44.6			24.5			35.2	
Approach LOS		C			D			C			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	27.3	30.7		8.4	11.7		25.7	42.9		8.0		25.2
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	19.0	35.0		7.0	23.0		29.0	46.0		16.0		33.0
Max Q Clear Time (g_c+I1), s	9.9	23.9		4.7	6.8		14.7	19.6		3.0		19.1
Green Ext Time (p_c), s	1.2	2.8		0.1	0.9		7.0	9.3		0.0		2.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				30.6								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 10: Loveridge Rd & SR-4 EB Ramps























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	839	0	518	0	0	0	0	719	398	139	525	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	0				0	2	1	2	2	0
Cap, veh/h	1390	0	640				0	1467	623	301	1923	0
Arrive On Green	0.41	0.00	0.41				0.00	0.40	0.40	0.09	0.52	0.00
Sat Flow, veh/h	3408	0	1568				0	3689	1568	3408	3689	0
Grp Volume(v), veh/h	912	0	563				0	782	433	151	571	0
Grp Sat Flow(s),veh/h/ln	1704	0	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	24.5	0.0	37.5				0.0	18.3	26.0	4.8	9.9	0.0
Cycle Q Clear(g_c), s	24.5	0.0	37.5				0.0	18.3	26.0	4.8	9.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1390	0	640				0	1467	623	301	1923	0
V/C Ratio(X)	0.66	0.00	0.88				0.00	0.53	0.69	0.50	0.30	0.00
Avail Cap(c_a), veh/h	1596	0	734				0	1467	623	301	1923	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	27.1	0.0	30.9				0.0	26.1	28.4	49.2	15.3	0.0
Incr Delay (d2), s/veh	0.8	0.0	10.9				0.0	1.4	6.3	1.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	10.4	0.0	16.5				0.0	8.8	11.3	2.2	4.5	0.0
Lane Grp Delay (d), s/veh	27.9	0.0	41.8				0.0	27.4	34.6	50.4	15.7	0.0
Lane Grp LOS	C		D					C	C	D	B	
Approach Vol, veh/h		1475						1215			722	
Approach Delay, s/veh		33.2						30.0			22.9	
Approach LOS		C						C			C	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		50.2						49.0		14.0	63.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		53.0						45.0		10.0	59.0	
Max Q Clear Time (g_c+I1), s		39.5						28.0		6.8	11.9	
Green Ext Time (p_c), s		6.6						6.7		1.4	5.1	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			29.9									
HCM 2010 LOS			C									
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 11: Loveridge Rd & Leland Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	566	1166	253	223	428	148	216	488	159	260	423	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	2	1	2	2	1	1	2	1	2	2	1
Cap, veh/h	714	1579	671	306	1137	483	268	841	357	349	656	279
Arrive On Green	0.21	0.43	0.43	0.09	0.31	0.31	0.15	0.23	0.23	0.10	0.18	0.18
Sat Flow, veh/h	3408	3689	1568	3408	3689	1568	1757	3689	1568	3408	3689	1568
Grp Volume(v), veh/h	615	1267	275	242	465	161	235	530	173	283	460	141
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	1845	1568	1757	1845	1568	1704	1845	1568
Q Serve(g_s), s	18.3	31.5	12.8	7.3	10.5	8.3	13.8	13.6	10.1	8.6	12.3	8.6
Cycle Q Clear(g_c), s	18.3	31.5	12.8	7.3	10.5	8.3	13.8	13.6	10.1	8.6	12.3	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	714	1579	671	306	1137	483	268	841	357	349	656	279
V/C Ratio(X)	0.86	0.80	0.41	0.79	0.41	0.33	0.88	0.63	0.48	0.81	0.70	0.51
Avail Cap(c_a), veh/h	970	1750	744	356	1137	483	350	1050	446	420	770	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	26.3	20.9	47.0	28.9	28.1	43.7	36.7	35.3	46.3	40.7	39.1
Incr Delay (d2), s/veh	6.1	2.6	0.4	10.0	0.2	0.4	17.6	0.8	1.0	9.6	2.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.5	15.0	5.0	3.6	4.9	3.3	7.5	6.5	4.1	4.2	6.0	3.5
Lane Grp Delay (d), s/veh	46.2	28.8	21.3	57.0	29.1	28.5	61.2	37.5	36.3	55.9	43.0	40.5
Lane Grp LOS	D	C	C	E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		2157			868			938			884	
Approach Delay, s/veh		32.8			36.8			43.2			46.7	
Approach LOS		C			D			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	26.1	49.1		13.5	36.5		20.1	28.0		14.8	22.7	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	30.0	50.0		11.0	31.0		21.0	30.0		13.0	22.0	
Max Q Clear Time (g_c+I1), s	20.3	33.5		9.3	12.5		15.8	15.6		10.6	14.3	
Green Ext Time (p_c), s	1.7	11.6		0.1	13.2		0.3	6.7		0.2	4.4	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.1								
HCM 2010 LOS				D								
<b>Notes</b>												






















						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	151	846	350	255	427	291
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	305	1189	808	686	509	454
Arrive On Green	0.17	0.64	0.88	0.88	0.29	0.29
Sat Flow, veh/h	1757	1845	1845	1568	1757	1568
Grp Volume(v), veh/h	164	920	380	277	464	316
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1568	1757	1568
Q Serve(g_s), s	10.3	42.8	5.3	4.1	30.9	21.7
Cycle Q Clear(g_c), s	10.3	42.8	5.3	4.1	30.9	21.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	305	1189	808	686	509	454
V/C Ratio(X)	0.54	0.77	0.47	0.40	0.91	0.70
Avail Cap(c_a), veh/h	305	1189	808	686	639	570
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.89	0.89	1.00	1.00
Uniform Delay (d), s/veh	45.6	15.3	4.6	4.5	41.5	38.3
Incr Delay (d2), s/veh	0.5	1.5	1.7	1.6	15.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.6	18.1	1.8	1.4	15.9	0.3
Lane Grp Delay (d), s/veh	46.2	16.8	6.3	6.1	56.7	40.9
Lane Grp LOS	D	B	A	A	E	D
Approach Vol, veh/h		1084	657		780	
Approach Delay, s/veh		21.2	6.2		50.3	
Approach LOS		C	A		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.0	82.0	57.0			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	21.0	78.0	53.0			
Max Q Clear Time (g_c+I1), s	12.3	44.8	7.3			
Green Ext Time (p_c), s	4.6	9.0	3.5			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			26.3			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 13: Ventura Dr & Buchanan Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	1153	147	55	524	12	105	23	68	199	104	18
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	1	1	1	0	1	1	0	1	1	0
Cap, veh/h	54	1263	1073	68	1244	28	203	76	225	224	282	50
Arrive On Green	0.04	0.91	0.91	0.04	0.69	0.69	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1757	1845	1568	1757	1796	41	1239	412	1218	1278	1527	270
Grp Volume(v), veh/h	8	1253	160	60	0	583	114	0	99	216	0	133
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	0	1837	1239	0	1630	1278	0	1797
Q Serve(g_s), s	0.6	81.8	1.4	4.4	0.0	18.6	11.6	0.0	6.9	17.1	0.0	8.5
Cycle Q Clear(g_c), s	0.6	81.8	1.4	4.4	0.0	18.6	20.1	0.0	6.9	24.0	0.0	8.5
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.75	1.00		0.15
Lane Grp Cap(c), veh/h	54	1263	1073	68	0	1272	203	0	301	224	0	332
V/C Ratio(X)	0.15	0.99	0.15	0.89	0.00	0.46	0.56	0.00	0.33	0.96	0.00	0.40
Avail Cap(c_a), veh/h	54	1263	1073	68	0	1272	203	0	301	224	0	332
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.47	0.91	0.00	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.7	5.5	1.9	62.2	0.0	9.0	55.5	0.0	46.0	58.3	0.0	46.7
Incr Delay (d2), s/veh	0.6	15.7	0.1	67.7	0.0	1.1	3.4	0.0	0.6	49.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.3	9.3	0.4	3.3	0.0	7.7	3.9	0.0	2.9	10.4	0.0	4.0
Lane Grp Delay (d), s/veh	61.3	21.2	2.0	130.0	0.0	10.1	59.0	0.0	46.6	108.3	0.0	47.5
Lane Grp LOS	E	C	A	F		B	E		D	F		D
Approach Vol, veh/h		1421			643			213				349
Approach Delay, s/veh		19.2			21.3			53.2				85.1
Approach LOS		B			C			D				F
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	8.0	93.0		9.0	94.0			28.0				28.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	4.0	89.0		5.0	90.0			24.0				24.0
Max Q Clear Time (g_c+I1), s	2.6	83.8		6.4	20.6			22.1				26.0
Green Ext Time (p_c), s	1.2	4.1		0.0	4.3			0.5				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				31.2								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 14: Ventura Dr & James Donlon Blvd

Cumulative Plus Project PM With Bypass  
 3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	1486	54	88	898	49	31	44	54	37	73	35
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	47	2086	76	123	2194	119	47	74	91	53	119	57
Arrive On Green	0.03	0.59	0.59	0.07	0.63	0.63	0.03	0.10	0.10	0.03	0.10	0.10
Sat Flow, veh/h	1757	3538	129	1757	3468	188	1757	754	927	1757	1178	567
Grp Volume(v), veh/h	33	840	834	96	519	510	34	0	107	40	0	117
Grp Sat Flow(s),veh/h/ln	1757	1845	1822	1757	1845	1811	1757	0	1681	1757	0	1745
Q Serve(g_s), s	1.4	25.8	26.1	4.1	10.8	10.8	1.4	0.0	4.6	1.7	0.0	4.9
Cycle Q Clear(g_c), s	1.4	25.8	26.1	4.1	10.8	10.8	1.4	0.0	4.6	1.7	0.0	4.9
Prop In Lane	1.00		0.07	1.00		0.10	1.00		0.55	1.00		0.32
Lane Grp Cap(c), veh/h	47	1088	1074	123	1167	1146	47	0	165	53	0	177
V/C Ratio(X)	0.71	0.77	0.78	0.78	0.44	0.44	0.72	0.00	0.65	0.76	0.00	0.66
Avail Cap(c_a), veh/h	140	1151	1137	163	1175	1154	93	0	357	93	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	11.6	11.7	34.5	7.1	7.1	36.4	0.0	32.7	36.3	0.0	32.6
Incr Delay (d2), s/veh	17.9	3.1	3.3	16.1	0.3	0.3	18.1	0.0	4.2	19.4	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	11.2	11.2	2.3	4.3	4.2	0.9	0.0	2.1	1.0	0.0	2.3
Lane Grp Delay (d), s/veh	54.3	14.8	15.0	50.6	7.3	7.3	54.4	0.0	36.9	55.6	0.0	36.8
Lane Grp LOS	D	B	B	D	A	A	D		D	E		D
Approach Vol, veh/h		1707			1125			141			157	
Approach Delay, s/veh		15.7			11.0			41.2			41.6	
Approach LOS		B			B			D			D	
<b>Timer</b>												
Assigned Phs	5	2		1	6		3	8		7	4	
Phs Duration (G+Y+Rc), s	6.0	48.4		9.3	51.7		6.0	11.4		6.3	11.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	6.0	47.0		7.0	48.0		4.0	16.0		4.0	16.0	
Max Q Clear Time (g_c+I1), s	3.4	28.1		6.1	12.8		3.4	6.6		3.7	6.9	
Green Ext Time (p_c), s	0.0	16.3		0.0	27.4		0.0	0.8		0.0	0.8	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.4								
HCM 2010 LOS				B								
<b>Notes</b>												

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1450	28	94	665	17	55
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1489	1266	73	1627	90	80
Arrive On Green	0.81	0.81	0.08	1.00	0.05	0.05
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1576	30	102	723	18	60
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	97.0	0.5	5.0	0.0	1.2	4.5
Cycle Q Clear(g_c), s	97.0	0.5	5.0	0.0	1.2	4.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1489	1266	73	1627	90	80
V/C Ratio(X)	1.06	0.02	1.40	0.44	0.20	0.75
Avail Cap(c_a), veh/h	1489	1266	73	1627	234	209
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.85	0.85	1.00	1.00
Uniform Delay (d), s/veh	11.6	2.3	55.1	0.0	54.6	56.2
Incr Delay (d2), s/veh	28.1	0.0	234.1	0.8	1.1	12.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	43.5	0.1	6.9	0.3	0.6	2.1
Lane Grp Delay (d), s/veh	39.6	2.3	289.2	0.8	55.7	69.1
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1606			825	78	
Approach Delay, s/veh	38.9			36.4	66.0	
Approach LOS	D			D	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	101.0		9.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	97.0		5.0	106.0		
Max Q Clear Time (g_c+I1), s	99.0		7.0	2.0		
Green Ext Time (p_c), s	0.0		0.0	5.7		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			39.0			
HCM 2010 LOS			D			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
 16: James Donlon Blvd & Tuscany Meadows Dr























Cumulative Plus Project PM With Bypass













3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	131	1384	28	33	881	12	13	27	22	8	18	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	182	2239	45	51	1984	27	24	93	77	16	30	124
Arrive On Green	0.10	0.62	0.62	0.03	0.55	0.55	0.01	0.10	0.10	0.01	0.10	0.10
Sat Flow, veh/h	1757	3605	72	1757	3631	49	1757	935	774	1757	314	1301
Grp Volume(v), veh/h	142	769	765	36	487	484	14	0	53	9	0	103
Grp Sat Flow(s),veh/h/ln	1757	1845	1832	1757	1845	1836	1757	0	1708	1757	0	1615
Q Serve(g_s), s	5.2	18.0	18.1	1.4	10.8	10.8	0.5	0.0	1.9	0.3	0.0	4.1
Cycle Q Clear(g_c), s	5.2	18.0	18.1	1.4	10.8	10.8	0.5	0.0	1.9	0.3	0.0	4.1
Prop In Lane	1.00		0.04	1.00		0.03	1.00		0.45	1.00		0.81
Lane Grp Cap(c), veh/h	182	1146	1138	51	1008	1003	24	0	171	16	0	154
V/C Ratio(X)	0.78	0.67	0.67	0.70	0.48	0.48	0.58	0.00	0.31	0.56	0.00	0.67
Avail Cap(c_a), veh/h	396	1331	1322	132	1054	1049	106	0	437	106	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	8.2	8.2	32.0	9.3	9.3	32.6	0.0	27.8	32.8	0.0	29.1
Incr Delay (d2), s/veh	7.0	1.1	1.1	15.9	0.4	0.4	20.3	0.0	1.0	26.6	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.6	7.2	7.1	0.8	4.4	4.4	0.4	0.0	0.8	0.3	0.0	1.8
Lane Grp Delay (d), s/veh	36.1	9.3	9.3	47.9	9.7	9.7	52.9	0.0	28.8	59.4	0.0	34.0
Lane Grp LOS	D	A	A	D	A	A	D		C	E		C
Approach Vol, veh/h		1676			1007			67				112
Approach Delay, s/veh		11.6			11.0			33.8				36.0
Approach LOS		B			B			C				D
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	10.9	45.3		5.9	40.3		4.9	10.7		4.6		10.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	15.0	48.0		5.0	38.0		4.0	17.0		4.0		17.0
Max Q Clear Time (g_c+I1), s	7.2	20.1		3.4	12.8		2.5	3.9		2.3		6.1
Green Ext Time (p_c), s	0.2	21.2		0.0	19.6		0.0	0.6		0.0		0.6
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				12.8								
HCM 2010 LOS				B								
<b>Notes</b>												























	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Volume (veh/h)	1501	66	80	780	36	43
Number	2	12	1	6	3	18
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	1	1	1
Cap, veh/h	1515	1288	59	1639	78	70
Arrive On Green	1.00	1.00	0.03	0.89	0.04	0.04
Sat Flow, veh/h	1845	1568	1757	1845	1757	1568
Grp Volume(v), veh/h	1632	72	87	848	39	47
Grp Sat Flow(s),veh/h/ln	1845	1568	1757	1845	1757	1568
Q Serve(g_s), s	98.0	0.0	4.0	11.3	2.6	3.5
Cycle Q Clear(g_c), s	98.0	0.0	4.0	11.3	2.6	3.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1515	1288	59	1639	78	70
V/C Ratio(X)	1.08	0.06	1.48	0.52	0.50	0.67
Avail Cap(c_a), veh/h	1515	1288	59	1639	236	210
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	57.7	1.4	55.7	56.1
Incr Delay (d2), s/veh	36.2	0.0	285.8	1.2	4.8	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.2	0.0	6.5	2.7	1.3	1.6
Lane Grp Delay (d), s/veh	36.2	0.0	343.5	2.5	60.5	66.8
Lane Grp LOS	F	A	F	A	E	E
Approach Vol, veh/h	1704			935	86	
Approach Delay, s/veh	34.7			34.3	63.9	
Approach LOS	C			C	E	
<b>Timer</b>						
Assigned Phs	2		1	6		
Phs Duration (G+Y+Rc), s	102.0		8.0	110.0		
Change Period (Y+Rc), s	4.0		4.0	4.0		
Max Green Setting (Gmax), s	98.0		4.0	106.0		
Max Q Clear Time (g_c+I1), s	100.0		6.0	13.3		
Green Ext Time (p_c), s	0.0		0.0	7.4		
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			35.4			
HCM 2010 LOS			D			
<b>Notes</b>						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	381	140	268	223	71	25	451	573	135	27	856	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	2	1	1	2	1	0	2	3	0	1	3	0
Cap, veh/h	726	393	334	726	278	98	584	2770	642	40	2153	466
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.29	1.00	1.00	0.02	0.49	0.49
Sat Flow, veh/h	3408	1845	1568	3408	1306	458	3408	4349	1007	1757	4411	954
Grp Volume(v), veh/h	414	152	291	242	0	104	490	527	243	29	777	355
Grp Sat Flow(s),veh/h/ln	1704	1845	1568	1704	0	1764	1704	1845	1667	1757	1845	1676
Q Serve(g_s), s	10.2	6.7	16.9	5.7	0.0	4.6	12.7	0.0	0.0	1.5	12.9	12.9
Cycle Q Clear(g_c), s	10.2	6.7	16.9	5.7	0.0	4.6	12.7	0.0	0.0	1.5	12.9	12.9
Prop In Lane	1.00		1.00	1.00		0.26	1.00		0.60	1.00		0.57
Lane Grp Cap(c), veh/h	726	393	334	726	0	376	584	2350	1062	40	1801	818
V/C Ratio(X)	0.57	0.39	0.87	0.33	0.00	0.28	0.84	0.22	0.23	0.73	0.43	0.43
Avail Cap(c_a), veh/h	796	431	366	726	0	376	941	2350	1062	112	1801	818
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	31.8	35.8	31.4	0.0	31.0	32.4	0.0	0.0	45.7	15.6	15.7
Incr Delay (d2), s/veh	0.8	0.6	18.7	0.3	0.0	0.4	3.6	0.2	0.5	22.5	0.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.5	3.2	8.4	2.5	0.0	2.1	5.3	0.1	0.1	0.9	5.9	5.6
Lane Grp Delay (d), s/veh	34.0	32.4	54.5	31.7	0.0	31.4	36.0	0.2	0.5	68.2	16.4	17.3
Lane Grp LOS	C	C	D	C		C	D	A	A	E	B	B
Approach Vol, veh/h		857			346			1260			1161	
Approach Delay, s/veh		40.7			31.6			14.2			18.0	
Approach LOS		D			C			B			B	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		24.1			24.1		20.2	64.0		6.1		50.0
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		22.0			16.0		26.0	60.0		6.0		40.0
Max Q Clear Time (g_c+I1), s		18.9			7.7		14.7	2.0		3.5		14.9
Green Ext Time (p_c), s		1.2			3.4		1.4	22.4		0.0		15.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				23.3								
HCM 2010 LOS				C								
<b>Notes</b>												
























						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	382	517	337	675	1030	312
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	1	2	3	3	1
Cap, veh/h	1299	597	615	3045	1856	526
Arrive On Green	0.38	0.38	0.36	1.00	0.34	0.34
Sat Flow, veh/h	3408	1568	3408	5534	5534	1568
Grp Volume(v), veh/h	415	562	366	734	1120	339
Grp Sat Flow(s),veh/h/ln	1704	1568	1704	1845	1845	1568
Q Serve(g_s), s	10.0	40.2	10.2	0.0	19.6	21.3
Cycle Q Clear(g_c), s	10.0	40.2	10.2	0.0	19.6	21.3
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	1299	597	615	3045	1856	526
V/C Ratio(X)	0.32	0.94	0.59	0.24	0.60	0.64
Avail Cap(c_a), veh/h	1406	647	615	3045	1856	526
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.93	0.93	0.79	0.79
Uniform Delay (d), s/veh	25.4	34.7	33.7	0.0	32.2	32.8
Incr Delay (d2), s/veh	0.1	21.2	1.4	0.2	1.2	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.5	4.0	0.0	9.4	9.2
Lane Grp Delay (d), s/veh	25.5	55.9	35.1	0.2	33.4	37.6
Lane Grp LOS	C	E	D	A	C	D
Approach Vol, veh/h	977			1100	1459	
Approach Delay, s/veh	43.0			11.8	34.3	
Approach LOS	D			B	C	
<b>Timer</b>						
Assigned Phs			5	2	6	
Phs Duration (G+Y+Rc), s			25.0	68.0	43.0	
Change Period (Y+Rc), s			4.0	4.0	4.0	
Max Green Setting (Gmax), s			21.0	64.0	39.0	
Max Q Clear Time (g_c+I1), s			12.2	2.0	23.3	
Green Ext Time (p_c), s			4.2	8.1	8.3	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			29.7			
HCM 2010 LOS			C			
<b>Notes</b>						

HCM 2010 Signalized Intersection Summary  
20: Somersville Rd & EB SR-4 Ramps

Cumulative Plus Project PM With Bypass  
3/16/2014



























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	275	232	457	0	0	0	0	867	732	480	1160	0
Number	7	4	14				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5				0.0	184.5	184.5	184.5	184.5	0.0
Lanes	2	1	2				0	3	1	2	3	0
Cap, veh/h	568	307	523				0	3130	887	572	4243	0
Arrive On Green	0.17	0.17	0.17				0.00	1.00	1.00	0.34	1.00	0.00
Sat Flow, veh/h	3408	1845	3136				0	5534	1568	3408	5534	0
Grp Volume(v), veh/h	299	252	497				0	942	796	522	1261	0
Grp Sat Flow(s),veh/h/ln	1704	1845	1568				0	1845	1568	1704	1845	0
Q Serve(g_s), s	9.6	15.8	18.8				0.0	0.0	0.0	17.6	0.0	0.0
Cycle Q Clear(g_c), s	9.6	15.8	18.8				0.0	0.0	0.0	17.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	568	307	523				0	3130	887	572	4243	0
V/C Ratio(X)	0.53	0.82	0.95				0.00	0.30	0.90	0.91	0.30	0.00
Avail Cap(c_a), veh/h	568	307	523				0	3130	887	625	4243	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	2.00	2.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	1.00	1.00				0.00	0.72	0.72	0.79	0.79	0.00
Uniform Delay (d), s/veh	45.7	48.3	49.5				0.0	0.0	0.0	39.0	0.0	0.0
Incr Delay (d2), s/veh	0.9	16.0	27.5				0.0	0.2	10.5	14.1	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	8.9	9.6				0.0	0.1	2.6	7.9	0.1	0.0
Lane Grp Delay (d), s/veh	46.6	64.2	77.0				0.0	0.2	10.5	53.1	0.1	0.0
Lane Grp LOS	D	E	E					A	B	D	A	
Approach Vol, veh/h		1048						1738			1783	
Approach Delay, s/veh		65.2						4.9			15.7	
Approach LOS		E						A			B	
<b>Timer</b>												
Assigned Phs		4						2		1	6	
Phs Duration (G+Y+Rc), s		24.0						71.9		24.1	96.0	
Change Period (Y+Rc), s		4.0						4.0		4.0	4.0	
Max Green Setting (Gmax), s		20.0						66.0		22.0	92.0	
Max Q Clear Time (g_c+I1), s		20.8						2.0		19.6	2.0	
Green Ext Time (p_c), s		0.0						42.5		0.5	52.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			22.9									
HCM 2010 LOS			C									
<b>Notes</b>												













HCM 2010 Signalized Intersection Summary  
21: Somersville Rd & Delta Fair Blvd























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	438	371	41	55	143	410	59	762	29	429	707	245
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	2	1	0	1	1	1	1	3	0	2	2	1
Cap, veh/h	1081	517	58	557	585	497	82	1737	67	693	1788	760
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.02	0.11	0.11	0.41	0.97	0.97
Sat Flow, veh/h	3408	1630	182	1757	1845	1568	1757	5294	204	3408	3689	1568
Grp Volume(v), veh/h	476	0	448	60	155	446	64	576	284	466	768	266
Grp Sat Flow(s),veh/h/ln	1704	0	1813	1757	1845	1568	1757	1845	1809	1704	1845	1568
Q Serve(g_s), s	8.8	0.0	17.8	1.9	5.0	21.5	2.9	11.6	11.7	8.9	0.9	0.6
Cycle Q Clear(g_c), s	8.8	0.0	17.8	1.9	5.0	21.5	2.9	11.6	11.7	8.9	0.9	0.6
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	1081	0	575	557	585	497	82	1211	593	693	1788	760
V/C Ratio(X)	0.44	0.00	0.78	0.11	0.26	0.90	0.78	0.48	0.48	0.67	0.43	0.35
Avail Cap(c_a), veh/h	1505	0	801	557	585	497	155	1211	593	860	1816	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.89	0.89	0.89
Uniform Delay (d), s/veh	21.5	0.0	24.5	19.1	20.2	25.8	38.6	28.9	28.9	21.4	0.6	0.6
Incr Delay (d2), s/veh	0.3	0.0	3.3	0.1	0.2	18.0	14.1	1.3	2.6	1.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	3.7	0.0	8.4	0.8	2.3	10.6	1.6	6.1	6.2	3.2	0.3	0.2
Lane Grp Delay (d), s/veh	21.8	0.0	27.8	19.2	20.4	43.8	52.7	30.2	31.6	22.7	0.8	0.9
Lane Grp LOS	C		C	B	C	D	D	C	C	C	A	A
Approach Vol, veh/h		924			661			924			1500	
Approach Delay, s/veh		24.7			36.1			32.2			7.6	
Approach LOS		C			D			C			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		29.1			29.1		7.7	30.0		20.1		42.4
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		35.0			23.0		7.0	26.0		20.0		39.0
Max Q Clear Time (g_c+I1), s		19.8			23.5		4.9	13.7		10.9		2.9
Green Ext Time (p_c), s		5.4			0.0		0.0	4.5		5.3		10.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				21.9								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
22: Somersville Rd & Buchanan Rd

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						 			 	
Volume (veh/h)	407	504	697	54	247	129	260	409	36	264	603	408
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	1	1	1	1	1	2	0	1	2	1
Cap, veh/h	472	1449	616	76	309	262	311	813	71	317	908	386
Arrive On Green	0.27	0.39	0.00	0.04	0.17	0.00	0.18	0.24	0.24	0.18	0.25	0.25
Sat Flow, veh/h	1757	3689	1568	1757	1845	1568	1757	3346	292	1757	3689	1568
Grp Volume(v), veh/h	442	548	0	59	268	0	283	245	239	287	655	443
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1757	1845	1568	1757	1845	1793	1757	1845	1568
Q Serve(g_s), s	28.0	12.0	0.0	3.8	16.1	0.0	18.0	13.2	13.3	18.2	18.5	28.0
Cycle Q Clear(g_c), s	28.0	12.0	0.0	3.8	16.1	0.0	18.0	13.2	13.3	18.2	18.5	28.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	472	1449	616	76	309	262	311	448	436	317	908	386
V/C Ratio(X)	0.94	0.38	0.00	0.78	0.87	0.00	0.91	0.55	0.55	0.91	0.72	1.15
Avail Cap(c_a), veh/h	525	1460	620	139	324	276	340	448	436	371	908	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	24.6	0.0	53.9	46.1	0.0	45.9	37.6	37.6	45.7	39.3	42.9
Incr Delay (d2), s/veh	23.4	0.2	0.0	15.6	20.7	0.0	26.1	1.4	1.5	22.9	2.8	92.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	15.3	5.4	0.0	2.0	9.4	0.0	10.4	6.4	6.3	10.2	9.1	21.0
Lane Grp Delay (d), s/veh	64.0	24.8	0.0	69.5	66.8	0.0	72.0	38.9	39.1	68.5	42.1	135.3
Lane Grp LOS	E	C		E	E		E	D	D	E	D	F
Approach Vol, veh/h		990			327			767			1385	
Approach Delay, s/veh		42.3			67.3			51.2			77.4	
Approach LOS		D			E			D			E	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	34.5	48.7		8.9	23.0		24.2	31.6		24.5	32.0	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	34.0	45.0		9.0	20.0		22.0	26.0		24.0	28.0	
Max Q Clear Time (g_c+I1), s	30.0	14.0		5.8	18.1		20.0	15.3		20.2	30.0	
Green Ext Time (p_c), s	0.6	5.5		0.0	0.9		0.2	6.4		0.3	0.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				60.6								
HCM 2010 LOS				E								
<b>Notes</b>												






















						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	94	8	12	614	1416	161
Number	7	14	5	2	6	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	1	1	1	2	2	1
Cap, veh/h	138	124	294	2942	2942	1250
Arrive On Green	0.08	0.08	0.80	0.80	0.80	0.80
Sat Flow, veh/h	1757	1568	281	3689	3689	1568
Grp Volume(v), veh/h	102	9	13	667	1539	175
Grp Sat Flow(s),veh/h/ln	1757	1568	281	1845	1845	1568
Q Serve(g_s), s	3.7	0.3	1.1	2.9	9.4	1.6
Cycle Q Clear(g_c), s	3.7	0.3	10.5	2.9	9.4	1.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	138	124	294	2942	2942	1250
V/C Ratio(X)	0.74	0.07	0.04	0.23	0.52	0.14
Avail Cap(c_a), veh/h	598	533	461	5135	5135	2182
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	27.6	4.1	1.6	2.3	1.5
Incr Delay (d2), s/veh	7.4	0.2	0.1	0.0	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.9	0.1	0.1	0.8	2.6	0.4
Lane Grp Delay (d), s/veh	36.5	27.8	4.2	1.7	2.4	1.5
Lane Grp LOS	D	C	A	A	A	A
Approach Vol, veh/h	111			680	1714	
Approach Delay, s/veh	35.8			1.7	2.3	
Approach LOS	D			A	A	
<b>Timer</b>						
Assigned Phs				2	6	
Phs Duration (G+Y+Rc), s				55.6	55.6	
Change Period (Y+Rc), s				4.0	4.0	
Max Green Setting (Gmax), s				90.0	90.0	
Max Q Clear Time (g_c+I1), s				12.5	11.4	
Green Ext Time (p_c), s				39.1	39.3	
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			3.6			
HCM 2010 LOS			A			
<b>Notes</b>						

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	1239	0	2	700	392	0	7	4	814	5	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	1	1	1	0	2	1	2
Cap, veh/h	139	1786	0	4	1503	639	2	50	25	1011	707	1202
Arrive On Green	0.08	0.48	0.00	0.00	0.41	0.00	0.00	0.04	0.04	0.30	0.38	0.38
Sat Flow, veh/h	1757	3689	0	1757	3689	1568	1757	1161	581	3408	1845	3136
Grp Volume(v), veh/h	109	1347	0	2	761	0	0	0	12	885	5	174
Grp Sat Flow(s),veh/h/ln	1757	1845	0	1757	1845	1568	1757	0	1742	1704	1845	1568
Q Serve(g_s), s	5.6	27.3	0.0	0.1	14.2	0.0	0.0	0.0	0.6	22.7	0.2	3.3
Cycle Q Clear(g_c), s	5.6	27.3	0.0	0.1	14.2	0.0	0.0	0.0	0.6	22.7	0.2	3.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	139	1786	0	4	1503	639	2	0	75	1011	707	1202
V/C Ratio(X)	0.79	0.75	0.00	0.53	0.51	0.00	0.00	0.00	0.16	0.88	0.01	0.14
Avail Cap(c_a), veh/h	286	2004	0	76	1563	664	76	0	303	1259	922	1567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	19.3	0.0	45.9	20.4	0.0	0.0	0.0	42.4	30.8	17.6	18.5
Incr Delay (d2), s/veh	9.4	1.5	0.0	81.8	0.3	0.0	0.0	0.0	1.0	6.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	12.3	0.0	0.1	6.4	0.0	0.0	0.0	0.3	10.4	0.1	1.2
Lane Grp Delay (d), s/veh	51.0	20.8	0.0	127.7	20.6	0.0	0.0	0.0	43.4	36.8	17.6	18.6
Lane Grp LOS	D	C		F	C				D	D	B	B
Approach Vol, veh/h		1456			763			12				1064
Approach Delay, s/veh		23.0			20.9			43.4				33.7
Approach LOS		C			C			D				C
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1		6
Phs Duration (G+Y+Rc), s	11.3	48.6		4.2	41.5		0.0	8.0		31.3		39.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s	15.0	50.0		4.0	39.0		4.0	16.0		34.0		46.0
Max Q Clear Time (g_c+I1), s	7.6	29.3		2.1	16.2		0.0	2.6		24.7		5.3
Green Ext Time (p_c), s	0.1	15.3		0.0	16.4		0.0	0.6		2.6		0.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				26.1								
HCM 2010 LOS				C								
<b>Notes</b>												























HCM 2010 Signalized Intersection Summary  
25: Buchanan Rd & Delta Fair Blvd

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	74	445	163	100	251	80	90	275	27	277	453	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Cap, veh/h	425	1023	372	292	1068	333	361	823	80	497	916	779
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	1008	2585	939	763	2699	841	843	1656	161	1037	1845	1568
Grp Volume(v), veh/h	80	345	316	109	185	175	98	0	328	301	492	62
Grp Sat Flow(s),veh/h/ln	1008	1845	1679	763	1845	1696	843	0	1816	1037	1845	1568
Q Serve(g_s), s	4.3	10.3	10.4	9.2	5.0	5.2	6.7	0.0	8.3	18.7	13.6	1.5
Cycle Q Clear(g_c), s	9.5	10.3	10.4	19.7	5.0	5.2	20.3	0.0	8.3	26.9	13.6	1.5
Prop In Lane	1.00		0.56	1.00		0.50	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	425	730	664	292	730	671	361	0	902	497	916	779
V/C Ratio(X)	0.19	0.47	0.48	0.37	0.25	0.26	0.27	0.00	0.36	0.61	0.54	0.08
Avail Cap(c_a), veh/h	663	1165	1060	472	1165	1071	678	0	1586	888	1611	1369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	16.7	16.7	24.1	15.1	15.2	19.8	0.0	11.5	19.8	12.8	9.8
Incr Delay (d2), s/veh	0.2	0.5	0.5	0.8	0.2	0.2	0.4	0.0	0.2	1.2	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.1	4.5	4.1	1.8	2.2	2.1	1.4	0.0	3.4	4.7	5.9	0.6
Lane Grp Delay (d), s/veh	18.6	17.2	17.3	24.9	15.3	15.4	20.2	0.0	11.7	21.0	13.3	9.9
Lane Grp LOS	B	B	B	C	B	B	C		B	C	B	A
Approach Vol, veh/h		741			469			426			855	
Approach Delay, s/veh		17.4			17.5			13.7			15.8	
Approach LOS		B			B			B			B	
<b>Timer</b>												
Assigned Phs		4			8			2			6	
Phs Duration (G+Y+Rc), s		33.4			33.4			41.0			41.0	
Change Period (Y+Rc), s		4.0			4.0			4.0			4.0	
Max Green Setting (Gmax), s		47.0			47.0			65.0			65.0	
Max Q Clear Time (g_c+I1), s		12.4			21.7			22.3			28.9	
Green Ext Time (p_c), s		8.4			7.8			8.2			8.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				16.2								
HCM 2010 LOS				B								
<b>Notes</b>												
























HCM 2010 Signalized Intersection Summary  
 26: James Donlon Blvd & Contra Loma Blvd

Cumulative Plus Project PM With Bypass  
 3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	117	1635	8	27	658	124	4	19	8	246	21	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	0	1	1	0
Cap, veh/h	161	2152	11	42	1567	296	71	283	110	397	52	334
Arrive On Green	0.09	0.59	0.59	0.02	0.52	0.52	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1757	3667	19	1757	3019	570	90	1172	454	1361	217	1384
Grp Volume(v), veh/h	127	893	893	29	437	413	34	0	0	267	0	170
Grp Sat Flow(s),veh/h/ln	1757	1845	1841	1757	1845	1744	1716	0	0	1361	0	1600
Q Serve(g_s), s	5.7	31.4	31.5	1.3	12.1	12.1	0.0	0.0	0.0	15.3	0.0	7.3
Cycle Q Clear(g_c), s	5.7	31.4	31.5	1.3	12.1	12.1	1.2	0.0	0.0	16.5	0.0	7.3
Prop In Lane	1.00		0.01	1.00		0.33	0.12		0.26	1.00		0.86
Lane Grp Cap(c), veh/h	161	1082	1080	42	957	905	464	0	0	397	0	386
V/C Ratio(X)	0.79	0.83	0.83	0.70	0.46	0.46	0.07	0.00	0.00	0.67	0.00	0.44
Avail Cap(c_a), veh/h	282	1140	1138	87	957	905	556	0	0	472	0	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	13.4	13.4	39.2	12.3	12.3	23.7	0.0	0.0	30.1	0.0	26.1
Incr Delay (d2), s/veh	8.4	4.9	4.9	18.9	0.3	0.4	0.1	0.0	0.0	2.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.9	14.4	14.4	0.8	5.1	4.8	0.5	0.0	0.0	5.4	0.0	3.0
Lane Grp Delay (d), s/veh	44.4	18.3	18.4	58.1	12.6	12.6	23.8	0.0	0.0	33.0	0.0	26.8
Lane Grp LOS	D	B	B	E	B	B	C			C		C
Approach Vol, veh/h		1913			879			34			437	
Approach Delay, s/veh		20.1			14.1			23.8			30.6	
Approach LOS		C			B			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8			2			6	
Phs Duration (G+Y+Rc), s	11.4	51.5		5.9	46.0			23.5			23.5	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0			4.0	
Max Green Setting (Gmax), s	13.0	50.0		4.0	41.0			24.0			24.0	
Max Q Clear Time (g_c+I1), s	7.7	33.5		3.3	14.1			3.2			18.5	
Green Ext Time (p_c), s	0.1	14.0		0.0	22.0			2.0			1.0	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				19.9								
HCM 2010 LOS				B								
<b>Notes</b>												




























HCM 2010 Signalized Intersection Summary  
27: Lone Tree Way & James Donlon Blvd

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	165	135	1162	13	66	77	802	842	10	80	1274	267
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	2	0	1	1	2	2	1	1	3	0
Cap, veh/h	298	313	1433	51	260	266	978	2358	1002	112	1846	386
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.29	0.64	0.64	0.06	0.42	0.42
Sat Flow, veh/h	1757	1845	3136	298	1532	1568	3408	3689	1568	1757	4442	929
Grp Volume(v), veh/h	179	147	1263	86	0	84	872	915	11	87	1150	525
Grp Sat Flow(s),veh/h/ln	1757	1845	1568	1830	0	1568	1704	1845	1568	1757	1845	1681
Q Serve(g_s), s	8.9	6.8	16.0	3.9	0.0	4.4	23.1	11.2	0.2	4.6	24.9	25.0
Cycle Q Clear(g_c), s	8.9	6.8	16.0	3.9	0.0	4.4	23.1	11.2	0.2	4.6	24.9	25.0
Prop In Lane	1.00		1.00	0.16		1.00	1.00		1.00	1.00		0.55
Lane Grp Cap(c), veh/h	298	313	1433	311	0	266	978	2358	1002	112	1534	699
V/C Ratio(X)	0.60	0.47	0.88	0.28	0.00	0.32	0.89	0.39	0.01	0.78	0.75	0.75
Avail Cap(c_a), veh/h	298	313	1433	311	0	266	1122	2358	1002	224	1606	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	35.3	23.3	34.0	0.0	34.3	32.2	8.2	6.2	43.4	23.4	23.4
Incr Delay (d2), s/veh	3.3	1.1	6.8	0.5	0.0	0.7	8.4	0.1	0.0	11.1	1.9	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	4.3	3.3	14.2	1.8	0.0	1.8	11.0	4.5	0.1	2.4	11.7	11.2
Lane Grp Delay (d), s/veh	39.4	36.3	30.0	34.5	0.0	35.0	40.6	8.3	6.2	54.5	25.3	27.6
Lane Grp LOS	D	D	C	C		C	D	A	A	D	C	C
Approach Vol, veh/h		1589			170			1798			1762	
Approach Delay, s/veh		31.7			34.7			23.9			27.4	
Approach LOS		C			C			C			C	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		20.0			20.0		31.0	64.2		10.0		43.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		31.0	60.0		12.0		41.0
Max Q Clear Time (g_c+I1), s		18.0			6.4		25.1	13.2		6.6		27.0
Green Ext Time (p_c), s		0.0			5.7		1.9	32.6		0.1		12.2
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				27.7								
HCM 2010 LOS				C								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
28: Kirker Pass Rd & Myrtle Dr
























Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				  				 			  	
Volume (veh/h)	56	0	47	2	0	1	55	2166	3	0	751	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	1	0	3	1	1	1	2	1	1	3	0
Cap, veh/h	102	0	91	289	107	91	76	3085	1311	2	4032	54
Arrive On Green	0.06	0.00	0.06	0.06	0.00	0.06	0.04	0.84	0.84	0.00	0.74	0.74
Sat Flow, veh/h	1757	0	1568	4954	1845	1568	1757	3689	1568	1757	5448	73
Grp Volume(v), veh/h	61	0	51	2	0	1	60	2354	3	0	552	275
Grp Sat Flow(s),veh/h/ln	1757	0	1568	1651	1845	1568	1757	1845	1568	1757	1845	1832
Q Serve(g_s), s	2.6	0.0	2.4	0.0	0.0	0.0	2.6	21.9	0.0	0.0	3.5	3.5
Cycle Q Clear(g_c), s	2.6	0.0	2.4	0.0	0.0	0.0	2.6	21.9	0.0	0.0	3.5	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	102	0	91	289	107	91	76	3085	1311	2	2730	1356
V/C Ratio(X)	0.60	0.00	0.56	0.01	0.00	0.01	0.78	0.76	0.00	0.00	0.20	0.20
Avail Cap(c_a), veh/h	371	0	331	1045	389	331	208	3307	1405	93	3064	1521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	0.0	34.8	33.7	0.0	33.7	35.9	2.8	1.0	0.0	3.0	3.0
Incr Delay (d2), s/veh	5.4	0.0	5.2	0.0	0.0	0.0	15.9	1.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	0.0	1.1	0.0	0.0	0.0	1.5	5.7	0.0	0.0	1.2	1.2
Lane Grp Delay (d), s/veh	40.3	0.0	40.0	33.7	0.0	33.7	51.9	3.8	1.0	0.0	3.1	3.1
Lane Grp LOS	D		D	C		C	D	A	A		A	A
Approach Vol, veh/h		112			3			2417			827	
Approach Delay, s/veh		40.2			33.7			5.0			3.1	
Approach LOS		D			C			A			A	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		8.4			8.4		7.3	67.4		0.0		60.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0			16.0		9.0	68.0		4.0		63.0
Max Q Clear Time (g_c+I1), s		4.6			2.0		4.6	23.9		0.0		5.5
Green Ext Time (p_c), s		0.3			0.3		0.0	39.6		0.0		50.1
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				5.7								
HCM 2010 LOS				A								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 29: Ygnacio Valley Rd/Kirker Pass Rd & Concord Blvd























Cumulative Plus Project PM With Bypass

3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	319	327	177	222	143	46	160	1496	397	63	539	67
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	3	0	1	3	0
Cap, veh/h	487	425	226	274	243	103	206	1946	509	87	1895	233
Arrive On Green	0.28	0.19	0.19	0.16	0.07	0.07	0.12	0.46	0.46	0.05	0.39	0.39
Sat Flow, veh/h	1757	2271	1206	1757	3689	1568	1757	4232	1107	1757	4835	594
Grp Volume(v), veh/h	347	287	260	241	155	50	174	1414	644	68	445	214
Grp Sat Flow(s),veh/h/ln	1757	1845	1632	1757	1845	1568	1757	1845	1649	1757	1845	1740
Q Serve(g_s), s	19.3	16.2	16.7	14.5	4.4	2.9	10.5	36.4	37.4	4.1	9.0	9.2
Cycle Q Clear(g_c), s	19.3	16.2	16.7	14.5	4.4	2.9	10.5	36.4	37.4	4.1	9.0	9.2
Prop In Lane	1.00		0.74	1.00		1.00	1.00		0.67	1.00		0.34
Lane Grp Cap(c), veh/h	487	345	305	274	243	103	206	1697	758	87	1446	682
V/C Ratio(X)	0.71	0.83	0.85	0.88	0.64	0.49	0.84	0.83	0.85	0.78	0.31	0.31
Avail Cap(c_a), veh/h	487	409	362	341	545	232	325	1772	792	114	1446	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	42.4	42.6	44.7	49.3	36.8	46.8	25.6	25.9	50.9	22.8	22.8
Incr Delay (d2), s/veh	4.9	11.9	15.3	19.2	2.8	3.5	11.1	3.5	8.4	22.4	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	9.2	8.9	8.3	8.0	2.2	1.4	5.4	17.3	17.0	2.4	4.2	4.0
Lane Grp Delay (d), s/veh	40.1	54.3	57.9	64.0	52.1	40.3	58.0	29.1	34.3	73.3	22.9	23.1
Lane Grp LOS	D	D	E	E	D	D	E	C	C	E	C	C
Approach Vol, veh/h		894			446			2232			727	
Approach Delay, s/veh		49.8			57.2			32.8			27.7	
Approach LOS		D			E			C			C	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	34.0	24.2		20.9	11.1		16.7	53.8		9.4	46.4	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	29.0	24.0		21.0	16.0		20.0	52.0		7.0	39.0	
Max Q Clear Time (g_c+I1), s	21.3	18.7		16.5	6.4		12.5	39.4		6.1	11.2	
Green Ext Time (p_c), s	1.3	1.6		0.4	0.7		0.3	10.3		0.0	22.9	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				38.0								
HCM 2010 LOS				D								
<b>Notes</b>												






















HCM 2010 Signalized Intersection Summary  
30: Ygnacio Valley Rd & Clayton Blvd














Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	662	946	30	251	443	161	145	1670	594	279	469	235
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5
Lanes	2	3	0	2	3	0	2	3	1	2	3	1
Cap, veh/h	779	1469	0	328	737	0	215	2214	627	348	2429	688
Arrive On Green	0.23	0.27	0.00	0.10	0.13	0.00	0.06	0.40	0.40	0.10	0.44	0.44
Sat Flow, veh/h	3408	5534	0	3408	5534	0	3408	5534	1568	3408	5534	1568
Grp Volume(v), veh/h	720	1028	0	273	482	0	158	1815	646	303	510	255
Grp Sat Flow(s),veh/h/ln	1704	1845	0	1704	1845	0	1704	1845	1568	1704	1845	1568
Q Serve(g_s), s	24.3	19.7	0.0	9.2	9.7	0.0	5.4	34.4	47.0	10.3	6.7	12.8
Cycle Q Clear(g_c), s	24.3	19.7	0.0	9.2	9.7	0.0	5.4	34.4	47.0	10.3	6.7	12.8
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	779	1469	0	328	737	0	215	2214	627	348	2429	688
V/C Ratio(X)	0.92	0.70	0.00	0.83	0.65	0.00	0.73	0.82	1.03	0.87	0.21	0.37
Avail Cap(c_a), veh/h	812	1554	0	348	801	0	290	2214	627	348	2429	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	38.9	0.0	52.2	48.4	0.0	54.1	31.5	35.3	52.0	20.4	22.1
Incr Delay (d2), s/veh	15.8	1.3	0.0	14.9	1.7	0.0	6.3	2.6	43.9	20.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	12.3	9.5	0.0	4.8	4.8	0.0	2.6	16.5	26.0	5.5	3.0	5.0
Lane Grp Delay (d), s/veh	60.1	40.3	0.0	67.1	50.1	0.0	60.3	34.1	79.1	72.5	20.4	22.4
Lane Grp LOS	E	D		E	D		E	C	F	E	C	C
Approach Vol, veh/h		1748			755			2619			1068	
Approach Delay, s/veh		48.5			56.2			46.7			35.7	
Approach LOS		D			E			D			D	
<b>Timer</b>												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	30.9	35.2		15.3	19.6		11.4	51.0		16.0	55.6	
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Max Green Setting (Gmax), s	28.0	33.0		12.0	17.0		10.0	47.0		12.0	49.0	
Max Q Clear Time (g_c+I1), s	26.3	21.7		11.2	11.7		7.4	49.0		12.3	14.8	
Green Ext Time (p_c), s	0.6	7.3		0.1	3.9		0.1	0.0		0.0	28.5	
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				46.5								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
31: Un Rd & Buchanan Rd

Cumulative Plus Project PM With Bypass  
3/16/2014






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	1413	14	32	756	38	20	0	31	40	0	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	2	0	1	2	0	1	1	0	1	1	0
Cap, veh/h	41	2583	25	51	2488	124	196	0	123	189	0	123
Arrive On Green	0.02	0.71	0.71	0.03	0.71	0.71	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1757	3647	36	1757	3485	174	1364	0	1568	1356	0	1568
Grp Volume(v), veh/h	26	776	775	35	435	428	22	0	34	43	0	27
Grp Sat Flow(s),veh/h/ln	1757	1845	1838	1757	1845	1814	1364	0	1568	1356	0	1568
Q Serve(g_s), s	1.0	13.8	13.8	1.3	5.7	5.7	1.0	0.0	1.3	2.0	0.0	1.0
Cycle Q Clear(g_c), s	1.0	13.8	13.8	1.3	5.7	5.7	2.0	0.0	1.3	3.3	0.0	1.0
Prop In Lane	1.00		0.02	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	1306	1302	51	1317	1295	196	0	123	189	0	123
V/C Ratio(X)	0.64	0.59	0.60	0.69	0.33	0.33	0.11	0.00	0.28	0.23	0.00	0.22
Avail Cap(c_a), veh/h	216	2328	2320	216	2328	2289	467	0	434	459	0	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.5	4.8	4.8	31.3	3.5	3.5	29.0	0.0	28.2	29.8	0.0	28.1
Incr Delay (d2), s/veh	15.7	0.4	0.4	15.5	0.1	0.1	0.3	0.0	1.2	0.6	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	3.8	3.8	0.8	1.6	1.6	0.3	0.0	0.6	0.7	0.0	0.4
Lane Grp Delay (d), s/veh	47.2	5.2	5.2	46.7	3.6	3.6	29.3	0.0	29.4	30.4	0.0	29.0
Lane Grp LOS	D	A	A	D	A	A	C		C	C		C
Approach Vol, veh/h		1577			898			56			70	
Approach Delay, s/veh		5.9			5.3			29.4			29.8	
Approach LOS		A			A			C			C	
<b>Timer</b>												
Assigned Phs	5	2		1	6			8				4
Phs Duration (G+Y+Rc), s	5.5	50.0		5.9	50.4			9.1				9.1
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	8.0	82.0		8.0	82.0			18.0				18.0
Max Q Clear Time (g_c+I1), s	3.0	15.8		3.3	7.7			4.0				5.3
Green Ext Time (p_c), s	0.0	30.2		0.0	31.5			0.4				0.3
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				6.9								
HCM 2010 LOS				A								
<b>Notes</b>												

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		 	 			
Volume (veh/h)	417	1312	482	181	203	290
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	184.5	190.0	184.5	184.5
Lanes	1	2	2	0	1	1
Cap, veh/h	511	2444	813	304	402	359
Arrive On Green	0.29	0.66	0.32	0.32	0.23	0.23
Sat Flow, veh/h	1757	3689	2561	959	1757	1568
Grp Volume(v), veh/h	453	1426	377	344	221	315
Grp Sat Flow(s),veh/h/ln	1757	1845	1845	1675	1757	1568
Q Serve(g_s), s	18.1	15.7	12.9	13.0	8.2	14.3
Cycle Q Clear(g_c), s	18.1	15.7	12.9	13.0	8.2	14.3
Prop In Lane	1.00			0.57	1.00	1.00
Lane Grp Cap(c), veh/h	511	2444	585	532	402	359
V/C Ratio(X)	0.89	0.58	0.64	0.65	0.55	0.88
Avail Cap(c_a), veh/h	811	3158	627	569	453	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	6.8	21.6	21.6	25.0	27.4
Incr Delay (d2), s/veh	7.4	0.2	2.1	2.3	1.2	17.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	8.7	5.8	6.1	5.6	3.6	1.8
Lane Grp Delay (d), s/veh	32.3	7.1	23.6	23.9	26.2	45.2
Lane Grp LOS	C	A	C	C	C	D
Approach Vol, veh/h		1879	721		536	
Approach Delay, s/veh		13.2	23.8		37.4	
Approach LOS		B	C		D	
<b>Timer</b>						
Assigned Phs	5	2	6			
Phs Duration (G+Y+Rc), s	25.4	52.8	27.4			
Change Period (Y+Rc), s	4.0	4.0	4.0			
Max Green Setting (Gmax), s	34.0	63.0	25.0			
Max Q Clear Time (g_c+I1), s	20.1	17.7	15.0			
Green Ext Time (p_c), s	1.3	25.9	8.4			
<b>Intersection Summary</b>						
HCM 2010 Ctrl Delay			19.7			
HCM 2010 LOS			B			
<b>Notes</b>						























HCM 2010 Signalized Intersection Summary  
33: Somersville Rd & Fairview Dr

Cumulative Plus Project PM With Bypass  
3/16/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	129	9	580	19	1	2	257	624	14	21	636	51
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0	184.5	184.5	190.0
Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Cap, veh/h	667	11	666	99	237	473	361	1569	35	33	841	67
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.21	0.44	0.44	0.02	0.25	0.25
Sat Flow, veh/h	1394	25	1547	778	550	1100	1757	3596	80	1757	3374	268
Grp Volume(v), veh/h	140	0	640	21	0	3	279	348	345	23	378	368
Grp Sat Flow(s),veh/h/ln	1394	0	1572	778	0	1650	1757	1845	1831	1757	1845	1797
Q Serve(g_s), s	6.7	0.0	40.9	2.8	0.0	0.1	15.7	13.7	13.7	1.4	20.2	20.2
Cycle Q Clear(g_c), s	6.8	0.0	40.9	43.7	0.0	0.1	15.7	13.7	13.7	1.4	20.2	20.2
Prop In Lane	1.00		0.98	1.00		0.67	1.00		0.04	1.00		0.15
Lane Grp Cap(c), veh/h	667	0	676	99	0	710	361	805	799	33	460	448
V/C Ratio(X)	0.21	0.00	0.95	0.21	0.00	0.00	0.77	0.43	0.43	0.70	0.82	0.82
Avail Cap(c_a), veh/h	667	0	676	99	0	710	470	988	980	118	617	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.64	0.64	0.64	0.84	0.84	0.84
Uniform Delay (d), s/veh	18.9	0.0	28.6	49.6	0.0	17.0	39.2	20.5	20.5	51.0	37.0	37.1
Incr Delay (d2), s/veh	0.2	0.0	22.3	1.1	0.0	0.0	3.8	1.1	1.1	20.3	12.9	13.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	0.0	20.0	0.6	0.0	0.0	7.4	6.4	6.4	0.8	11.1	10.9
Lane Grp Delay (d), s/veh	19.1	0.0	51.0	50.7	0.0	17.0	43.0	21.6	21.6	71.4	49.9	50.3
Lane Grp LOS	B		D	D		B	D	C	C	E	D	D
Approach Vol, veh/h		780			24			972			769	
Approach Delay, s/veh		45.2			46.5			27.7			50.8	
Approach LOS		D			D			C			D	
<b>Timer</b>												
Assigned Phs		4			8		5	2		1		6
Phs Duration (G+Y+Rc), s		49.0			49.0		25.5	49.6		5.9		30.1
Change Period (Y+Rc), s		4.0			4.0		4.0	4.0		4.0		4.0
Max Green Setting (Gmax), s		45.0			45.0		28.0	56.0		7.0		35.0
Max Q Clear Time (g_c+I1), s		42.9			45.7		17.7	15.7		3.4		22.2
Green Ext Time (p_c), s		1.1			0.0		3.8	5.9		0.0		3.8
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				40.2								
HCM 2010 LOS				D								
<b>Notes</b>												

HCM 2010 Signalized Intersection Summary  
 34: Fairview Dr & Delta Fair Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	928	599	128	384	10	202	20	34	15	11	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	190.0	190.0	184.5	184.5	190.0	184.5	190.0
Lanes	1	2	0	1	2	0	0	1	1	0	1	0
Cap, veh/h	31	1109	677	171	2134	56	274	20	392	59	39	11
Arrive On Green	0.02	0.52	0.52	0.10	0.60	0.60	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1757	2147	1311	1757	3578	94	786	79	1568	0	157	45
Grp Volume(v), veh/h	20	859	801	139	215	213	242	0	37	36	0	0
Grp Sat Flow(s),veh/h/ln	1757	1845	1613	1757	1845	1828	865	0	1568	201	0	0
Q Serve(g_s), s	1.0	37.1	42.0	6.8	4.7	4.7	0.0	0.0	1.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	37.1	42.0	6.8	4.7	4.7	22.0	0.0	1.6	22.0	0.0	0.0
Prop In Lane	1.00		0.81	1.00		0.05	0.91		1.00	0.44		0.22
Lane Grp Cap(c), veh/h	31	953	834	171	1100	1090	294	0	392	109	0	0
V/C Ratio(X)	0.65	0.90	0.96	0.81	0.20	0.20	0.82	0.00	0.09	0.33	0.00	0.00
Avail Cap(c_a), veh/h	100	963	843	199	1100	1090	294	0	392	109	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.0	19.3	20.4	39.0	8.1	8.1	34.2	0.0	25.4	27.5	0.0	0.0
Incr Delay (d2), s/veh	20.5	11.4	21.9	19.5	0.1	0.1	17.0	0.0	0.1	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.6	19.0	20.9	4.0	1.9	1.9	6.8	0.0	0.6	0.7	0.0	0.0
Lane Grp Delay (d), s/veh	63.5	30.6	42.3	58.5	8.2	8.2	51.2	0.0	25.5	29.2	0.0	0.0
Lane Grp LOS	E	C	D	E	A	A	D		C	C		
Approach Vol, veh/h	1680		567				279			36		
Approach Delay, s/veh	36.6		20.5				47.8			29.2		
Approach LOS	D		C				D			C		
<b>Timer</b>												
Assigned Phs	7	4		3	8			2				6
Phs Duration (G+Y+Rc), s	5.5	49.5		12.6	56.5			26.0				26.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				4.0
Max Green Setting (Gmax), s	5.0	46.0		10.0	51.0			22.0				22.0
Max Q Clear Time (g_c+I1), s	3.0	44.0		8.8	6.7			24.0				24.0
Green Ext Time (p_c), s	0.0	1.5		0.0	25.6			0.0				0.0
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			34.2									
HCM 2010 LOS			C									
<b>Notes</b>												

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 Impact Analysis Report  
 Level Of Service  
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Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1	C	xxxxxx 0.716	C	xxxxxx 0.716	+ 0.000 V/C
# 2	B	xxxxxx 0.627	B	xxxxxx 0.627	+ 0.000 V/C
# 3	B	xxxxxx 0.695	B	xxxxxx 0.695	+ 0.000 V/C
# 4	A	xxxxxx 0.568	A	xxxxxx 0.568	+ 0.000 V/C
# 5	A	xxxxxx 0.517	A	xxxxxx 0.517	+ 0.000 V/C
# 6	A	xxxxxx 0.545	A	xxxxxx 0.545	+ 0.000 V/C
# 7	C	xxxxxx 0.783	C	xxxxxx 0.783	+ 0.000 V/C
# 8	A	xxxxxx 0.397	A	xxxxxx 0.397	+ 0.000 V/C
# 9	A	xxxxxx 0.582	A	xxxxxx 0.582	+ 0.000 V/C
# 10	A	xxxxxx 0.440	A	xxxxxx 0.440	+ 0.000 V/C
# 11	A	xxxxxx 0.491	A	xxxxxx 0.491	+ 0.000 V/C
# 12	C	xxxxxx 0.792	C	xxxxxx 0.792	+ 0.000 V/C
# 13	C	xxxxxx 0.711	C	xxxxxx 0.711	+ 0.000 V/C
# 14	A	xxxxxx 0.061	A	xxxxxx 0.061	+ 0.000 V/C
# 15	A	xxxxxx 0.507	A	xxxxxx 0.507	+ 0.000 V/C
# 16	A	xxxxxx 0.047	A	xxxxxx 0.047	+ 0.000 V/C
# 17	A	xxxxxx 0.507	A	xxxxxx 0.507	+ 0.000 V/C
# 18	A	xxxxxx 0.327	A	xxxxxx 0.327	+ 0.000 V/C
# 19	A	xxxxxx 0.332	A	xxxxxx 0.332	+ 0.000 V/C
# 20	A	xxxxxx 0.332	A	xxxxxx 0.332	+ 0.000 V/C
# 21	A	xxxxxx 0.458	A	xxxxxx 0.458	+ 0.000 V/C
# 22	B	xxxxxx 0.697	B	xxxxxx 0.697	+ 0.000 V/C
# 23	A	xxxxxx 0.401	A	xxxxxx 0.401	+ 0.000 V/C
# 24	A	xxxxxx 0.147	A	xxxxxx 0.147	+ 0.000 V/C
# 25	A	xxxxxx 0.514	A	xxxxxx 0.514	+ 0.000 V/C

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Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 26	B xxxxxx	0.607	B xxxxxx	0.607	+ 0.000 V/C
# 27	B xxxxxx	0.699	B xxxxxx	0.699	+ 0.000 V/C
# 28	A xxxxxx	0.389	A xxxxxx	0.389	+ 0.000 V/C
# 29	C xxxxxx	0.706	C xxxxxx	0.706	+ 0.000 V/C
# 30	C xxxxxx	0.749	C xxxxxx	0.749	+ 0.000 V/C
# 31	A xxxxxx	0.329	A xxxxxx	0.329	+ 0.000 V/C
# 32	A xxxxxx	0.399	A xxxxxx	0.399	+ 0.000 V/C
# 33	A xxxxxx	0.538	A xxxxxx	0.538	+ 0.000 V/C
# 34	A xxxxxx	0.505	A xxxxxx	0.505	+ 0.000 V/C

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.716
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 80 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 0 0 0 0 0 0 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 675 737 160 199 868 388 0 0 0 197 387 269
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 675 737 160 199 868 388 0 0 0 197 387 269
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 675 737 160 199 868 388 0 0 0 197 387 269
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 675 737 160 199 868 388 0 0 0 197 387 269
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 675 737 160 199 868 388 0 0 0 197 387 269
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 675 737 160 199 868 388 0 0 0 197 387 269
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 1.64 0.36 1.00 2.00 1.00 0.00 0.00 0.00 0.46 0.91 0.63
Final Sat.: 3127 2826 614 1720 3440 1720 0 0 0 794 1561 1085
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.22 0.26 0.26 0.12 0.25 0.23 0.00 0.00 0.00 0.25 0.25 0.25
Crit Volume: 338 434 0 427
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.627
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 61 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 1 0 1 0 2 0 0 1 0 1 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 1079 311 303 796 0 392 0 458 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 1079 311 303 796 0 392 0 458 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 1079 311 303 796 0 392 0 458 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1079 311 303 796 0 392 0 458 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 1079 311 303 796 0 392 0 458 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 1079 311 303 796 0 392 0 458 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 1.00 1.00 1.00
Lanes: 0.00 2.33 0.67 1.00 2.00 0.00 1.38 xxxxx 1.62 0.00 0.00 0.00
Final Sat.: 0 4005 1155 1720 3440 0 2163 0 2527 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.27 0.27 0.18 0.23 0.00 0.18 0.00 0.18 0.00 0.00 0.00
Crit Volume: 463 303 283 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.695
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 75 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow values and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #4
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.568
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 53 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 1 0 1 1 1 0 0 1
Volume Module:
Base Vol: 7 444 406 79 518 67 86 93 27 937 52 92
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 7 444 406 79 518 67 86 93 27 937 52 92
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 7 444 406 79 518 67 86 93 27 937 52 92
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 7 444 406 79 518 67 86 93 27 937 52 92
RTOR Reduct: 0 0 406 0 0 67 0 0 7 0 0 79
RTOR Vol: 7 444 0 79 518 0 86 93 20 937 52 13
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 7 444 0 79 518 0 86 93 20 937 52 13
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.89 0.11 1.00
Final Sat.: 1650 3300 1650 1650 3300 1650 1650 1650 1650 2842 174 1650
Capacity Analysis Module:
Vol/Sat: 0.00 0.13 0.00 0.05 0.16 0.00 0.05 0.06 0.01 0.33 0.30 0.01
Crit Volume: 222 79 93 494
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.517
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 13 695 0 0 1427 54 162 0 40 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 13 695 0 0 1427 54 162 0 40 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 13 695 0 0 1427 54 162 0 40 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 13 695 0 0 1427 54 162 0 40 0 0 0
RTOR Reduct: 0 0 0 0 0 0 54 0 0 13 0 0 0
RTOR Vol: 13 695 0 0 1427 0 162 0 27 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 13 695 0 0 1427 0 162 0 27 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1720 3440 0 0 3440 1720 1720 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.01 0.20 0.00 0.00 0.41 0.00 0.09 0.00 0.02 0.00 0.00 0.00
Crit Volume: 13 714 162 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #6
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.545
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of volume-related metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #7
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.783
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 105 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1
Volume Module:
Base Vol: 94 101 3 129 33 159 116 450 5 2 890 85
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 94 101 3 129 33 159 116 450 5 2 890 85
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 94 101 3 129 33 159 116 450 5 2 890 85
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 94 101 3 129 33 159 116 450 5 2 890 85
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 94 101 3 129 33 159 116 450 5 2 890 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 94 101 3 129 33 159 116 450 5 2 890 0
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.97 0.03 1.00 0.17 0.83 1.00 0.99 0.01 1.00 1.00 1.00
Final Sat.: 1650 1602 48 1650 284 1366 1650 1632 18 1650 1650 1650
Capacity Analysis Module:
Vol/Sat: 0.06 0.06 0.06 0.08 0.12 0.12 0.07 0.28 0.28 0.00 0.54 0.00
Crit Volume: 94 192 116 890
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #8
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.397
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 4 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #9
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.582
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 2 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 550 301 88 7 219 522 104 60 269 45 136 3
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 550 301 88 7 219 522 104 60 269 45 136 3
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 550 301 88 7 219 522 104 60 269 45 136 3
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 550 301 88 7 219 522 104 60 269 45 136 3
RTOR Reduct: 0 0 0 0 0 0 57 0 0 269 0 0 3
RTOR Vol: 550 301 88 7 219 465 104 60 0 45 136 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 550 301 88 7 219 465 104 60 0 45 136 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 2.00 1.55 0.45 1.00 2.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00
Final Sat.: 3000 2553 747 1650 3300 1650 3000 1650 1650 3000 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.18 0.12 0.12 0.00 0.07 0.28 0.03 0.04 0.00 0.02 0.08 0.00
Crit Volume: 275 465 52 136
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #10
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.440
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 0 1 2 0 2 0 0 2 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 647 193 129 478 0 416 0 362 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 647 193 129 478 0 416 0 362 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 647 193 129 478 0 416 0 362 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 647 193 129 478 0 416 0 362 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 647 193 129 478 0 416 0 362 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 647 193 129 478 0 416 0 362 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 2.00 1.00 2.00 2.00 0.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 0 3440 1720 3127 3440 0 3127 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.19 0.11 0.04 0.14 0.00 0.13 0.00 0.21 0.00 0.00 0.00
Crit Volume: 324 65 362 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #11
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.491
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow values and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #12
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.792
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 110 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 0 0 0 170 0 190 270 379 0 0 923 252
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 170 0 190 270 379 0 0 923 252
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 170 0 190 270 379 0 0 923 252
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 170 0 190 270 379 0 0 923 252
RTOR Reduct: 0 0 0 0 0 190 0 0 0 0 0 170
RTOR Vol: 0 0 0 170 0 0 270 379 0 0 923 82
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 170 0 0 270 379 0 0 923 82
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00
Final Sat.: 0 0 0 1720 0 1720 1720 1720 0 0 1720 1720
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.10 0.00 0.00 0.16 0.22 0.00 0.00 0.54 0.05
Crit Volume: 0 170 270 923
Crit Moves: \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #13
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.711
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 1 0 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 177 108 44 14 10 17 9 477 76 25 999 11
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 177 108 44 14 10 17 9 477 76 25 999 11
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 177 108 44 14 10 17 9 477 76 25 999 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 177 108 44 14 10 17 9 477 76 25 999 11
RTOR Reduct: 0 0 0 0 0 0 0 0 0 76 0 0 0
RTOR Vol: 177 108 44 14 10 17 9 477 0 25 999 11
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 177 108 44 14 10 17 9 477 0 25 999 11
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.71 0.29 1.00 0.37 0.63 1.00 1.00 1.00 1.00 0.99 0.01
Final Sat.: 1720 1222 498 1720 637 1083 1720 1720 1720 1720 1701 19
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.10 0.09 0.09 0.01 0.02 0.02 0.01 0.28 0.00 0.01 0.59 0.59
Crit Volume: 177 27 9 1010
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #16
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.047
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 1 0 1 0 1 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 0 61 0 0 0 0 0 0 0 23 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 61 0 0 0 0 0 0 0 23 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 61 0 0 0 0 0 0 0 23 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 61 0 0 0 0 0 0 0 23 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 0 61 0 0 0 0 0 0 0 23 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 61 0 0 0 0 0 0 0 23 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 1.00 1.00 0.00 1.00 2.00 0.00 1.00 2.00 0.00
Final Sat.: 1800 0 1800 1800 1800 0 1800 3600 0 1800 3600 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.00 0.00
Crit Volume: 61 0 0 0
Crit Moves: \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #18
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.327
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 2 1 0 1 0 2 1 0 2 0 0 1 1 1 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 197 436 141 24 506 262 104 31 37 202 76 29
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 197 436 141 24 506 262 104 31 37 202 76 29
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 197 436 141 24 506 262 104 31 37 202 76 29
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 197 436 141 24 506 262 104 31 37 202 76 29
RTOR Reduct: 0 0 0 0 0 0 0 0 0 37 0 0 0
RTOR Vol: 197 436 141 24 506 262 104 31 0 202 76 29
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 197 436 141 24 506 262 104 31 0 202 76 29
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 0.91 1.00 1.00
Lanes: 2.00 2.27 0.73 1.00 2.00 1.00 2.00 1.00 1.00 1.98 0.74 0.28
Final Sat.: 3000 3740 1210 1650 3300 1650 3000 1650 1500 2966 1221 466
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.07 0.12 0.12 0.01 0.15 0.16 0.03 0.02 0.00 0.07 0.06 0.06
Crit Volume: 99 262 52 102
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #19
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.332
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 3 0 0 0 0 3 0 1 2 0 0 0 1 0 0 0 0 0
Volume Module:
Base Vol: 514 491 0 0 403 289 216 0 241 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 514 491 0 0 403 289 216 0 241 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 514 491 0 0 403 289 216 0 241 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 514 491 0 0 403 289 216 0 241 0 0 0
RTOR Reduct: 0 0 0 0 0 0 119 0 0 241 0 0 0
RTOR Vol: 514 491 0 0 403 170 216 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 514 491 0 0 403 170 216 0 0 0 0 0
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 3.00 0.00 0.00 3.00 1.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 3127 5160 0 0 5160 1720 3127 0 1720 0 0 0
Capacity Analysis Module:
Vol/Sat: 0.16 0.10 0.00 0.00 0.08 0.10 0.07 0.00 0.00 0.00 0.00 0.00
Crit Volume: 257 170 108 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #20
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.332
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #21
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.458
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 2 0 2 0 1 1 1 0 1 0 1 0 1 0 1
Volume Module:
Base Vol: 81 582 10 137 293 282 263 115 3 39 315 413
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 81 582 10 137 293 282 263 115 3 39 315 413
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 81 582 10 137 293 282 263 115 3 39 315 413
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 81 582 10 137 293 282 263 115 3 39 315 413
RTOR Reduct: 0 0 0 0 0 0 145 0 0 0 0 0 75
RTOR Vol: 81 582 10 137 293 137 263 115 3 39 315 338
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 81 582 10 137 293 137 263 115 3 39 315 338
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.95 0.05 2.00 2.00 1.00 2.00 0.97 0.03 1.00 1.00 1.00
Final Sat.: 1650 4866 84 3000 3300 1650 3000 1608 42 1650 1650 1650
Capacity Analysis Module:
Vol/Sat: 0.05 0.12 0.12 0.05 0.09 0.08 0.09 0.07 0.07 0.02 0.19 0.20
Crit Volume: 197 69 132 338
Crit Moves: \*\*\*\* \*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #22
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.697
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 75 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 2 0 1 1 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 484 940 19 39 111 94 253 180 134 14 339 396
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 484 940 19 39 111 94 253 180 134 14 339 396
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 484 940 19 39 111 94 253 180 134 14 339 396
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 484 940 19 39 111 94 253 180 134 14 339 396
RTOR Reduct: 0 0 0 0 0 0 94 0 0 0 0 0 39
RTOR Vol: 484 940 19 39 111 0 253 180 134 14 339 357
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 484 940 19 39 111 0 253 180 134 14 339 357
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.96 0.04 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00
Final Sat.: 1650 3235 65 1650 3300 1650 1650 3300 1650 1650 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.29 0.29 0.29 0.02 0.03 0.00 0.15 0.05 0.08 0.01 0.21 0.22
Crit Volume: 484 56 253 357
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #24
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.147
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different volume types and 13 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 13 columns for saturation flow values and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #25
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.514
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #26
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.607
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #27
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.699
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 76 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing traffic volumes and adjustment factors for various vehicle types and conditions.

Saturation Flow Module: Table with 12 columns showing saturation flow rates and adjustment factors for different lane configurations.

Capacity Analysis Module: Table with 12 columns showing volume-to-saturation ratios, critical volumes, and critical moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #28
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.389
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 1 0 1 0 0 1 0 1 3 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 56 473 3 0 1516 28 24 0 98 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 56 473 3 0 1516 28 24 0 98 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 56 473 3 0 1516 28 24 0 98 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 56 473 3 0 1516 28 24 0 98 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 56 473 3 0 1516 28 24 0 98 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 56 473 3 0 1516 28 24 0 98 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.87 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.95 0.05 1.00 0.00 1.00 3.00 1.00 1.00
Final Sat.: 1720 3440 1720 1720 5066 94 1720 0 1720 4489 1720 1720
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.03 0.14 0.00 0.00 0.30 0.30 0.01 0.00 0.06 0.00 0.00 0.00
Crit Volume: 56 515 98 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #29
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.706
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 78 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 67 383 79 50 1430 360 61 69 124 377 385 90
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 67 383 79 50 1430 360 61 69 124 377 385 90
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 67 383 79 50 1430 360 61 69 124 377 385 90
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 67 383 79 50 1430 360 61 69 124 377 385 90
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 67 383 79 50 1430 360 61 69 124 377 385 40
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 67 383 79 50 1430 360 61 69 124 377 385 40
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.49 0.51 1.00 2.40 0.60 1.00 1.00 1.00 1.00 2.00 1.00
Final Sat.: 1650 4104 846 1650 3954 996 1650 1650 1650 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.04 0.09 0.09 0.03 0.36 0.36 0.04 0.04 0.08 0.23 0.12 0.02
Crit Volume: 67 597 124 377
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #30
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.749
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 91 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 3 0 1 2 0 3 0 1 2 0 2 1 0 2 0 1 1 0
Volume Module:
Base Vol: 151 293 167 261 1008 503 205 351 34 443 1167 133
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 151 293 167 261 1008 503 205 351 34 443 1167 133
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 151 293 167 261 1008 503 205 351 34 443 1167 133
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 151 293 167 261 1008 503 205 351 34 443 1167 133
RTOR Reduct: 0 0 167 0 0 113 0 0 0 0 0 0
RTOR Vol: 151 293 0 261 1008 390 205 351 34 443 1167 133
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 151 293 0 261 1008 390 205 351 34 443 1167 133
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 2.00 3.00 1.00 2.00 3.00 1.00 2.00 2.74 0.26 2.00 1.80 0.20
Final Sat.: 3000 4950 1650 3000 4950 1650 3000 4513 437 3000 2962 338
Capacity Analysis Module:
Vol/Sat: 0.05 0.06 0.00 0.09 0.20 0.24 0.07 0.08 0.08 0.15 0.39 0.39
Crit Volume: 76 390 103 650
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #31
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.329
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 4 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #32
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.399
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #33
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.538
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #34
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.505
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

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 Impact Analysis Report  
 Level Of Service  
 -----

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1	A	xxxxxx 0.588	A	xxxxxx 0.588	+ 0.000 V/C
# 2	A	xxxxxx 0.576	A	xxxxxx 0.576	+ 0.000 V/C
# 3	D	xxxxxx 0.851	D	xxxxxx 0.851	+ 0.000 V/C
# 4	B	xxxxxx 0.700	B	xxxxxx 0.700	+ 0.000 V/C
# 5	A	xxxxxx 0.510	A	xxxxxx 0.510	+ 0.000 V/C
# 6	B	xxxxxx 0.637	B	xxxxxx 0.637	+ 0.000 V/C
# 7	C	xxxxxx 0.702	C	xxxxxx 0.702	+ 0.000 V/C
# 8	A	xxxxxx 0.463	A	xxxxxx 0.463	+ 0.000 V/C
# 9	A	xxxxxx 0.443	A	xxxxxx 0.443	+ 0.000 V/C
# 10	A	xxxxxx 0.513	A	xxxxxx 0.513	+ 0.000 V/C
# 11	B	xxxxxx 0.610	B	xxxxxx 0.610	+ 0.000 V/C
# 12	C	xxxxxx 0.701	C	xxxxxx 0.701	+ 0.000 V/C
# 13	C	xxxxxx 0.795	C	xxxxxx 0.795	+ 0.000 V/C
# 14	A	xxxxxx 0.057	A	xxxxxx 0.057	+ 0.000 V/C
# 15	C	xxxxxx 0.757	C	xxxxxx 0.757	+ 0.000 V/C
# 16	A	xxxxxx 0.047	A	xxxxxx 0.047	+ 0.000 V/C
# 17	D	xxxxxx 0.813	D	xxxxxx 0.813	+ 0.000 V/C
# 18	A	xxxxxx 0.501	A	xxxxxx 0.501	+ 0.000 V/C
# 19	A	xxxxxx 0.383	A	xxxxxx 0.383	+ 0.000 V/C
# 20	C	xxxxxx 0.736	C	xxxxxx 0.736	+ 0.000 V/C
# 21	A	xxxxxx 0.564	A	xxxxxx 0.564	+ 0.000 V/C
# 22	B	xxxxxx 0.610	B	xxxxxx 0.610	+ 0.000 V/C
# 23	A	xxxxxx 0.338	A	xxxxxx 0.338	+ 0.000 V/C
# 24	A	xxxxxx 0.413	A	xxxxxx 0.413	+ 0.000 V/C
# 25	A	xxxxxx 0.539	A	xxxxxx 0.539	+ 0.000 V/C

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Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 26	A xxxxxx	0.489	A xxxxxx	0.489	+ 0.000 V/C
# 27	C xxxxxx	0.782	C xxxxxx	0.782	+ 0.000 V/C
# 28	A xxxxxx	0.598	A xxxxxx	0.598	+ 0.000 V/C
# 29	B xxxxxx	0.628	B xxxxxx	0.628	+ 0.000 V/C
# 30	C xxxxxx	0.737	C xxxxxx	0.737	+ 0.000 V/C
# 31	A xxxxxx	0.451	A xxxxxx	0.451	+ 0.000 V/C
# 32	A xxxxxx	0.481	A xxxxxx	0.481	+ 0.000 V/C
# 33	A xxxxxx	0.570	A xxxxxx	0.570	+ 0.000 V/C
# 34	B xxxxxx	0.609	B xxxxxx	0.609	+ 0.000 V/C

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.588
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 0 0 0 0 0 0 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 462 758 294 172 844 293 0 0 0 175 253 199
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 462 758 294 172 844 293 0 0 0 175 253 199
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 462 758 294 172 844 293 0 0 0 175 253 199
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 462 758 294 172 844 293 0 0 0 175 253 199
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 462 758 294 172 844 293 0 0 0 175 253 199
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 462 758 294 172 844 293 0 0 0 175 253 199
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 1.44 0.56 1.00 2.00 1.00 0.00 0.00 0.00 0.56 0.81 0.63
Final Sat.: 3127 2479 961 1720 3440 1720 0 0 0 960 1388 1092
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.15 0.31 0.31 0.10 0.25 0.17 0.00 0.00 0.00 0.18 0.18 0.18
Crit Volume: 526 172 0 314
Crit Moves: \*\*\*\* \*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.576
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 1 0 1 0 2 0 0 1 0 1 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 901 148 131 638 0 599 0 793 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 901 148 131 638 0 599 0 793 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 901 148 131 638 0 599 0 793 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 901 148 131 638 0 599 0 793 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 901 148 131 638 0 599 0 793 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 901 148 131 638 0 599 0 793 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 1.00 1.00 1.00
Lanes: 0.00 2.58 0.42 1.00 2.00 0.00 1.29 0.00 1.71 0.00 0.00 0.00
Final Sat.: 0 4432 728 1720 3440 0 2018 0 2672 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.20 0.20 0.08 0.19 0.00 0.30 0.00 0.30 0.00 0.00 0.00
Crit Volume: 350 131 464 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.851
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 153 Level Of Service: D
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 153 677 213 463 840 266 225 757 167 141 333 198
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 153 677 213 463 840 266 225 757 167 141 333 198
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 153 677 213 463 840 266 225 757 167 141 333 198
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 153 677 213 463 840 266 225 757 167 141 333 198
RTOR Reduct: 0 0 141 0 0 225 0 0 0 0 0 0 198
RTOR Vol: 153 677 72 463 840 41 225 757 167 141 333 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 153 677 72 463 840 41 225 757 167 141 333 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.64 0.36 1.00 2.00 1.00
Final Sat.: 1650 3300 1650 1650 3300 1650 1650 2704 596 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.09 0.21 0.04 0.28 0.25 0.02 0.14 0.28 0.28 0.09 0.10 0.00
Crit Volume: 339 463 462 141
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #4
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.700
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 76 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow values and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.510
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows of adjustment factors.

Saturation Flow Module: Table with 12 columns representing saturation flow values and 4 rows of adjustment factors.

Capacity Analysis Module: Table with 12 columns representing capacity analysis metrics and 4 rows of values.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #6
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.637
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 63 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 74 253 272 240 419 125 95 1018 159 175 254 111
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 74 253 272 240 419 125 95 1018 159 175 254 111
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 74 253 272 240 419 125 95 1018 159 175 254 111
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 74 253 272 240 419 125 95 1018 159 175 254 111
RTOR Reduct: 0 0 175 0 0 0 0 0 0 74 0 0 111
RTOR Vol: 74 253 97 240 419 125 95 1018 85 175 254 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 74 253 97 240 419 125 95 1018 85 175 254 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 1.54 0.46 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 1650 3300 1650 1650 2542 758 1650 3300 1650 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.04 0.08 0.06 0.15 0.16 0.16 0.06 0.31 0.05 0.11 0.08 0.00
Crit Volume: 126 240 509 175
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #7
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.702
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 77 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #8
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.463
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns showing saturation flow values and adjustment factors for each lane.

Capacity Analysis Module: Table with 13 columns showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #9
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.443
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 2 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 434 564 192 17 179 262 304 288 349 86 149 17
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 434 564 192 17 179 262 304 288 349 86 149 17
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 434 564 192 17 179 262 304 288 349 86 149 17
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 434 564 192 17 179 262 304 288 349 86 149 17
RTOR Reduct: 0 0 0 0 0 0 167 0 0 239 0 0 17
RTOR Vol: 434 564 192 17 179 95 304 288 110 86 149 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 434 564 192 17 179 95 304 288 110 86 149 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 2.00 1.49 0.51 1.00 2.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00
Final Sat.: 3000 2462 838 1650 3300 1650 3000 1650 1650 3000 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.14 0.23 0.23 0.01 0.05 0.06 0.10 0.17 0.07 0.03 0.09 0.00
Crit Volume: 378 17 288 43
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #10
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.513
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 0 1 2 0 2 0 0 2 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 641 369 127 489 0 764 0 444 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 641 369 127 489 0 764 0 444 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 641 369 127 489 0 764 0 444 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 641 369 127 489 0 764 0 444 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 641 369 127 489 0 764 0 444 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 641 369 127 489 0 764 0 444 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 2.00 1.00 2.00 2.00 0.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 0 3440 1720 3127 3440 0 3127 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.19 0.21 0.04 0.14 0.00 0.24 0.00 0.26 0.00 0.00 0.00
Crit Volume: 369 64 444 0
Crit Moves: \*\*\*\* \*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #11
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.610
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 2 0 2 0 1 2 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 176 434 149 238 364 121 518 1067 184 209 393 135
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 176 434 149 238 364 121 518 1067 184 209 393 135
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 176 434 149 238 364 121 518 1067 184 209 393 135
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 176 434 149 238 364 121 518 1067 184 209 393 135
RTOR Reduct: 0 0 115 0 0 121 0 0 176 0 0 131
RTOR Vol: 176 434 34 238 364 0 518 1067 8 209 393 4
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 176 434 34 238 364 0 518 1067 8 209 393 4
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00
Final Sat.: 1650 3300 1650 3000 3300 1650 3000 3300 1650 3000 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.11 0.13 0.02 0.08 0.11 0.00 0.17 0.32 0.00 0.07 0.12 0.00
Crit Volume: 176 182 534 105
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #12
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.701
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 76 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 1 0 0 0 0 1 0 1
Volume Module:
Base Vol: 0 0 0 334 0 265 139 872 0 0 417 202
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 334 0 265 139 872 0 0 417 202
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 334 0 265 139 872 0 0 417 202
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 334 0 265 139 872 0 0 417 202
RTOR Reduct: 0 0 0 0 0 139 0 0 0 0 0 202
RTOR Vol: 0 0 0 334 0 126 139 872 0 0 417 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 334 0 126 139 872 0 0 417 0
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00
Final Sat.: 0 0 0 1720 0 1720 1720 1720 0 0 1720 1720
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.19 0.00 0.07 0.08 0.51 0.00 0.00 0.24 0.00
Crit Volume: 0 334 872 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #13
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.795
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 91 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow values and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #16
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.047
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for different volume types (Base Vol, Growth Adj, etc.) and 4 rows for North, South, East, and West bounds.

Saturation Flow Module: Table with 12 columns for saturation flow values and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis values and 3 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #18
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.501
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 2 1 0 1 0 2 1 0 2 0 0 1 1 1 1 0 1 0
Volume Module:
Base Vol: 406 502 119 25 743 170 348 128 234 196 65 23
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 406 502 119 25 743 170 348 128 234 196 65 23
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 406 502 119 25 743 170 348 128 234 196 65 23
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 406 502 119 25 743 170 348 128 234 196 65 23
RTOR Reduct: 0 0 0 0 0 0 0 0 0 223 0 0 0
RTOR Vol: 406 502 119 25 743 170 348 128 11 196 65 23
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 406 502 119 25 743 170 348 128 11 196 65 23
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 0.91 1.00 1.00
Lanes: 2.00 2.43 0.57 1.00 2.44 0.56 2.00 1.00 1.00 2.00 0.74 0.26
Final Sat.: 3000 4001 949 1650 4028 922 3000 1650 1500 3000 1219 431
Capacity Analysis Module:
Vol/Sat: 0.14 0.13 0.13 0.02 0.18 0.18 0.12 0.08 0.01 0.07 0.05 0.05
Crit Volume: 203 304 174 98
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #19
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.383
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 3 0 0 0 0 3 0 1 2 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 258 584 0 0 884 285 349 0 364 0 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 258 584 0 0 884 285 349 0 364 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 258 584 0 0 884 285 349 0 364 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 258 584 0 0 884 285 349 0 364 0 0 0 0
RTOR Reduct: 0 0 0 0 0 0 192 0 0 142 0 0 0 0
RTOR Vol: 258 584 0 0 884 93 349 0 222 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 258 584 0 0 884 93 349 0 222 0 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 3.00 0.00 0.00 3.00 1.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 3127 5160 0 0 5160 1720 3127 0 1720 0 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.08 0.11 0.00 0.00 0.17 0.05 0.11 0.00 0.13 0.00 0.00 0.00
Crit Volume: 129 295 222 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #20
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.736
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 86 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 11 rows of adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #21
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.564
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 2 0 2 0 1 1 1 0 1 0 1 0 1 0 1
Volume Module:
Base Vol: 49 596 22 392 537 270 492 431 30 43 131 375
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 49 596 22 392 537 270 492 431 30 43 131 375
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 49 596 22 392 537 270 492 431 30 43 131 375
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 49 596 22 392 537 270 492 431 30 43 131 375
RTOR Reduct: 0 0 0 0 0 0 270 0 0 0 0 0 216
RTOR Vol: 49 596 22 392 537 0 492 431 30 43 131 159
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 49 596 22 392 537 0 492 431 30 43 131 159
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.89 0.11 2.00 2.00 1.00 1.56 1.35 0.09 1.00 1.00 1.00
Final Sat.: 1650 4774 176 3000 3300 1650 2327 2235 155 1650 1650 1650
Capacity Analysis Module:
Vol/Sat: 0.03 0.12 0.12 0.13 0.16 0.00 0.21 0.19 0.19 0.03 0.08 0.10
Crit Volume: 206 196 317 159
Crit Moves: \*\*\*\* \*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #22
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.610
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 227 259 20 241 560 242 300 446 628 29 200 118
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 227 259 20 241 560 242 300 446 628 29 200 118
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 227 259 20 241 560 242 300 446 628 29 200 118
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 227 259 20 241 560 242 300 446 628 29 200 118
RTOR Reduct: 0 0 0 0 0 0 242 0 0 0 0 118
RTOR Vol: 227 259 20 241 560 0 300 446 628 29 200 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 227 259 20 241 560 0 300 446 628 29 200 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.86 0.14 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00
Final Sat.: 1650 3063 237 1650 3300 1650 1650 3300 1650 1650 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.14 0.08 0.08 0.15 0.17 0.00 0.18 0.14 0.38 0.02 0.12 0.00
Crit Volume: 227 280 300 200
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #24
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.413
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for movements and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #25
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.539
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0
Volume Module:
Base Vol: 82 251 25 253 414 31 55 390 149 91 207 73
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 82 251 25 253 414 31 55 390 149 91 207 73
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 82 251 25 253 414 31 55 390 149 91 207 73
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 82 251 25 253 414 31 55 390 149 91 207 73
RTOR Reduct: 0 0 0 0 0 0 31 0 0 0 0 0
RTOR Vol: 82 251 25 253 414 0 55 390 149 91 207 73
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 82 251 25 253 414 0 55 390 149 91 207 73
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.91 0.09 1.00 1.00 1.00 1.00 1.45 0.55 1.00 1.48 0.52
Final Sat.: 1650 1501 149 1650 1650 1650 1650 2388 912 1650 2440 860
Capacity Analysis Module:
Vol/Sat: 0.05 0.17 0.17 0.15 0.25 0.00 0.03 0.16 0.16 0.06 0.08 0.08
Crit Volume: 276 253 270 91
Crit Moves: \*\*\*\* \*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #26
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.489
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 0 1 0 0 1 1 0 1 0 1 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 4 17 7 225 19 117 103 1051 7 25 564 113
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 4 17 7 225 19 117 103 1051 7 25 564 113
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 4 17 7 225 19 117 103 1051 7 25 564 113
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 4 17 7 225 19 117 103 1051 7 25 564 113
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 4 17 7 225 19 117 103 1051 7 25 564 113
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 4 17 7 225 19 117 103 1051 7 25 564 113
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.14 0.61 0.25 1.00 0.14 0.86 1.00 1.99 0.01 1.00 1.67 0.33
Final Sat.: 236 1002 413 1650 231 1419 1650 3278 22 1650 2749 551
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.02 0.02 0.02 0.14 0.08 0.08 0.06 0.32 0.32 0.02 0.21 0.21
Crit Volume: 28 225 529 25
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #27
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.782
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 104 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 2 0 1 1 0 2 1 0 1 0 1 0 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 712 770 9 73 1165 228 141 123 1049 12 60 70
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 712 770 9 73 1165 228 141 123 1049 12 60 70
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 712 770 9 73 1165 228 141 123 1049 12 60 70
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 712 770 9 73 1165 228 141 123 1049 12 60 70
RTOR Reduct: 0 0 9 0 0 0 0 0 392 0 0 70
RTOR Vol: 712 770 0 73 1165 228 141 123 657 12 60 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 712 770 0 73 1165 228 141 123 657 12 60 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00
Lanes: 2.00 2.00 1.00 1.00 2.51 0.49 1.00 1.00 2.00 0.17 0.83 1.00
Final Sat.: 3000 3300 1650 1650 4140 810 1650 1650 3000 275 1375 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.24 0.23 0.00 0.04 0.28 0.28 0.09 0.07 0.22 0.04 0.04 0.00
Crit Volume: 356 464 329 72
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #28
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.598
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #29
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.628
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 61 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 1 0 1 0 2 0 1
Volume Module:
Base Vol: 146 1270 363 58 436 54 281 299 162 203 131 42
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 146 1270 363 58 436 54 281 299 162 203 131 42
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 146 1270 363 58 436 54 281 299 162 203 131 42
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 146 1270 363 58 436 54 281 299 162 203 131 42
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 42
RTOR Vol: 146 1270 363 58 436 54 281 299 162 203 131 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 146 1270 363 58 436 54 281 299 162 203 131 0
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.33 0.67 1.00 2.67 0.33 1.00 1.30 0.70 1.00 2.00 1.00
Final Sat.: 1650 3850 1100 1650 4404 546 1650 2140 1160 1650 3300 1650
Capacity Analysis Module:
Vol/Sat: 0.09 0.33 0.33 0.04 0.10 0.10 0.17 0.14 0.14 0.12 0.04 0.00
Crit Volume: 544 58 231 203
Crit Moves: \*\*\*\* \*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #30
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.737
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 87 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow rates and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #31
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for saturation flow values and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis metrics and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #32
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.481
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #33
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.570
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 216 402 13 19 441 47 118 8 496 17 1 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 216 402 13 19 441 47 118 8 496 17 1 2
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 216 402 13 19 441 47 118 8 496 17 1 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 216 402 13 19 441 47 118 8 496 17 1 2
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 216 402 13 19 441 47 118 8 496 17 1 2
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 216 402 13 19 441 47 118 8 496 17 1 2
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.94 0.06 1.00 1.81 0.19 1.00 0.02 0.98 1.00 0.33 0.67
Final Sat.: 1720 3332 108 1720 3109 331 1720 27 1693 1720 573 1147
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.13 0.12 0.12 0.01 0.14 0.14 0.07 0.29 0.29 0.01 0.00 0.00
Crit Volume: 216 244 504 17
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #34
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.609
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

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 Impact Analysis Report  
 Level Of Service  
 -----

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1	C	xxxxxx 0.731	C	xxxxxx 0.731	+ 0.000 V/C
# 2	B	xxxxxx 0.641	B	xxxxxx 0.641	+ 0.000 V/C
# 3	C	xxxxxx 0.717	C	xxxxxx 0.717	+ 0.000 V/C
# 4	B	xxxxxx 0.611	B	xxxxxx 0.611	+ 0.000 V/C
# 5	A	xxxxxx 0.548	A	xxxxxx 0.548	+ 0.000 V/C
# 6	A	xxxxxx 0.562	A	xxxxxx 0.562	+ 0.000 V/C
# 7	D	xxxxxx 0.867	D	xxxxxx 0.867	+ 0.000 V/C
# 8	A	xxxxxx 0.415	A	xxxxxx 0.415	+ 0.000 V/C
# 9	B	xxxxxx 0.605	B	xxxxxx 0.605	+ 0.000 V/C
# 10	A	xxxxxx 0.457	A	xxxxxx 0.457	+ 0.000 V/C
# 11	A	xxxxxx 0.526	A	xxxxxx 0.526	+ 0.000 V/C
# 12	E	xxxxxx 0.900	E	xxxxxx 0.900	+ 0.000 V/C
# 13	D	xxxxxx 0.855	D	xxxxxx 0.855	+ 0.000 V/C
# 14	A	xxxxxx 0.061	A	xxxxxx 0.061	+ 0.000 V/C
# 15	B	xxxxxx 0.674	B	xxxxxx 0.674	+ 0.000 V/C
# 16	A	xxxxxx 0.047	A	xxxxxx 0.047	+ 0.000 V/C
# 17	B	xxxxxx 0.655	B	xxxxxx 0.655	+ 0.000 V/C
# 18	A	xxxxxx 0.330	A	xxxxxx 0.330	+ 0.000 V/C
# 19	A	xxxxxx 0.356	A	xxxxxx 0.356	+ 0.000 V/C
# 20	A	xxxxxx 0.371	A	xxxxxx 0.371	+ 0.000 V/C
# 21	A	xxxxxx 0.493	A	xxxxxx 0.493	+ 0.000 V/C
# 22	D	xxxxxx 0.865	D	xxxxxx 0.865	+ 0.000 V/C
# 23	A	xxxxxx 0.574	A	xxxxxx 0.574	+ 0.000 V/C
# 24	A	xxxxxx 0.155	A	xxxxxx 0.155	+ 0.000 V/C
# 25	A	xxxxxx 0.530	A	xxxxxx 0.530	+ 0.000 V/C

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Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 26	B xxxxx	0.613	B xxxxx	0.613	+ 0.000 V/C
# 27	C xxxxx	0.704	C xxxxx	0.704	+ 0.000 V/C
# 28	A xxxxx	0.410	A xxxxx	0.410	+ 0.000 V/C
# 29	C xxxxx	0.728	C xxxxx	0.728	+ 0.000 V/C
# 30	C xxxxx	0.761	C xxxxx	0.761	+ 0.000 V/C
# 31	A xxxxx	0.381	A xxxxx	0.381	+ 0.000 V/C
# 32	A xxxxx	0.411	A xxxxx	0.411	+ 0.000 V/C
# 33	B xxxxx	0.602	B xxxxx	0.602	+ 0.000 V/C
# 34	A xxxxx	0.548	A xxxxx	0.548	+ 0.000 V/C

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.731
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 85 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 0 0 0 0 0 0 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 717 755 160 199 874 388 0 0 0 197 387 269
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 717 755 160 199 874 388 0 0 0 197 387 269
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 717 755 160 199 874 388 0 0 0 197 387 269
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 717 755 160 199 874 388 0 0 0 197 387 269
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 717 755 160 199 874 388 0 0 0 197 387 269
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 717 755 160 199 874 388 0 0 0 197 387 269
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 1.65 0.35 1.00 2.00 1.00 0.00 0.00 0.00 0.46 0.91 0.63
Final Sat.: 3127 2838 602 1720 3440 1720 0 0 0 794 1561 1085
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.23 0.27 0.27 0.12 0.25 0.23 0.00 0.00 0.00 0.25 0.25 0.25
Crit Volume: 359 437 0 427
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.641
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 1 0 1 0 2 0 0 1 0 1 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 1139 311 303 802 0 392 0 471 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 1139 311 303 802 0 392 0 471 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 1139 311 303 802 0 392 0 471 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 1139 311 303 802 0 392 0 471 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 1139 311 303 802 0 392 0 471 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 1139 311 303 802 0 392 0 471 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 1.00 1.00 1.00
Lanes: 0.00 2.36 0.64 1.00 2.00 0.00 1.36 0.01 1.63 0.00 0.00 0.00
Final Sat.: 0 4053 1107 1720 3440 0 2131 0 2560 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.28 0.28 0.18 0.23 0.00 0.18 0.00 0.18 0.00 0.00 0.00
Crit Volume: 483 303 288 0
Crit Moves: \*\*\*\* \*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.717
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 81 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow rates and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #4
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.611
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 1 0 1 1 1 0 0 1
Volume Module:
Base Vol: 7 444 440 89 518 67 86 93 27 1046 52 122
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 7 444 440 89 518 67 86 93 27 1046 52 122
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 7 444 440 89 518 67 86 93 27 1046 52 122
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 7 444 440 89 518 67 86 93 27 1046 52 122
RTOR Reduct: 0 0 440 0 0 67 0 0 7 0 0 89
RTOR Vol: 7 444 0 89 518 0 86 93 20 1046 52 33
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 7 444 0 89 518 0 86 93 20 1046 52 33
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00 1.91 0.09 1.00
Final Sat.: 1650 3300 1650 1650 3300 1650 1650 1650 1650 2858 156 1650
Capacity Analysis Module:
Vol/Sat: 0.00 0.13 0.00 0.05 0.16 0.00 0.05 0.06 0.01 0.37 0.33 0.02
Crit Volume: 222 89 93 549
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.548
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 13 729 0 0 1536 54 162 0 40 0 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 13 729 0 0 1536 54 162 0 40 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 13 729 0 0 1536 54 162 0 40 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 13 729 0 0 1536 54 162 0 40 0 0 0 0
RTOR Reduct: 0 0 0 0 0 0 54 0 0 13 0 0 0 0
RTOR Vol: 13 729 0 0 1536 0 162 0 27 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 13 729 0 0 1536 0 162 0 27 0 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1720 3440 0 0 3440 1720 1720 0 1720 0 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.01 0.21 0.00 0.00 0.45 0.00 0.09 0.00 0.02 0.00 0.00 0.00
Crit Volume: 13 768 162 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #6
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.562
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #7
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.867
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 172 Level Of Service: D
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1
Volume Module:
Base Vol: 94 101 3 135 33 159 116 494 5 2 1029 103
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 94 101 3 135 33 159 116 494 5 2 1029 103
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 94 101 3 135 33 159 116 494 5 2 1029 103
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 94 101 3 135 33 159 116 494 5 2 1029 103
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 94 101 3 135 33 159 116 494 5 2 1029 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 94 101 3 135 33 159 116 494 5 2 1029 0
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.97 0.03 1.00 0.17 0.83 1.00 0.99 0.01 1.00 1.00 1.00
Final Sat.: 1650 1602 48 1650 284 1366 1650 1633 17 1650 1650 1650
Capacity Analysis Module:
Vol/Sat: 0.06 0.06 0.06 0.08 0.12 0.12 0.07 0.30 0.30 0.00 0.62 0.00
Crit Volume: 94 192 116 1029
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #8
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.415
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 11 rows of volume-related metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 4 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #9
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.605
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 2 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 587 301 94 7 219 522 104 60 269 45 154 3
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 587 301 94 7 219 522 104 60 269 45 154 3
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 587 301 94 7 219 522 104 60 269 45 154 3
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 587 301 94 7 219 522 104 60 269 45 154 3
RTOR Reduct: 0 0 0 0 0 0 57 0 0 269 0 0 3
RTOR Vol: 587 301 94 7 219 465 104 60 0 45 154 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 587 301 94 7 219 465 104 60 0 45 154 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 2.00 1.52 0.48 1.00 2.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00
Final Sat.: 3000 2515 785 1650 3300 1650 3000 1650 1650 3000 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.20 0.12 0.12 0.00 0.07 0.28 0.03 0.04 0.00 0.02 0.09 0.00
Crit Volume: 294 465 52 154
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #10
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.457
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 0 1 2 0 2 0 0 2 0 0 0 1 0 0 0 0 0
Volume Module:
Base Vol: 0 684 193 129 478 0 422 0 373 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 684 193 129 478 0 422 0 373 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 684 193 129 478 0 422 0 373 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 684 193 129 478 0 422 0 373 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 684 193 129 478 0 422 0 373 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 684 193 129 478 0 422 0 373 0 0 0
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 2.00 1.00 2.00 2.00 0.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 0 3440 1720 3127 3440 0 3127 0 1720 0 0 0
Capacity Analysis Module:
Vol/Sat: 0.00 0.20 0.11 0.04 0.14 0.00 0.13 0.00 0.22 0.00 0.00 0.00
Crit Volume: 342 65 373 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #11
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.526
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 2 0 2 0 1 2 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 252 579 133 181 354 155 184 237 169 175 676 180
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 252 579 133 181 354 155 184 237 169 175 676 180
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 252 579 133 181 354 155 184 237 169 175 676 180
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 252 579 133 181 354 155 184 237 169 175 676 180
RTOR Reduct: 0 0 96 0 0 101 0 0 169 0 0 100
RTOR Vol: 252 579 37 181 354 54 184 237 0 175 676 80
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 252 579 37 181 354 54 184 237 0 175 676 80
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00
Final Sat.: 1650 3300 1650 3000 3300 1650 3000 3300 1650 3000 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.15 0.18 0.02 0.06 0.11 0.03 0.06 0.07 0.00 0.06 0.20 0.05
Crit Volume: 252 177 92 338
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #12
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.900
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 11 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow rates and adjustment factors.

Capacity Analysis Module: Table with 12 columns and 3 rows showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #13
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.855
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 128 Level Of Service: D
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 1 0 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 177 108 44 14 10 17 9 555 76 25 1247 11
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 177 108 44 14 10 17 9 555 76 25 1247 11
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 177 108 44 14 10 17 9 555 76 25 1247 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 177 108 44 14 10 17 9 555 76 25 1247 11
RTOR Reduct: 0 0 0 0 0 0 0 0 0 76 0 0 0
RTOR Vol: 177 108 44 14 10 17 9 555 0 25 1247 11
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 177 108 44 14 10 17 9 555 0 25 1247 11
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.71 0.29 1.00 0.37 0.63 1.00 1.00 1.00 1.00 0.99 0.01
Final Sat.: 1720 1222 498 1720 637 1083 1720 1720 1720 1720 1705 15
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.10 0.09 0.09 0.01 0.02 0.02 0.01 0.32 0.00 0.01 0.73 0.73
Crit Volume: 177 27 9 1258
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #15
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.674
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 70 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 1 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 74 0 107 0 0 0 0 0 627 25 36 1086 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 74 0 107 0 0 0 0 0 627 25 36 1086 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 74 0 107 0 0 0 0 0 627 25 36 1086 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 74 0 107 0 0 0 0 0 627 25 36 1086 0
RTOR Reduct: 0 0 36 0 0 0 0 0 0 25 0 0 0
RTOR Vol: 74 0 71 0 0 0 0 0 627 0 36 1086 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 74 0 71 0 0 0 0 0 627 0 36 1086 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 0 1720 1720 1720 1720 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.04 0.00 0.04 0.00 0.00 0.00 0.00 0.36 0.00 0.02 0.63 0.00
Crit Volume: 74 0 1086
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #16
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.047
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1 0
Volume Module:
Base Vol: 0 0 61 0 0 0 0 0 0 0 23 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 61 0 0 0 0 0 0 0 23 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 61 0 0 0 0 0 0 0 23 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 61 0 0 0 0 0 0 0 23 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 0 61 0 0 0 0 0 0 0 23 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 61 0 0 0 0 0 0 0 23 0 0
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 1.00 1.00 0.00 1.00 2.00 0.00 1.00 2.00 0.00
Final Sat.: 1800 0 1800 1800 1800 0 1800 3600 0 1800 3600 0
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.00 0.00
Crit Volume: 61 0 0 0
Crit Moves: \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #17
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.655
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 66 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 1 0 0 0
Volume Module:
Base Vol: 62 0 89 0 0 0 0 0 718 16 22 1060 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 62 0 89 0 0 0 0 0 718 16 22 1060 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 62 0 89 0 0 0 0 0 718 16 22 1060 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 62 0 89 0 0 0 0 0 718 16 22 1060 0
RTOR Reduct: 0 0 22 0 0 0 0 0 0 16 0 0 0 0
RTOR Vol: 62 0 67 0 0 0 0 0 718 0 22 1060 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 62 0 67 0 0 0 0 0 718 0 22 1060 0
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 0 1720 1720 1720 1720 0
Capacity Analysis Module:
Vol/Sat: 0.04 0.00 0.04 0.00 0.00 0.00 0.00 0.42 0.00 0.01 0.62 0.00
Crit Volume: 67 0 0 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #18
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.330
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 2 1 0 1 0 2 1 0 2 0 0 1 1 1 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 203 467 147 24 515 262 104 31 39 204 76 29
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 203 467 147 24 515 262 104 31 39 204 76 29
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 203 467 147 24 515 262 104 31 39 204 76 29
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 203 467 147 24 515 262 104 31 39 204 76 29
RTOR Reduct: 0 0 0 0 0 0 0 0 0 39 0 0 0
RTOR Vol: 203 467 147 24 515 262 104 31 0 204 76 29
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 203 467 147 24 515 262 104 31 0 204 76 29
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 0.91 1.00 1.00
Lanes: 2.00 2.28 0.72 1.00 2.00 1.00 2.00 1.00 1.00 1.99 0.73 0.28
Final Sat.: 3000 3765 1185 1650 3300 1650 3000 1650 1500 2978 1212 462
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.07 0.12 0.12 0.01 0.16 0.16 0.03 0.02 0.00 0.07 0.06 0.06
Crit Volume: 102 262 52 103
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #19
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.356
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 3 0 0 0 0 3 0 1 2 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 587 534 0 0 416 289 216 0 258 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 587 534 0 0 416 289 216 0 258 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 587 534 0 0 416 289 216 0 258 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 587 534 0 0 416 289 216 0 258 0 0 0
RTOR Reduct: 0 0 0 0 0 0 119 0 0 258 0 0 0
RTOR Vol: 587 534 0 0 416 170 216 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 587 534 0 0 416 170 216 0 0 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 3.00 0.00 0.00 3.00 1.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 3127 5160 0 0 5160 1720 3127 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.19 0.10 0.00 0.00 0.08 0.10 0.07 0.00 0.00 0.00 0.00 0.00
Crit Volume: 294 170 108 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #20
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.371
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 3 0 1 2 0 3 0 0 2 0 0 1 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 954 422 135 572 0 208 0 259 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 954 422 135 572 0 208 0 259 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 954 422 135 572 0 208 0 259 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 954 422 135 572 0 208 0 259 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 954 422 135 572 0 208 0 259 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 954 422 135 572 0 208 0 259 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 0.91 1.00 1.00 1.00
Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 2.00 0.00 2.00 0.00 0.00 0.00
Final Sat.: 0 5160 1720 3127 5160 0 3127 0 3127 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.18 0.25 0.04 0.11 0.00 0.07 0.00 0.08 0.00 0.00 0.00
Crit Volume: 422 68 130 0
Crit Moves: \*\*\*\* \*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #21
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.493
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 2 0 2 0 1 1 1 0 1 0 1 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 87 753 16 137 346 282 263 115 5 41 315 413
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 87 753 16 137 346 282 263 115 5 41 315 413
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 87 753 16 137 346 282 263 115 5 41 315 413
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 87 753 16 137 346 282 263 115 5 41 315 413
RTOR Reduct: 0 0 0 0 0 0 145 0 0 0 0 75
RTOR Vol: 87 753 16 137 346 137 263 115 5 41 315 338
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 87 753 16 137 346 137 263 115 5 41 315 338
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.94 0.06 2.00 2.00 1.00 2.00 0.96 0.04 1.00 1.00 1.00
Final Sat.: 1650 4847 103 3000 3300 1650 3000 1581 69 1650 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.05 0.16 0.16 0.05 0.10 0.08 0.09 0.07 0.07 0.02 0.19 0.20
Crit Volume: 256 69 132 338
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #22
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.865
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 169 Level Of Service: D
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 600 1058 52 39 150 137 396 220 184 25 350 396
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 600 1058 52 39 150 137 396 220 184 25 350 396
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 600 1058 52 39 150 137 396 220 184 25 350 396
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 600 1058 52 39 150 137 396 220 184 25 350 396
RTOR Reduct: 0 0 0 0 0 0 137 0 0 0 0 39
RTOR Vol: 600 1058 52 39 150 0 396 220 184 25 350 357
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 600 1058 52 39 150 0 396 220 184 25 350 357
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.91 0.09 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00
Final Sat.: 1650 3145 155 1650 3300 1650 1650 3300 1650 1650 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.36 0.34 0.34 0.02 0.05 0.00 0.24 0.07 0.11 0.02 0.21 0.22
Crit Volume: 600 75 396 357
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #23
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.574
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #24
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.155
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different volume types (Base Vol, Growth Adj, etc.) and 13 rows of adjustment factors.

Saturation Flow Module: Table with 13 columns for Sat/Lane, Adjustment, Lanes, and Final Sat., and 4 rows of flow data.

Capacity Analysis Module: Table with 13 columns for Vol/Sat, Crit Volume, and Crit Moves, and 3 rows of capacity data.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #25
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.530
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 1 0 1 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 125 421 52 63 104 13 41 214 54 50 390 204
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 125 421 52 63 104 13 41 214 54 50 390 204
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 125 421 52 63 104 13 41 214 54 50 390 204
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 125 421 52 63 104 13 41 214 54 50 390 204
RTOR Reduct: 0 0 0 0 0 0 13 0 0 0 0 0
RTOR Vol: 125 421 52 63 104 0 41 214 54 50 390 204
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 125 421 52 63 104 0 41 214 54 50 390 204
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.89 0.11 1.00 1.00 1.00 1.00 1.60 0.40 1.00 1.31 0.69
Final Sat.: 1650 1469 181 1650 1650 1650 1650 2635 665 1650 2167 1133
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.08 0.29 0.29 0.04 0.06 0.00 0.02 0.08 0.08 0.03 0.18 0.18
Crit Volume: 473 63 41 297
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #26
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.613
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 59 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for movements and 3 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #27
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.704
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 77 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 2 0 1 1 0 2 1 0 1 0 1 0 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 917 1161 9 49 868 149 194 50 486 11 113 78
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 917 1161 9 49 868 149 194 50 486 11 113 78
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 917 1161 9 49 868 149 194 50 486 11 113 78
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 917 1161 9 49 868 149 194 50 486 11 113 78
RTOR Reduct: 0 0 9 0 0 0 0 0 0 486 0 0 49
RTOR Vol: 917 1161 0 49 868 149 194 50 0 11 113 29
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 917 1161 0 49 868 149 194 50 0 11 113 29
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00
Lanes: 2.00 2.00 1.00 1.00 2.56 0.44 1.00 1.00 2.00 0.09 0.91 1.00
Final Sat.: 3000 3300 1650 1650 4225 725 1650 1650 3000 146 1504 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.31 0.35 0.00 0.03 0.21 0.21 0.12 0.03 0.00 0.08 0.08 0.02
Crit Volume: 459 339 194 124
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #28
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.410
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 1 0 1 0 0 1 0 3 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 56 507 3 0 1625 28 24 0 98 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 56 507 3 0 1625 28 24 0 98 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 56 507 3 0 1625 28 24 0 98 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 56 507 3 0 1625 28 24 0 98 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 56 507 3 0 1625 28 24 0 98 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 56 507 3 0 1625 28 24 0 98 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.87 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.95 0.05 1.00 0.00 1.00 3.00 1.00 1.00
Final Sat.: 1720 3440 1720 1720 5073 87 1720 0 1720 4489 1720 1720
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.03 0.15 0.00 0.00 0.32 0.32 0.01 0.00 0.06 0.00 0.00 0.00
Crit Volume: 56 551 98 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #29
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.728
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 84 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 67 413 79 50 1527 372 65 69 124 377 385 90
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 67 413 79 50 1527 372 65 69 124 377 385 90
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 67 413 79 50 1527 372 65 69 124 377 385 90
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 67 413 79 50 1527 372 65 69 124 377 385 90
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 67 413 79 50 1527 372 65 69 124 377 385 40
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 67 413 79 50 1527 372 65 69 124 377 385 40
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.52 0.48 1.00 2.41 0.59 1.00 1.00 1.00 1.00 2.00 1.00
Final Sat.: 1650 4155 795 1650 3980 970 1650 1650 1650 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.04 0.10 0.10 0.03 0.38 0.38 0.04 0.04 0.08 0.23 0.12 0.02
Crit Volume: 67 633 124 377
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #30
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.761
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 95 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 3 0 1 2 0 3 0 1 2 0 2 1 0 2 0 1 1 0
Volume Module:
Base Vol: 151 314 167 273 1075 521 210 351 34 443 1167 137
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 151 314 167 273 1075 521 210 351 34 443 1167 137
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 151 314 167 273 1075 521 210 351 34 443 1167 137
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 151 314 167 273 1075 521 210 351 34 443 1167 137
RTOR Reduct: 0 0 167 0 0 116 0 0 0 0 0 0
RTOR Vol: 151 314 0 273 1075 406 210 351 34 443 1167 137
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 151 314 0 273 1075 406 210 351 34 443 1167 137
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 2.00 3.00 1.00 2.00 3.00 1.00 2.00 2.74 0.26 2.00 1.79 0.21
Final Sat.: 3000 4950 1650 3000 4950 1650 3000 4513 437 3000 2953 347
Capacity Analysis Module:
Vol/Sat: 0.05 0.06 0.00 0.09 0.22 0.25 0.07 0.08 0.08 0.15 0.40 0.40
Crit Volume: 76 406 105 652
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #31
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.381
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 1 0 1 0 1 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 6 0 28 7 0 4 8 750 5 9 1159 11
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 6 0 28 7 0 4 8 750 5 9 1159 11
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 6 0 28 7 0 4 8 750 5 9 1159 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 6 0 28 7 0 4 8 750 5 9 1159 11
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 6 0 28 7 0 4 8 750 5 9 1159 11
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 6 0 28 7 0 4 8 750 5 9 1159 11
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 1.00 0.00 1.00 1.00 1.99 0.01 1.00 1.98 0.02
Final Sat.: 1650 0 1650 1650 0 1650 1650 3278 22 1650 3269 31
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.02 0.00 0.00 0.00 0.00 0.23 0.23 0.01 0.35 0.35
Crit Volume: 28 7 8 585
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #32
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.411
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 2 0 0 0 0 1 1 0
Volume Module:
Base Vol: 0 0 0 106 0 298 101 297 0 0 716 101
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 106 0 298 101 297 0 0 716 101
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 106 0 298 101 297 0 0 716 101
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 106 0 298 101 297 0 0 716 101
RTOR Reduct: 0 0 0 0 0 101 0 0 0 0 0 0
RTOR Vol: 0 0 0 106 0 197 101 297 0 0 716 101
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 106 0 197 101 297 0 0 716 101
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 2.00 0.00 0.00 1.75 0.25
Final Sat.: 0 0 0 1720 0 1720 1720 3440 0 0 3015 425
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.06 0.00 0.11 0.06 0.09 0.00 0.00 0.24 0.24
Crit Volume: 0 197 101 409
Crit Moves: \*\*\*\* \*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #33
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.602
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 802 764 0 2 238 25 42 0 102 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 802 764 0 2 238 25 42 0 102 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 802 764 0 2 238 25 42 0 102 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 802 764 0 2 238 25 42 0 102 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 802 764 0 2 238 25 42 0 102 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 802 764 0 2 238 25 42 0 102 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 1.00 1.81 0.19 1.00 0.00 1.00 1.00 1.00 0.00
Final Sat.: 1720 3440 0 1720 3113 327 1720 0 1720 1720 1720 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.47 0.22 0.00 0.00 0.08 0.08 0.02 0.00 0.06 0.00 0.00 0.00
Crit Volume: 802 132 102 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #34
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.548
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 1 0 0 1 0 0 1! 0 0 1 0 1 1 0
Volume Module:
Base Vol: 614 6 29 8 2 2 11 344 155 22 457 7
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 614 6 29 8 2 2 11 344 155 22 457 7
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 614 6 29 8 2 2 11 344 155 22 457 7
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 614 6 29 8 2 2 11 344 155 22 457 7
RTOR Reduct: 0 0 22 0 0 0 0 0 0 0 0 0
RTOR Vol: 614 6 7 8 2 2 11 344 155 22 457 7
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 614 6 7 8 2 2 11 344 155 22 457 7
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.99 0.01 1.00 0.66 0.17 0.17 1.00 1.38 0.62 1.00 1.97 0.03
Final Sat.: 1634 16 1650 1100 275 275 1650 2275 1025 1650 3250 50
Capacity Analysis Module:
Vol/Sat: 0.38 0.38 0.00 0.01 0.01 0.01 0.01 0.15 0.15 0.01 0.14 0.14
Crit Volume: 620 12 250 22
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

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 Impact Analysis Report  
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1	A	xxxxxx 0.592	A	xxxxxx 0.592	+ 0.000 V/C
# 2	A	xxxxxx 0.594	A	xxxxxx 0.594	+ 0.000 V/C
# 3	E	xxxxxx 0.902	E	xxxxxx 0.902	+ 0.000 V/C
# 4	C	xxxxxx 0.783	C	xxxxxx 0.783	+ 0.000 V/C
# 5	A	xxxxxx 0.540	A	xxxxxx 0.540	+ 0.000 V/C
# 6	B	xxxxxx 0.658	B	xxxxxx 0.658	+ 0.000 V/C
# 7	C	xxxxxx 0.796	C	xxxxxx 0.796	+ 0.000 V/C
# 8	A	xxxxxx 0.473	A	xxxxxx 0.473	+ 0.000 V/C
# 9	A	xxxxxx 0.448	A	xxxxxx 0.448	+ 0.000 V/C
# 10	A	xxxxxx 0.533	A	xxxxxx 0.533	+ 0.000 V/C
# 11	B	xxxxxx 0.645	B	xxxxxx 0.645	+ 0.000 V/C
# 12	D	xxxxxx 0.851	D	xxxxxx 0.851	+ 0.000 V/C
# 13	E	xxxxxx 0.945	E	xxxxxx 0.945	+ 0.000 V/C
# 14	A	xxxxxx 0.057	A	xxxxxx 0.057	+ 0.000 V/C
# 15	E	xxxxxx 0.978	E	xxxxxx 0.978	+ 0.000 V/C
# 16	A	xxxxxx 0.072	A	xxxxxx 0.072	+ 0.000 V/C
# 17	F	xxxxxx 1.017	F	xxxxxx 1.017	+ 0.000 V/C
# 18	A	xxxxxx 0.510	A	xxxxxx 0.510	+ 0.000 V/C
# 19	A	xxxxxx 0.437	A	xxxxxx 0.437	+ 0.000 V/C
# 20	C	xxxxxx 0.789	C	xxxxxx 0.789	+ 0.000 V/C
# 21	A	xxxxxx 0.587	A	xxxxxx 0.587	+ 0.000 V/C
# 22	C	xxxxxx 0.754	C	xxxxxx 0.754	+ 0.000 V/C
# 23	A	xxxxxx 0.462	A	xxxxxx 0.462	+ 0.000 V/C
# 24	A	xxxxxx 0.436	A	xxxxxx 0.436	+ 0.000 V/C
# 25	A	xxxxxx 0.543	A	xxxxxx 0.543	+ 0.000 V/C

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Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 26	A xxxxxx	0.493	A xxxxxx	0.493	+ 0.000 V/C
# 27	C xxxxxx	0.788	C xxxxxx	0.788	+ 0.000 V/C
# 28	B xxxxxx	0.629	B xxxxxx	0.629	+ 0.000 V/C
# 29	B xxxxxx	0.646	B xxxxxx	0.646	+ 0.000 V/C
# 30	C xxxxxx	0.761	C xxxxxx	0.761	+ 0.000 V/C
# 31	A xxxxxx	0.515	A xxxxxx	0.515	+ 0.000 V/C
# 32	A xxxxxx	0.503	A xxxxxx	0.503	+ 0.000 V/C
# 33	B xxxxxx	0.660	B xxxxxx	0.660	+ 0.000 V/C
# 34	B xxxxxx	0.628	B xxxxxx	0.628	+ 0.000 V/C

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.592
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 0 0 0 0 0 0 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 489 771 294 172 868 293 0 0 0 175 253 199
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 489 771 294 172 868 293 0 0 0 175 253 199
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 489 771 294 172 868 293 0 0 0 175 253 199
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 489 771 294 172 868 293 0 0 0 175 253 199
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 489 771 294 172 868 293 0 0 0 175 253 199
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 489 771 294 172 868 293 0 0 0 175 253 199
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 1.45 0.55 1.00 2.00 1.00 0.00 0.00 0.00 0.56 0.81 0.63
Final Sat.: 3127 2490 950 1720 3440 1720 0 0 0 960 1388 1092
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.16 0.31 0.31 0.10 0.25 0.17 0.00 0.00 0.00 0.18 0.18 0.18
Crit Volume: 533 172 0 314
Crit Moves: \*\*\*\* \*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.594
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 1 0 1 0 2 0 0 1 0 1 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 941 148 131 662 0 599 0 839 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 941 148 131 662 0 599 0 839 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 941 148 131 662 0 599 0 839 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 941 148 131 662 0 599 0 839 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 941 148 131 662 0 599 0 839 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 941 148 131 662 0 599 0 839 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 1.00 1.00 1.00
Lanes: 0.00 2.59 0.41 1.00 2.00 0.00 1.25 0.00 1.75 0.00 0.00 0.00
Final Sat.: 0 4459 701 1720 3440 0 1954 0 2737 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.21 0.21 0.08 0.19 0.00 0.31 0.00 0.31 0.00 0.00 0.00
Crit Volume: 363 131 479 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.902
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 1 1 0 1 0 2 0 1
Volume Module:
Base Vol: 163 687 213 515 858 266 225 792 184 141 352 228
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 163 687 213 515 858 266 225 792 184 141 352 228
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 163 687 213 515 858 266 225 792 184 141 352 228
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 163 687 213 515 858 266 225 792 184 141 352 228
RTOR Reduct: 0 0 141 0 0 225 0 0 0 0 0 228
RTOR Vol: 163 687 72 515 858 41 225 792 184 141 352 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 163 687 72 515 858 41 225 792 184 141 352 0
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.62 0.38 1.00 2.00 1.00
Final Sat.: 1650 3300 1650 1650 3300 1650 1650 2678 622 1650 3300 1650
Capacity Analysis Module:
Vol/Sat: 0.10 0.21 0.04 0.31 0.26 0.02 0.14 0.30 0.30 0.09 0.11 0.00
Crit Volume: 344 515 488 141
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #4
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.783
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 105 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of volume-related metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow values and adjustment factors.

Capacity Analysis Module: Table with 12 columns and 4 rows showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.540
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Ovl Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 44 1659 0 0 809 170 99 0 26 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 44 1659 0 0 809 170 99 0 26 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 44 1659 0 0 809 170 99 0 26 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 44 1659 0 0 809 170 99 0 26 0 0 0
RTOR Reduct: 0 0 0 0 0 0 99 0 0 26 0 0 0
RTOR Vol: 44 1659 0 0 809 71 99 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 44 1659 0 0 809 71 99 0 0 0 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1720 3440 0 0 3440 1720 1720 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.03 0.48 0.00 0.00 0.24 0.04 0.06 0.00 0.00 0.00 0.00 0.00
Crit Volume: 830 0 99 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #6
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.658
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 67 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 83 253 272 240 419 125 95 1087 177 175 294 111
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 83 253 272 240 419 125 95 1087 177 175 294 111
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 83 253 272 240 419 125 95 1087 177 175 294 111
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 83 253 272 240 419 125 95 1087 177 175 294 111
RTOR Reduct: 0 0 175 0 0 0 0 0 0 83 0 0 111
RTOR Vol: 83 253 97 240 419 125 95 1087 94 175 294 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 83 253 97 240 419 125 95 1087 94 175 294 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 1.54 0.46 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 1650 3300 1650 1650 2542 758 1650 3300 1650 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.05 0.08 0.06 0.15 0.16 0.16 0.06 0.33 0.06 0.11 0.09 0.00
Crit Volume: 126 240 543 175
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #7
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.796
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 112 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows of adjustment factors.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow values and adjustment factors.

Capacity Analysis Module: Table with 12 columns and 4 rows showing capacity analysis metrics.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #8
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.473
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase/Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #9
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.448
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 2 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 454 564 209 17 179 262 304 288 349 86 159 17
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 454 564 209 17 179 262 304 288 349 86 159 17
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 454 564 209 17 179 262 304 288 349 86 159 17
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 454 564 209 17 179 262 304 288 349 86 159 17
RTOR Reduct: 0 0 0 0 0 0 167 0 0 250 0 0 17
RTOR Vol: 454 564 209 17 179 95 304 288 99 86 159 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 454 564 209 17 179 95 304 288 99 86 159 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 2.00 1.46 0.54 1.00 2.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00
Final Sat.: 3000 2408 892 1650 3300 1650 3000 1650 1650 3000 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.15 0.23 0.23 0.01 0.05 0.06 0.10 0.17 0.06 0.03 0.10 0.00
Crit Volume: 387 17 288 43
Crit Moves: \*\*\*\* \*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #10
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.533
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 0 1 2 0 2 0 0 2 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 661 369 127 489 0 781 0 478 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 661 369 127 489 0 781 0 478 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 661 369 127 489 0 781 0 478 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 661 369 127 489 0 781 0 478 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 661 369 127 489 0 781 0 478 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 661 369 127 489 0 781 0 478 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 2.00 1.00 2.00 2.00 0.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 0 3440 1720 3127 3440 0 3127 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.19 0.21 0.04 0.14 0.00 0.25 0.00 0.28 0.00 0.00 0.00
Crit Volume: 369 64 478 0
Crit Moves: \*\*\*\* \*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #11
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.645
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 2 0 2 0 1 2 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 216 454 149 238 398 121 518 1067 253 209 393 135
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 216 454 149 238 398 121 518 1067 253 209 393 135
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 216 454 149 238 398 121 518 1067 253 209 393 135
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 216 454 149 238 398 121 518 1067 253 209 393 135
RTOR Reduct: 0 0 115 0 0 121 0 0 216 0 0 131
RTOR Vol: 216 454 34 238 398 0 518 1067 37 209 393 4
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 216 454 34 238 398 0 518 1067 37 209 393 4
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00
Final Sat.: 1650 3300 1650 3000 3300 1650 3000 3300 1650 3000 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.13 0.14 0.02 0.08 0.12 0.00 0.17 0.32 0.02 0.07 0.12 0.00
Crit Volume: 216 199 534 105
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #12
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.851
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 153 Level Of Service: D
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 1 0 0 0 0 1 0 1
Volume Module:
Base Vol: 0 0 0 437 0 265 139 1027 0 0 506 262
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 437 0 265 139 1027 0 0 506 262
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 437 0 265 139 1027 0 0 506 262
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 437 0 265 139 1027 0 0 506 262
RTOR Reduct: 0 0 0 0 0 139 0 0 0 0 0 262
RTOR Vol: 0 0 0 437 0 126 139 1027 0 0 506 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 437 0 126 139 1027 0 0 506 0
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00
Final Sat.: 0 0 0 1720 0 1720 1720 1720 0 0 1720 1720
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.25 0.00 0.07 0.08 0.60 0.00 0.00 0.29 0.00
Crit Volume: 0 437 1027 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #13
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.945
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 1 0 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 118 21 56 182 95 16 6 1328 168 39 677 11
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 118 21 56 182 95 16 6 1328 168 39 677 11
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 118 21 56 182 95 16 6 1328 168 39 677 11
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 118 21 56 182 95 16 6 1328 168 39 677 11
RTOR Reduct: 0 0 0 0 0 0 0 0 0 118 0 0 0
RTOR Vol: 118 21 56 182 95 16 6 1328 50 39 677 11
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 118 21 56 182 95 16 6 1328 50 39 677 11
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.27 0.73 1.00 0.86 0.14 1.00 1.00 1.00 1.00 0.98 0.02
Final Sat.: 1720 469 1251 1720 1472 248 1720 1720 1720 1720 1693 28
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.07 0.04 0.04 0.11 0.06 0.06 0.00 0.77 0.03 0.02 0.40 0.40
Crit Volume: 77 182 1328 39
Crit Moves: \*\*\*\* \*\*

Level of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #15
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.978
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 45 0 55 0 0 0 0 0 1543 77 94 766 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 45 0 55 0 0 0 0 0 1543 77 94 766 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 45 0 55 0 0 0 0 0 1543 77 94 766 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 45 0 55 0 0 0 0 0 1543 77 94 766 0
RTOR Reduct: 0 0 55 0 0 0 0 0 0 45 0 0 0
RTOR Vol: 45 0 0 0 0 0 0 0 1543 32 94 766 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 45 0 0 0 0 0 0 0 1543 32 94 766 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 0 1720 1720 1720 1720 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.90 0.02 0.05 0.45 0.00
Crit Volume: 45 0 1543 94
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #16
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.072
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 1 0 1 0 1 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 0 58 0 0 0 0 0 0 0 71 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 58 0 0 0 0 0 0 0 71 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 58 0 0 0 0 0 0 0 71 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 58 0 0 0 0 0 0 0 71 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 0 58 0 0 0 0 0 0 0 71 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 58 0 0 0 0 0 0 0 71 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 1.00 1.00 0.00 1.00 2.00 0.00 1.00 2.00 0.00
Final Sat.: 1800 0 1800 1800 1800 0 1800 3600 0 1800 3600 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.03 0.00 0.00 0.00 0.00 0.00 0.00 0.04 0.00 0.00
Crit Volume: 58 0 0 0
Crit Moves: \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #17
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 1.017
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: F
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #18
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.510
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 2 1 0 1 0 2 1 0 2 0 0 1 1 1 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 409 518 122 25 772 170 348 128 240 202 65 23
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 409 518 122 25 772 170 348 128 240 202 65 23
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 409 518 122 25 772 170 348 128 240 202 65 23
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 409 518 122 25 772 170 348 128 240 202 65 23
RTOR Reduct: 0 0 0 0 0 0 0 0 0 225 0 0 0
RTOR Vol: 409 518 122 25 772 170 348 128 15 202 65 23
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 409 518 122 25 772 170 348 128 15 202 65 23
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 0.91 1.00 1.00
Lanes: 2.00 2.43 0.57 1.00 2.46 0.54 2.00 1.00 1.00 2.00 0.74 0.26
Final Sat.: 3000 4006 944 1650 4057 893 3000 1650 1500 3000 1219 431
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.14 0.13 0.13 0.02 0.19 0.19 0.12 0.08 0.01 0.07 0.05 0.05
Crit Volume: 205 314 174 101
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #19
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.437
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 3 0 0 0 0 3 0 1 2 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 297 606 0 0 925 285 349 0 444 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 297 606 0 0 925 285 349 0 444 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 297 606 0 0 925 285 349 0 444 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 297 606 0 0 925 285 349 0 444 0 0 0
RTOR Reduct: 0 0 0 0 0 0 192 0 163 0 0 0
RTOR Vol: 297 606 0 0 925 93 349 0 281 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 297 606 0 0 925 93 349 0 281 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 3.00 0.00 0.00 3.00 1.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 3127 5160 0 0 5160 1720 3127 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.09 0.12 0.00 0.00 0.18 0.05 0.11 0.00 0.16 0.00 0.00 0.00
Crit Volume: 149 308 281 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #20
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.789
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 108 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 3 0 1 2 0 3 0 0 2 0 0 1 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 771 652 439 1015 0 251 395 449 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 771 652 439 1015 0 251 395 449 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 771 652 439 1015 0 251 395 449 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 771 652 439 1015 0 251 395 449 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 771 652 439 1015 0 251 395 449 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 771 652 439 1015 0 251 395 449 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 0.91 1.00 1.00 1.00
Lanes: 0.00 3.00 1.00 2.00 3.00 0.00 2.00 0.94 1.06 0.00 0.00 0.00
Final Sat.: 0 5160 1720 3127 5160 0 3127 1610 1664 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.15 0.38 0.14 0.20 0.00 0.08 0.25 0.27 0.00 0.00 0.00
Crit Volume: 652 220 422 0
Crit Moves: \*\*\*\* \*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #21
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.587
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 2 0 2 0 1 1 1 0 1 0 1 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 52 703 25 392 727 270 492 431 36 49 131 375
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 52 703 25 392 727 270 492 431 36 49 131 375
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 52 703 25 392 727 270 492 431 36 49 131 375
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 52 703 25 392 727 270 492 431 36 49 131 375
RTOR Reduct: 0 0 0 0 0 0 270 0 0 0 0 0 216
RTOR Vol: 52 703 25 392 727 0 492 431 36 49 131 159
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 52 703 25 392 727 0 492 431 36 49 131 159
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.90 0.10 2.00 2.00 1.00 1.54 1.35 0.11 1.00 1.00 1.00
Final Sat.: 1650 4780 170 3000 3300 1650 2311 2222 185 1650 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.03 0.15 0.15 0.13 0.22 0.00 0.21 0.19 0.19 0.03 0.08 0.10
Crit Volume: 243 196 319 159
Crit Moves: \*\*\*\* \* 319 \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #22
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.754
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 93 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 310 324 31 241 670 379 377 458 752 47 222 118
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 310 324 31 241 670 379 377 458 752 47 222 118
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 310 324 31 241 670 379 377 458 752 47 222 118
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 310 324 31 241 670 379 377 458 752 47 222 118
RTOR Reduct: 0 0 0 0 0 0 377 0 0 0 0 118
RTOR Vol: 310 324 31 241 670 2 377 458 752 47 222 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 310 324 31 241 670 2 377 458 752 47 222 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.83 0.17 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.00 1.00
Final Sat.: 1650 3012 288 1650 3300 1650 1650 3300 1650 1650 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.19 0.11 0.11 0.15 0.20 0.00 0.23 0.14 0.46 0.03 0.13 0.00
Crit Volume: 310 335 377 222
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #23
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.462
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 39 522 0 0 1226 243 143 0 26 0 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 39 522 0 0 1226 243 143 0 26 0 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 39 522 0 0 1226 243 143 0 26 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 39 522 0 0 1226 243 143 0 26 0 0 0 0
RTOR Reduct: 0 0 0 0 0 0 143 0 0 26 0 0 0 0
RTOR Vol: 39 522 0 0 1226 100 143 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 39 522 0 0 1226 100 143 0 0 0 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1720 3440 0 0 3440 1720 1720 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.02 0.15 0.00 0.00 0.36 0.06 0.08 0.00 0.00 0.00 0.00 0.00
Crit Volume: 39 613 143 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #24
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.436
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Ignore
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 2 0 1 0 2 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 0 6 4 1151 5 90 69 16 0 7 13 365
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 6 4 1151 5 90 69 16 0 7 13 365
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 6 4 1151 5 90 69 16 0 7 13 365
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 6 4 1151 5 90 69 16 0 7 13 365
RTOR Reduct: 0 0 0 0 0 69 0 0 0 0 0 0
RTOR Vol: 0 6 4 1151 5 21 69 16 0 7 13 365
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 6 4 1151 5 21 69 16 0 7 13 365
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 0.91 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.60 0.40 2.00 1.00 2.00 1.00 2.00 0.00 1.00 2.00 1.00
Final Sat.: 1650 990 660 3000 1650 3000 1650 3300 0 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.01 0.01 0.38 0.00 0.01 0.04 0.00 0.00 0.00 0.00 0.22
Crit Volume: 10 576 69 7
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #25
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.543
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0
Volume Module:
Base Vol: 82 251 25 253 414 48 65 403 149 91 230 73
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 82 251 25 253 414 48 65 403 149 91 230 73
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 82 251 25 253 414 48 65 403 149 91 230 73
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 82 251 25 253 414 48 65 403 149 91 230 73
RTOR Reduct: 0 0 0 0 0 0 48 0 0 0 0 0
RTOR Vol: 82 251 25 253 414 0 65 403 149 91 230 73
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 82 251 25 253 414 0 65 403 149 91 230 73
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.91 0.09 1.00 1.00 1.00 1.00 1.46 0.54 1.00 1.52 0.48
Final Sat.: 1650 1501 149 1650 1650 1650 1650 2409 891 1650 2505 795
Capacity Analysis Module:
Vol/Sat: 0.05 0.17 0.17 0.15 0.25 0.00 0.04 0.17 0.17 0.06 0.09 0.09
Crit Volume: 276 253 276 91
Crit Moves: \*\*\*\* \*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #26
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.493
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #27
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.788
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 107 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 2 0 1 1 0 2 1 0 1 0 1 0 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 723 770 9 73 1165 239 148 123 1056 12 60 70
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 723 770 9 73 1165 239 148 123 1056 12 60 70
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 723 770 9 73 1165 239 148 123 1056 12 60 70
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 723 770 9 73 1165 239 148 123 1056 12 60 70
RTOR Reduct: 0 0 0 9 0 0 0 0 0 398 0 0 70
RTOR Vol: 723 770 0 73 1165 239 148 123 658 12 60 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 723 770 0 73 1165 239 148 123 658 12 60 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00
Lanes: 2.00 2.00 1.00 1.00 2.49 0.51 1.00 1.00 2.00 0.17 0.83 1.00
Final Sat.: 3000 3300 1650 1650 4107 843 1650 1650 3000 275 1375 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.24 0.23 0.00 0.04 0.28 0.28 0.09 0.07 0.22 0.04 0.04 0.00
Crit Volume: 362 468 329 72
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #28
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.629
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 62 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 1 0 1 0 0 1 0 1 3 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 50 1973 3 0 683 9 51 0 43 2 0 1
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 50 1973 3 0 683 9 51 0 43 2 0 1
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 50 1973 3 0 683 9 51 0 43 2 0 1
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 50 1973 3 0 683 9 51 0 43 2 0 1
RTOR Reduct: 0 0 1 0 0 0 0 0 0 0 0 0
RTOR Vol: 50 1973 2 0 683 9 51 0 43 2 0 1
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 50 1973 2 0 683 9 51 0 43 2 0 1
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.87 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.96 0.04 1.00 0.00 1.00 3.00 1.00 1.00
Final Sat.: 1650 3300 1650 1650 4886 64 1650 0 1650 4307 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.03 0.60 0.00 0.00 0.14 0.14 0.03 0.00 0.03 0.00 0.00 0.00
Crit Volume: 987 0 51 1
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #29
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.646
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 146 1361 363 58 489 61 292 299 162 203 131 42
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 146 1361 363 58 489 61 292 299 162 203 131 42
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 146 1361 363 58 489 61 292 299 162 203 131 42
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 146 1361 363 58 489 61 292 299 162 203 131 42
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 42
RTOR Vol: 146 1361 363 58 489 61 292 299 162 203 131 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 146 1361 363 58 489 61 292 299 162 203 131 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.37 0.63 1.00 2.67 0.33 1.00 1.30 0.70 1.00 2.00 1.00
Final Sat.: 1650 3908 1042 1650 4401 549 1650 2140 1160 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.09 0.35 0.35 0.04 0.11 0.11 0.18 0.14 0.14 0.12 0.04 0.00
Crit Volume: 575 58 231 203
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #30
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.761
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 96 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 3 0 1 2 0 3 0 1 2 0 2 1 0 2 0 1 1 0
Volume Module:
Base Vol: 133 1521 543 256 425 214 605 865 27 229 405 146
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 133 1521 543 256 425 214 605 865 27 229 405 146
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 133 1521 543 256 425 214 605 865 27 229 405 146
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 133 1521 543 256 425 214 605 865 27 229 405 146
RTOR Reduct: 0 0 126 0 0 214 0 0 0 0 0 0
RTOR Vol: 133 1521 417 256 425 0 605 865 27 229 405 146
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 133 1521 417 256 425 0 605 865 27 229 405 146
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 2.00 3.00 1.00 2.00 3.00 1.00 2.00 2.91 0.09 2.00 1.47 0.53
Final Sat.: 3000 4950 1650 3000 4950 1650 3000 4800 150 3000 2426 874
Capacity Analysis Module:
Vol/Sat: 0.04 0.31 0.25 0.09 0.09 0.00 0.20 0.18 0.18 0.08 0.17 0.17
Crit Volume: 507 128 303 276
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #31
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.515
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume types (Base Vol, Growth Adj, etc.) and 12 rows of values.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #32
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.503
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 2 0 0 0 0 1 1 0
Volume Module:
Base Vol: 0 0 0 181 0 265 381 1200 0 0 441 164
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 181 0 265 381 1200 0 0 441 164
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 181 0 265 381 1200 0 0 441 164
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 181 0 265 381 1200 0 0 441 164
RTOR Reduct: 0 0 0 0 0 265 0 0 0 0 0 0
RTOR Vol: 0 0 0 181 0 0 381 1200 0 0 441 164
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 181 0 0 381 1200 0 0 441 164
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 2.00 0.00 0.00 1.46 0.54
Final Sat.: 0 0 0 1720 0 1720 1720 3440 0 0 2508 932
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.11 0.00 0.00 0.22 0.35 0.00 0.00 0.18 0.18
Crit Volume: 0 181 381 303
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #33
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.660
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #34
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.628
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 61 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Impact Analysis Report  
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1	B xxxxxx	0.676	B xxxxxx	0.676	+ 0.000 V/C
# 2	B xxxxxx	0.601	B xxxxxx	0.601	+ 0.000 V/C
# 3	B xxxxxx	0.675	B xxxxxx	0.675	+ 0.000 V/C
# 4	C xxxxxx	0.744	C xxxxxx	0.744	+ 0.000 V/C
# 5	xxxxxx	0.000	xxxxxx	0.000	+ 0.000 V/C
# 6	B xxxxxx	0.607	B xxxxxx	0.607	+ 0.000 V/C
# 7	C xxxxxx	0.735	C xxxxxx	0.735	+ 0.000 V/C
# 8	A xxxxxx	0.447	A xxxxxx	0.447	+ 0.000 V/C
# 9	B xxxxxx	0.650	B xxxxxx	0.650	+ 0.000 V/C
# 10	A xxxxxx	0.498	A xxxxxx	0.498	+ 0.000 V/C
# 11	A xxxxxx	0.561	A xxxxxx	0.561	+ 0.000 V/C
# 12	C xxxxxx	0.794	C xxxxxx	0.794	+ 0.000 V/C
# 13	C xxxxxx	0.720	C xxxxxx	0.720	+ 0.000 V/C
# 14	B xxxxxx	0.631	B xxxxxx	0.631	+ 0.000 V/C
# 15	A xxxxxx	0.571	A xxxxxx	0.571	+ 0.000 V/C
# 16	A xxxxxx	0.542	A xxxxxx	0.542	+ 0.000 V/C
# 17	A xxxxxx	0.553	A xxxxxx	0.553	+ 0.000 V/C
# 18	A xxxxxx	0.364	A xxxxxx	0.364	+ 0.000 V/C
# 19	A xxxxxx	0.361	A xxxxxx	0.361	+ 0.000 V/C
# 20	A xxxxxx	0.307	A xxxxxx	0.307	+ 0.000 V/C
# 21	A xxxxxx	0.501	A xxxxxx	0.501	+ 0.000 V/C
# 22	D xxxxxx	0.851	D xxxxxx	0.851	+ 0.000 V/C
# 23	A xxxxxx	0.584	A xxxxxx	0.584	+ 0.000 V/C
# 24	A xxxxxx	0.600	A xxxxxx	0.600	+ 0.000 V/C
# 25	A xxxxxx	0.583	A xxxxxx	0.583	+ 0.000 V/C

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Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 26	D xxxxxx	0.821	D xxxxxx	0.821	+ 0.000 V/C
# 27	C xxxxxx	0.775	C xxxxxx	0.775	+ 0.000 V/C
# 28	A xxxxxx	0.450	A xxxxxx	0.450	+ 0.000 V/C
# 29	C xxxxxx	0.798	C xxxxxx	0.798	+ 0.000 V/C
# 30	D xxxxxx	0.833	D xxxxxx	0.833	+ 0.000 V/C
# 31	xxxxxx	0.000	xxxxxx	0.000	+ 0.000 V/C
# 32	A xxxxxx	0.451	A xxxxxx	0.451	+ 0.000 V/C
# 33	B xxxxxx	0.672	B xxxxxx	0.672	+ 0.000 V/C
# 34	B xxxxxx	0.606	B xxxxxx	0.606	+ 0.000 V/C

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.676
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 70 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 0 0 0 0 0 0 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 745 827 155 268 829 324 0 0 0 161 323 194
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 745 827 155 268 829 324 0 0 0 161 323 194
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 745 827 155 268 829 324 0 0 0 161 323 194
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 745 827 155 268 829 324 0 0 0 161 323 194
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 745 827 155 268 829 324 0 0 0 161 323 194
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 745 827 155 268 829 324 0 0 0 161 323 194
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 1.68 0.32 1.00 2.00 1.00 0.00 0.00 0.00 0.47 0.96 0.57
Final Sat.: 3127 2897 543 1720 3440 1720 0 0 0 817 1639 984
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.24 0.29 0.29 0.16 0.24 0.19 0.00 0.00 0.00 0.20 0.20 0.20
Crit Volume: 373 414 339
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.601
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 11 rows of adjustment factors like Growth Adj, User Adj, PHF Adj, etc.

Saturation Flow Module: Table with 12 columns for saturation flow and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.675
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 70 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing traffic volumes and adjustment factors for various vehicle types and conditions.

Saturation Flow Module: Table with 12 columns showing saturation flow rates and adjustment factors for different lane configurations.

Capacity Analysis Module: Table with 12 columns showing volume-to-saturation ratios, critical volumes, and critical moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #4
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.744
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 89 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume types (Base Vol, Growth Adj, etc.) and 12 rows of values.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 4 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.000
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 0 Level Of Service:

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for volume metrics (Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, Final Volume).

Saturation Flow Module: Table with 12 columns for saturation metrics (Sat/Lane, Adjustment, Lanes, Final Sat.).

Capacity Analysis Module: Table with 12 columns for capacity metrics (Vol/Sat, Crit Volume, Crit Moves).

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #6
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.607
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #7
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.735
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 86 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #8
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.447
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 4 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #9
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.650
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 65 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 2 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 637 329 96 8 240 571 114 66 291 49 151 3
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 637 329 96 8 240 571 114 66 291 49 151 3
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 637 329 96 8 240 571 114 66 291 49 151 3
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 637 329 96 8 240 571 114 66 291 49 151 3
RTOR Reduct: 0 0 0 0 0 63 0 0 291 0 0 3
RTOR Vol: 637 329 96 8 240 508 114 66 0 49 151 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 637 329 96 8 240 508 114 66 0 49 151 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 2.00 1.55 0.45 1.00 2.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00
Final Sat.: 3000 2555 745 1650 3300 1650 3000 1650 1650 3000 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.21 0.13 0.13 0.00 0.07 0.31 0.04 0.04 0.00 0.02 0.09 0.00
Crit Volume: 319 508 57 151
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #10
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.498
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 0 1 2 0 2 0 0 2 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 743 201 141 520 0 455 0 407 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 743 201 141 520 0 455 0 407 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 743 201 141 520 0 455 0 407 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 743 201 141 520 0 455 0 407 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 743 201 141 520 0 455 0 407 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 743 201 141 520 0 455 0 407 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 2.00 1.00 2.00 2.00 0.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 0 3440 1720 3127 3440 0 3127 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.22 0.12 0.05 0.15 0.00 0.15 0.00 0.24 0.00 0.00 0.00
Crit Volume: 372 71 407 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #11
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.561
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 2 0 2 0 1 2 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 256 621 139 198 383 170 199 257 180 189 739 197
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 256 621 139 198 383 170 199 257 180 189 739 197
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 256 621 139 198 383 170 199 257 180 189 739 197
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 256 621 139 198 383 170 199 257 180 189 739 197
RTOR Reduct: 0 0 104 0 0 109 0 0 180 0 0 109
RTOR Vol: 256 621 35 198 383 61 199 257 0 189 739 88
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 256 621 35 198 383 61 199 257 0 189 739 88
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00
Final Sat.: 1650 3300 1650 3000 3300 1650 3000 3300 1650 3000 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.16 0.19 0.02 0.07 0.12 0.04 0.07 0.08 0.00 0.06 0.22 0.05
Crit Volume: 256 192 100 370
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #12
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.794
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 111 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for movements and 3 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #13
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.720
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 67 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #14
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.631
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 62 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow values and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #15
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.571
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 53 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 1 0 0 0
Volume Module:
Base Vol: 34 0 107 0 0 0 0 0 549 12 36 911 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 34 0 107 0 0 0 0 0 549 12 36 911 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 34 0 107 0 0 0 0 0 549 12 36 911 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 34 0 107 0 0 0 0 0 549 12 36 911 0
RTOR Reduct: 0 0 36 0 0 0 0 0 0 12 0 0 0
RTOR Vol: 34 0 71 0 0 0 0 0 549 0 36 911 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 34 0 71 0 0 0 0 0 549 0 36 911 0
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 0 1720 1720 1720 1720 0
Capacity Analysis Module:
Vol/Sat: 0.02 0.00 0.04 0.00 0.00 0.00 0.00 0.32 0.00 0.02 0.53 0.00
Crit Volume: 71 0 0 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #16
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.542
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 1 0 1 0 1 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 30 23 40 11 15 128 41 555 15 13 1355 4
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 30 23 40 11 15 128 41 555 15 13 1355 4
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 30 23 40 11 15 128 41 555 15 13 1355 4
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 30 23 40 11 15 128 41 555 15 13 1355 4
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 30 23 40 11 15 128 41 555 15 13 1355 4
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 30 23 40 11 15 128 41 555 15 13 1355 4
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.37 0.63 1.00 0.10 0.90 1.00 1.95 0.05 1.00 1.99 0.01
Final Sat.: 1650 602 1048 1650 173 1477 1650 3213 87 1650 3290 10
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.02 0.04 0.04 0.01 0.09 0.09 0.02 0.17 0.17 0.01 0.41 0.41
Crit Volume: 30 143 41 680
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #17
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.553
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 51 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 1 0 0 0
Volume Module:
Base Vol: 62 0 89 0 0 0 0 0 640 16 22 885 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 62 0 89 0 0 0 0 0 640 16 22 885 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 62 0 89 0 0 0 0 0 640 16 22 885 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 62 0 89 0 0 0 0 0 640 16 22 885 0
RTOR Reduct: 0 0 22 0 0 0 0 0 0 16 0 0 0
RTOR Vol: 62 0 67 0 0 0 0 0 640 0 22 885 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 62 0 67 0 0 0 0 0 640 0 22 885 0
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 0 1720 1720 1720 1720 0
Capacity Analysis Module:
Vol/Sat: 0.04 0.00 0.04 0.00 0.00 0.00 0.00 0.37 0.00 0.01 0.51 0.00
Crit Volume: 67 0 0 885
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #18
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.364
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 2 1 0 1 0 2 1 0 2 0 0 1 1 1 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 228 522 162 26 568 287 114 34 46 225 83 32
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 228 522 162 26 568 287 114 34 46 225 83 32
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 228 522 162 26 568 287 114 34 46 225 83 32
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 228 522 162 26 568 287 114 34 46 225 83 32
RTOR Reduct: 0 0 0 0 0 0 0 0 0 46 0 0 0
RTOR Vol: 228 522 162 26 568 287 114 34 0 225 83 32
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 228 522 162 26 568 287 114 34 0 225 83 32
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 0.91 1.00 1.00
Lanes: 2.00 2.29 0.71 1.00 2.00 1.00 2.00 1.00 1.00 1.99 0.73 0.28
Final Sat.: 3000 3778 1172 1650 3300 1650 3000 1650 1500 2978 1208 466
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.08 0.14 0.14 0.02 0.17 0.17 0.04 0.02 0.00 0.08 0.07 0.07
Crit Volume: 114 287 57 113
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #19
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.361
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #20
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.307
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing volume adjustments. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #21
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.501
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 2 0 2 0 1 1 1 0 1 0 1 0 1 0 1
Volume Module:
Base Vol: 97 568 19 150 405 308 288 126 7 47 345 452
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 97 568 19 150 405 308 288 126 7 47 345 452
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 97 568 19 150 405 308 288 126 7 47 345 452
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 97 568 19 150 405 308 288 126 7 47 345 452
RTOR Reduct: 0 0 0 0 0 0 158 0 0 0 0 0 83
RTOR Vol: 97 568 19 150 405 150 288 126 7 47 345 370
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 97 568 19 150 405 150 288 126 7 47 345 370
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.90 0.10 2.00 2.00 1.00 2.00 0.95 0.05 1.00 1.00 1.00
Final Sat.: 1650 4790 160 3000 3300 1650 3000 1563 87 1650 1650 1650
Capacity Analysis Module:
Vol/Sat: 0.06 0.12 0.12 0.05 0.12 0.09 0.10 0.08 0.08 0.03 0.21 0.22
Crit Volume: 97 203 144 370
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #22
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.851
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 153 Level Of Service: D
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 416 699 58 43 197 148 425 244 37 27 384 433
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 416 699 58 43 197 148 425 244 37 27 384 433
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 416 699 58 43 197 148 425 244 37 27 384 433
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 416 699 58 43 197 148 425 244 37 27 384 433
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 416 699 58 43 197 148 425 244 37 27 384 390
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 416 699 58 43 197 148 425 244 37 27 384 390
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.85 0.15 1.00 1.14 0.86 1.00 2.00 1.00 1.00 1.00 1.00
Final Sat.: 1650 3047 253 1650 1884 1416 1650 3300 1650 1650 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.25 0.23 0.23 0.03 0.10 0.10 0.26 0.07 0.02 0.02 0.23 0.24
Crit Volume: 416 173 425 390
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #23
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.584
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #24
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.600
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic volumes and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns showing saturation flow rates and adjustment factors for each lane.

Capacity Analysis Module: Table with 12 columns showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #25
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.583
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 55 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 1 0 1 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 137 461 57 69 114 16 49 230 59 55 429 223
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 137 461 57 69 114 16 49 230 59 55 429 223
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 137 461 57 69 114 16 49 230 59 55 429 223
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 137 461 57 69 114 16 49 230 59 55 429 223
RTOR Reduct: 0 0 0 0 0 0 16 0 0 0 0 0
RTOR Vol: 137 461 57 69 114 0 49 230 59 55 429 223
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 137 461 57 69 114 0 49 230 59 55 429 223
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.89 0.11 1.00 1.00 1.00 1.00 1.59 0.41 1.00 1.32 0.68
Final Sat.: 1650 1468 182 1650 1650 1650 1650 2626 674 1650 2171 1129
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.08 0.31 0.31 0.04 0.07 0.00 0.03 0.09 0.09 0.03 0.20 0.20
Crit Volume: 518 69 49 326
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #26
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.821
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 128 Level Of Service: D
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 0 1 0 0 1 1 0 1 0 1 1 0

Volume Module:
Base Vol: 7 10 13 226 14 139 200 492 2 10 1563 235
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 7 10 13 226 14 139 200 492 2 10 1563 235
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 7 10 13 226 14 139 200 492 2 10 1563 235
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 7 10 13 226 14 139 200 492 2 10 1563 235
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 7 10 13 226 14 139 200 492 2 10 1563 235
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 7 10 13 226 14 139 200 492 2 10 1563 235

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.23 0.33 0.44 1.00 0.09 0.91 1.00 1.99 0.01 1.00 1.74 0.26
Final Sat.: 385 550 715 1650 151 1499 1650 3287 13 1650 2869 431

Capacity Analysis Module:
Vol/Sat: 0.02 0.02 0.02 0.14 0.09 0.09 0.12 0.15 0.15 0.01 0.54 0.54
Crit Volume: 30 226 200 899
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #27
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.775
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 101 Level Of Service: C
\*\*\*\*\*

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 2 0 1 1 0 2 1 0 1 0 1 0 0 1

Volume Module:
Base Vol: 1006 1270 10 54 950 165 218 55 545 12 124 85
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 1006 1270 10 54 950 165 218 55 545 12 124 85
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 1006 1270 10 54 950 165 218 55 545 12 124 85
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1006 1270 10 54 950 165 218 55 545 12 124 85
RTOR Reduct: 0 0 10 0 0 0 0 0 0 545 0 0 54
RTOR Vol: 1006 1270 0 54 950 165 218 55 0 12 124 31
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 1006 1270 0 54 950 165 218 55 0 12 124 31

Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00
Lanes: 2.00 2.00 1.00 1.00 2.56 0.44 1.00 1.00 2.00 0.09 0.91 1.00
Final Sat.: 3000 3300 1650 1650 4217 733 1650 1650 3000 146 1504 1650

Capacity Analysis Module:
Vol/Sat: 0.34 0.38 0.00 0.03 0.23 0.23 0.13 0.03 0.00 0.08 0.08 0.02
Crit Volume: 503 372 218 136
Crit Moves: \*\*\*\*

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #28
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.450
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 1 0 1 0 0 1 0 1 3 0 1 0 1
Volume Module:
Base Vol: 61 559 3 0 1786 31 26 0 107 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 61 559 3 0 1786 31 26 0 107 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 61 559 3 0 1786 31 26 0 107 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 61 559 3 0 1786 31 26 0 107 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 61 559 3 0 1786 31 26 0 107 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 61 559 3 0 1786 31 26 0 107 0 0 0
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.87 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.95 0.05 1.00 0.00 1.00 3.00 1.00 1.00
Final Sat.: 1720 3440 1720 1720 5072 88 1720 0 1720 4489 1720 1720
Capacity Analysis Module:
Vol/Sat: 0.04 0.16 0.00 0.00 0.35 0.35 0.02 0.00 0.06 0.00 0.00 0.00
Crit Volume: 61 606 107 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #29
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.798
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 113 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 73 456 86 55 1678 408 72 75 136 412 421 98
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 73 456 86 55 1678 408 72 75 136 412 421 98
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 73 456 86 55 1678 408 72 75 136 412 421 98
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 73 456 86 55 1678 408 72 75 136 412 421 98
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 73 456 86 55 1678 408 72 75 136 412 421 43
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 73 456 86 55 1678 408 72 75 136 412 421 43
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.52 0.48 1.00 2.41 0.59 1.00 1.00 1.00 1.00 2.00 1.00
Final Sat.: 1650 4165 785 1650 3982 968 1650 1650 1650 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.04 0.11 0.11 0.03 0.42 0.42 0.04 0.05 0.08 0.25 0.13 0.03
Crit Volume: 73 695 136 412
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #30
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.833
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 137 Level Of Service: D
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume types (Base Vol, Growth Adj, etc.) and 12 rows of values.

Saturation Flow Module: Table with 12 columns representing saturation flow values and 4 rows of adjustment factors.

Capacity Analysis Module: Table with 12 columns representing capacity analysis metrics and 4 rows of values.

\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #31
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.000
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 0 Level Of Service:

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #32
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 0 0 0 1 0 0 0 1 1 0 2 0 0 0 0 1 1 0
Volume Module:
Base Vol: 0 0 0 118 0 326 110 325 0 0 782 116
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 0 0 118 0 326 110 325 0 0 782 116
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 0 0 118 0 326 110 325 0 0 782 116
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 118 0 326 110 325 0 0 782 116
RTOR Reduct: 0 0 0 0 0 110 0 0 0 0 0 0
RTOR Vol: 0 0 0 118 0 216 110 325 0 0 782 116
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 0 0 118 0 216 110 325 0 0 782 116
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 0.00 0.00 1.00 0.00 1.00 1.00 2.00 0.00 0.00 1.74 0.26
Final Sat.: 0 0 0 1720 0 1720 1720 3440 0 0 2996 444
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.07 0.00 0.13 0.06 0.09 0.00 0.00 0.26 0.26
Crit Volume: 0 216 110 449
Crit Moves: \*\*\*\* \*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #33
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.672
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of volume-related metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow values and adjustments.

Capacity Analysis Module: Table with 12 columns and 3 rows showing capacity analysis metrics like Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #34
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.606
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Split Phase, Protected), Rights (Include), Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for movements and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*



Impact Analysis Report  
Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 1	B xxxxxx	0.619	B xxxxxx	0.619	+ 0.000 V/C
# 2	A xxxxxx	0.566	A xxxxxx	0.566	+ 0.000 V/C
# 3	D xxxxxx	0.865	D xxxxxx	0.865	+ 0.000 V/C
# 4	B xxxxxx	0.695	B xxxxxx	0.695	+ 0.000 V/C
# 5	xxxxxx	0.000	xxxxxx	0.000	+ 0.000 V/C
# 6	B xxxxxx	0.633	B xxxxxx	0.633	+ 0.000 V/C
# 7	C xxxxxx	0.702	C xxxxxx	0.702	+ 0.000 V/C
# 8	A xxxxxx	0.513	A xxxxxx	0.513	+ 0.000 V/C
# 9	A xxxxxx	0.486	A xxxxxx	0.486	+ 0.000 V/C
# 10	A xxxxxx	0.577	A xxxxxx	0.577	+ 0.000 V/C
# 11	B xxxxxx	0.687	B xxxxxx	0.687	+ 0.000 V/C
# 12	C xxxxxx	0.740	C xxxxxx	0.740	+ 0.000 V/C
# 13	D xxxxxx	0.871	D xxxxxx	0.871	+ 0.000 V/C
# 14	B xxxxxx	0.604	B xxxxxx	0.604	+ 0.000 V/C
# 15	E xxxxxx	0.908	E xxxxxx	0.908	+ 0.000 V/C
# 16	A xxxxxx	0.513	A xxxxxx	0.513	+ 0.000 V/C
# 17	E xxxxxx	0.969	E xxxxxx	0.969	+ 0.000 V/C
# 18	A xxxxxx	0.562	A xxxxxx	0.562	+ 0.000 V/C
# 19	A xxxxxx	0.500	A xxxxxx	0.500	+ 0.000 V/C
# 20	A xxxxxx	0.542	A xxxxxx	0.542	+ 0.000 V/C
# 21	A xxxxxx	0.598	A xxxxxx	0.598	+ 0.000 V/C
# 22	D xxxxxx	0.860	D xxxxxx	0.860	+ 0.000 V/C
# 23	A xxxxxx	0.473	A xxxxxx	0.473	+ 0.000 V/C
# 24	B xxxxxx	0.655	B xxxxxx	0.655	+ 0.000 V/C
# 25	A xxxxxx	0.596	A xxxxxx	0.596	+ 0.000 V/C

---

Intersection	Base		Future		Change in
	Del/ LOS	V/ Veh C	Del/ LOS	V/ Veh C	
# 26	B xxxxxx	0.682	B xxxxxx	0.682	+ 0.000 V/C
# 27	D xxxxxx	0.867	D xxxxxx	0.867	+ 0.000 V/C
# 28	B xxxxxx	0.691	B xxxxxx	0.691	+ 0.000 V/C
# 29	C xxxxxx	0.708	C xxxxxx	0.708	+ 0.000 V/C
# 30	D xxxxxx	0.834	D xxxxxx	0.834	+ 0.000 V/C
# 31	xxxxxx	0.000	xxxxxx	0.000	+ 0.000 V/C
# 32	A xxxxxx	0.553	A xxxxxx	0.553	+ 0.000 V/C
# 33	C xxxxxx	0.703	C xxxxxx	0.703	+ 0.000 V/C
# 34	B xxxxxx	0.695	B xxxxxx	0.695	+ 0.000 V/C

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #1
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.619
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 60 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 0 0 0 0 0 0 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 532 775 392 258 820 321 0 0 0 127 262 58
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 532 775 392 258 820 321 0 0 0 127 262 58
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 532 775 392 258 820 321 0 0 0 127 262 58
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 532 775 392 258 820 321 0 0 0 127 262 58
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 532 775 392 258 820 321 0 0 0 127 262 58
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 532 775 392 258 820 321 0 0 0 127 262 58
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 1.33 0.67 1.00 2.00 1.00 0.00 0.00 0.00 0.57 1.17 0.26
Final Sat.: 3127 2284 1156 1720 3440 1720 0 0 0 977 2016 446
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.17 0.34 0.34 0.15 0.24 0.19 0.00 0.00 0.00 0.13 0.13 0.13
Crit Volume: 584 258 0 224
Crit Moves: \*\*\*\* \*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #2
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.566
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 53 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 1 0 1 0 2 0 0 1 0 1 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 978 114 83 601 0 575 0 863 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 978 114 83 601 0 575 0 863 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 978 114 83 601 0 575 0 863 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 978 114 83 601 0 575 0 863 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 978 114 83 601 0 575 0 863 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 978 114 83 601 0 575 0 863 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 1.00 1.00 1.00
Lanes: 0.00 2.69 0.31 1.00 2.00 0.00 1.20 0.00 1.80 0.00 0.00 0.00
Final Sat.: 0 4621 539 1720 3440 0 1876 0 2815 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.21 0.21 0.05 0.17 0.00 0.31 0.00 0.31 0.00 0.00 0.00
Crit Volume: 364 83 479 0
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #3
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.865
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 169 Level Of Service: D
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 0 1 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 76 612 144 501 932 281 226 869 177 97 336 224
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 76 612 144 501 932 281 226 869 177 97 336 224
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 76 612 144 501 932 281 226 869 177 97 336 224
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 76 612 144 501 932 281 226 869 177 97 336 224
RTOR Reduct: 0 0 97 0 0 226 0 0 0 0 0 0 224
RTOR Vol: 76 612 47 501 932 55 226 869 177 97 336 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 76 612 47 501 932 55 226 869 177 97 336 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.00 1.00 1.00 1.66 0.34 1.00 2.00 1.00
Final Sat.: 1650 3300 1650 1650 3300 1650 1650 2742 558 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.05 0.19 0.03 0.30 0.28 0.03 0.14 0.32 0.32 0.06 0.10 0.00
Crit Volume: 306 501 523 97
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #4
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.695
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 75 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 11 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #5
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.000
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 0 Level Of Service:
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, RTOR Reduct, RTOR Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns representing different traffic movements. Rows include Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns representing different traffic movements. Rows include Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #6
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.633
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 62 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 87 277 298 263 458 133 102 905 186 191 297 121
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 87 277 298 263 458 133 102 905 186 191 297 121
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 87 277 298 263 458 133 102 905 186 191 297 121
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 87 277 298 263 458 133 102 905 186 191 297 121
RTOR Reduct: 0 0 191 0 0 0 0 0 0 87 0 0 121
RTOR Vol: 87 277 107 263 458 133 102 905 99 191 297 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 87 277 107 263 458 133 102 905 99 191 297 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 1.55 0.45 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 1650 3300 1650 1650 2557 743 1650 3300 1650 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.05 0.08 0.06 0.16 0.18 0.18 0.06 0.27 0.06 0.12 0.09 0.00
Crit Volume: 139 263 453 191
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #7
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.702
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 77 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for movements and 3 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #8
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.513
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Ignore Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 1 0 0 1 1 0 0 1 0 1 0 2 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 44 26 252 78 65 10 32 721 25 650 284 90
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 44 26 252 78 65 10 32 721 25 650 284 90
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 44 26 252 78 65 10 32 721 25 650 284 90
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 44 26 252 78 65 10 32 721 25 650 284 90
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0 78
RTOR Vol: 44 26 252 78 65 10 32 721 25 650 284 12
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 44 26 252 78 65 10 32 721 25 650 284 12
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00
Lanes: 1.26 0.74 1.00 1.00 0.87 0.13 1.00 1.93 0.07 2.00 2.00 1.00
Final Sat.: 1886 1226 1650 1650 1430 220 1650 3189 111 3000 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.02 0.02 0.15 0.05 0.05 0.05 0.02 0.23 0.23 0.22 0.09 0.01
Crit Volume: 35 78 373 325
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #9
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.486
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 1 1 0 1 0 2 0 1 2 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 492 617 213 19 196 287 333 315 371 95 164 19
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 492 617 213 19 196 287 333 315 371 95 164 19
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 492 617 213 19 196 287 333 315 371 95 164 19
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 492 617 213 19 196 287 333 315 371 95 164 19
RTOR Reduct: 0 0 0 0 0 0 183 0 0 271 0 0 19
RTOR Vol: 492 617 213 19 196 104 333 315 100 95 164 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 492 617 213 19 196 104 333 315 100 95 164 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 2.00 1.49 0.51 1.00 2.00 1.00 2.00 1.00 1.00 2.00 1.00 1.00
Final Sat.: 3000 2453 847 1650 3300 1650 3000 1650 1650 3000 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.16 0.25 0.25 0.01 0.06 0.06 0.11 0.19 0.06 0.03 0.10 0.00
Crit Volume: 415 19 315 48
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #10
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.577
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 54 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 2 0 1 2 0 2 0 0 2 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 0 719 398 139 525 0 839 0 518 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 719 398 139 525 0 839 0 518 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 719 398 139 525 0 839 0 518 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 719 398 139 525 0 839 0 518 0 0 0
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 0 719 398 139 525 0 839 0 518 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 719 398 139 525 0 839 0 518 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 0.00 2.00 1.00 2.00 2.00 0.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 0 3440 1720 3127 3440 0 3127 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.00 0.21 0.23 0.04 0.15 0.00 0.27 0.00 0.30 0.00 0.00 0.00
Crit Volume: 398 70 518 0
Crit Moves: \*\*\*\* \*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #11
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.687
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 73 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 2 0 2 0 1 2 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 216 488 159 260 423 130 566 1166 253 223 428 148
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 216 488 159 260 423 130 566 1166 253 223 428 148
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 216 488 159 260 423 130 566 1166 253 223 428 148
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 216 488 159 260 423 130 566 1166 253 223 428 148
RTOR Reduct: 0 0 123 0 0 130 0 0 216 0 0 143
RTOR Vol: 216 488 36 260 423 0 566 1166 37 223 428 5
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 216 488 36 260 423 0 566 1166 37 223 428 5
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 1.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00 2.00 2.00 1.00
Final Sat.: 1650 3300 1650 3000 3300 1650 3000 3300 1650 3000 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.13 0.15 0.02 0.09 0.13 0.00 0.19 0.35 0.02 0.07 0.13 0.00
Crit Volume: 216 583 112
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #12
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.740
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 88 Level Of Service: C
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various volume and adjustment factors.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow rates and adjustments.

Capacity Analysis Module: Table with 12 columns and 4 rows showing capacity analysis metrics.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #13
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.871
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 144 Level Of Service: D
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for saturation flow values and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for capacity analysis metrics and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #14
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.604
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 58 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 1 0 1 0 1 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 31 44 54 37 73 35 30 1486 54 88 898 49
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 31 44 54 37 73 35 30 1486 54 88 898 49
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 31 44 54 37 73 35 30 1486 54 88 898 49
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 31 44 54 37 73 35 30 1486 54 88 898 49
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 31 44 54 37 73 35 30 1486 54 88 898 49
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 31 44 54 37 73 35 30 1486 54 88 898 49
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.45 0.55 1.00 0.68 0.32 1.00 1.93 0.07 1.00 1.90 0.10
Final Sat.: 1650 741 909 1650 1115 535 1650 3184 116 1650 3129 171
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.02 0.06 0.06 0.02 0.07 0.07 0.02 0.47 0.47 0.05 0.29 0.29
Crit Volume: 31 108 770 88
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #15
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.908
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for movements and 4 rows for Vol/Sat, Crit Volume, and Crit Moves.

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #16
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.513
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 47 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 0 1 0 1 0 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 13 27 22 8 18 76 131 1384 28 33 881 12
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 13 27 22 8 18 76 131 1384 28 33 881 12
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 13 27 22 8 18 76 131 1384 28 33 881 12
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 13 27 22 8 18 76 131 1384 28 33 881 12
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 13 27 22 8 18 76 131 1384 28 33 881 12
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 13 27 22 8 18 76 131 1384 28 33 881 12
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.55 0.45 1.00 0.19 0.81 1.00 1.96 0.04 1.00 1.97 0.03
Final Sat.: 1650 909 741 1650 316 1334 1650 3235 65 1650 3256 44
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.01 0.03 0.03 0.00 0.06 0.06 0.08 0.43 0.43 0.02 0.27 0.27
Crit Volume: 13 94 706 33
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #17
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.969
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 180 Level Of Service: E
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 1 0 0 0
Volume Module:
Base Vol: 36 0 43 0 0 0 0 0 1551 66 80 780 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 36 0 43 0 0 0 0 0 1551 66 80 780 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 36 0 43 0 0 0 0 0 1551 66 80 780 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 36 0 43 0 0 0 0 0 1551 66 80 780 0
RTOR Reduct: 0 0 43 0 0 0 0 0 0 36 0 0 0
RTOR Vol: 36 0 0 0 0 0 0 0 1551 30 80 780 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 36 0 0 0 0 0 0 0 1551 30 80 780 0
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.00 1.00 0.00 0.00 0.00 0.00 1.00 1.00 1.00 1.00 0.00
Final Sat.: 1720 0 1720 0 0 0 0 0 1720 1720 1720 1720 0
Capacity Analysis Module:
Vol/Sat: 0.02 0.00 0.00 0.00 0.00 0.00 0.00 0.90 0.02 0.05 0.45 0.00
Crit Volume: 36 0 1551 80
Crit Moves: \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #18
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.562
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 2 1 0 1 0 2 1 0 2 0 0 1 1 1 1 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 451 573 135 27 856 186 381 140 268 223 71 25
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 451 573 135 27 856 186 381 140 268 223 71 25
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 451 573 135 27 856 186 381 140 268 223 71 25
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 451 573 135 27 856 186 381 140 268 223 71 25
RTOR Reduct: 0 0 0 0 0 0 0 0 0 248 0 0 0
RTOR Vol: 451 573 135 27 856 186 381 140 20 223 71 25
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 451 573 135 27 856 186 381 140 20 223 71 25
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 0.91 0.91 1.00 1.00
Lanes: 2.00 2.43 0.57 1.00 2.46 0.54 2.00 1.00 1.00 2.00 0.74 0.26
Final Sat.: 3000 4006 944 1650 4066 884 3000 1650 1500 3000 1220 430
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.15 0.14 0.14 0.02 0.21 0.21 0.13 0.08 0.01 0.07 0.06 0.06
Crit Volume: 226 347 191 112
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #19
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.500
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 3 0 0 0 0 3 0 1 2 0 0 0 1 0 0 0 0 0
\*\*\*\*\*
Volume Module:
Base Vol: 337 675 0 0 1030 312 382 0 517 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 337 675 0 0 1030 312 382 0 517 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 337 675 0 0 1030 312 382 0 517 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 337 675 0 0 1030 312 382 0 517 0 0 0
RTOR Reduct: 0 0 0 0 0 0 210 0 0 185 0 0 0
RTOR Vol: 337 675 0 0 1030 102 382 0 332 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 337 675 0 0 1030 102 382 0 332 0 0 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 0.91 1.00 1.00 1.00 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 2.00 3.00 0.00 0.00 3.00 1.00 2.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 3127 5160 0 0 5160 1720 3127 0 1720 0 0 0
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.11 0.13 0.00 0.00 0.20 0.06 0.12 0.00 0.19 0.00 0.00 0.00
Crit Volume: 169 343 332 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #20
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.542
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different volume categories and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for Sat/Lane, Adjustment, Lanes, and Final Sat., and 4 rows of data.

Capacity Analysis Module: Table with 12 columns for Vol/Sat, Crit Volume, and Crit Moves, and 3 rows of data.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #21
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.598
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 2 0 2 0 1 1 1 0 1 0 1 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 59 762 29 429 707 245 438 371 41 55 143 410
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 59 762 29 429 707 245 438 371 41 55 143 410
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 59 762 29 429 707 245 438 371 41 55 143 410
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 59 762 29 429 707 245 438 371 41 55 143 410
RTOR Reduct: 0 0 0 0 0 0 241 0 0 0 0 236
RTOR Vol: 59 762 29 429 707 4 438 371 41 55 143 174
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 59 762 29 429 707 4 438 371 41 55 143 174
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.89 0.11 2.00 2.00 1.00 1.54 1.31 0.15 1.00 1.00 1.00
Final Sat.: 1650 4769 181 3000 3300 1650 2314 2165 240 1650 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.04 0.16 0.16 0.14 0.21 0.00 0.19 0.17 0.17 0.03 0.09 0.11
Crit Volume: 264 215 284 174
Crit Moves: \*\*\*\* \* 284 \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #22
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.860
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 163 Level Of Service: D
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Ignore Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 2 0 1 1 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 260 409 36 264 603 408 407 504 697 54 247 129
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 260 409 36 264 603 408 407 504 697 54 247 129
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 260 409 36 264 603 408 407 504 697 54 247 129
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 260 409 36 264 603 408 407 504 697 54 247 129
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 260 409 36 264 603 408 407 504 697 54 247 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 260 409 36 264 603 408 407 504 697 54 247 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.84 0.16 1.00 1.19 0.81 1.00 2.00 1.00 1.00 1.00 1.00
Final Sat.: 1650 3033 267 1650 1968 1332 1650 3300 1650 1650 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.16 0.13 0.13 0.16 0.31 0.31 0.25 0.15 0.42 0.03 0.15 0.00
Crit Volume: 260 506 407 247
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #23
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.473
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 0 0 0 2 0 1 1 0 0 0 1 0 0 0 0 0
Volume Module:
Base Vol: 12 614 0 0 1416 161 94 0 8 0 0 0
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 12 614 0 0 1416 161 94 0 8 0 0 0
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 12 614 0 0 1416 161 94 0 8 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 12 614 0 0 1416 161 94 0 8 0 0 0
RTOR Reduct: 0 0 0 0 0 0 94 0 0 8 0 0
RTOR Vol: 12 614 0 0 1416 67 94 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 12 614 0 0 1416 67 94 0 0 0 0 0
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 1.00 0.00 1.00 0.00 0.00 0.00
Final Sat.: 1720 3440 0 0 3440 1720 1720 0 1720 0 0 0
Capacity Analysis Module:
Vol/Sat: 0.01 0.18 0.00 0.00 0.41 0.04 0.05 0.00 0.00 0.00 0.00 0.00
Crit Volume: 12 708 94 0
Crit Moves: \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #24
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.655
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 66 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 2 0 1 0 2 1 0 1 1 0 1 0 2 0 1
Volume Module:
Base Vol: 0 7 4 814 5 160 100 1239 0 2 700 392
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 0 7 4 814 5 160 100 1239 0 2 700 392
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 0 7 4 814 5 160 100 1239 0 2 700 392
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 7 4 814 5 160 100 1239 0 2 700 392
RTOR Reduct: 0 0 0 0 0 100 0 0 0 0 0 392
RTOR Vol: 0 7 4 814 5 60 100 1239 0 2 700 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 0 7 4 814 5 60 100 1239 0 2 700 0
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 0.91 1.00 0.91 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.64 0.36 2.00 1.00 2.00 1.00 2.00 0.00 1.00 2.00 1.00
Final Sat.: 1650 1050 600 3000 1650 3000 1650 3300 0 1650 3300 1650
Capacity Analysis Module:
Vol/Sat: 0.00 0.01 0.01 0.27 0.00 0.02 0.06 0.38 0.00 0.00 0.21 0.00
Crit Volume: 11 407 620 2
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #25
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.596
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 56 Level Of Service: A
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0
Volume Module:
Base Vol: 90 275 27 277 453 57 74 445 163 100 251 80
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 90 275 27 277 453 57 74 445 163 100 251 80
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 90 275 27 277 453 57 74 445 163 100 251 80
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 90 275 27 277 453 57 74 445 163 100 251 80
RTOR Reduct: 0 0 0 0 0 0 57 0 0 0 0 0
RTOR Vol: 90 275 27 277 453 0 74 445 163 100 251 80
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 90 275 27 277 453 0 74 445 163 100 251 80
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 0.91 0.09 1.00 1.00 1.00 1.00 1.46 0.54 1.00 1.52 0.48
Final Sat.: 1650 1502 148 1650 1650 1650 1650 2415 885 1650 2502 798
Capacity Analysis Module:
Vol/Sat: 0.05 0.18 0.18 0.17 0.27 0.00 0.04 0.18 0.18 0.06 0.10 0.10
Crit Volume: 302 277 304 100
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #26
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.682
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 72 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Split Phase Split Phase Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 0 1 0 0 1 1 0 1 0 1 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 4 19 8 246 21 135 117 1635 8 27 658 124
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 4 19 8 246 21 135 117 1635 8 27 658 124
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 4 19 8 246 21 135 117 1635 8 27 658 124
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 4 19 8 246 21 135 117 1635 8 27 658 124
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 4 19 8 246 21 135 117 1635 8 27 658 124
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 4 19 8 246 21 135 117 1635 8 27 658 124
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.13 0.61 0.26 1.00 0.13 0.87 1.00 1.99 0.01 1.00 1.68 0.32
Final Sat.: 213 1011 426 1650 222 1428 1650 3284 16 1650 2777 523
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.02 0.02 0.02 0.15 0.09 0.09 0.07 0.50 0.50 0.02 0.24 0.24
Crit Volume: 31 246 822 27
Crit Moves: \*\*\*\* \*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #27
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.867
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 171 Level Of Service: D
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 11 rows of volume-related metrics like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing saturation flow values and adjustments.

Capacity Analysis Module: Table with 12 columns and 4 rows showing capacity analysis metrics like Vol/Sat, Crit Volume, etc.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #28
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.691
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 74 Level Of Service: B
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 0 1 1 0 2 1 0 1 0 0 1 0 1 3 0 1 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 55 2166 3 0 751 10 56 0 47 2 0 1
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 55 2166 3 0 751 10 56 0 47 2 0 1
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 55 2166 3 0 751 10 56 0 47 2 0 1
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 55 2166 3 0 751 10 56 0 47 2 0 1
RTOR Reduct: 0 0 1 0 0 0 0 0 0 0 0 0
RTOR Vol: 55 2166 2 0 751 10 56 0 47 2 0 1
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 55 2166 2 0 751 10 56 0 47 2 0 1
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.87 1.00 1.00
Lanes: 1.00 2.00 1.00 1.00 2.96 0.04 1.00 0.00 1.00 3.00 1.00 1.00
Final Sat.: 1650 3300 1650 1650 4885 65 1650 0 1650 4307 1650 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.03 0.66 0.00 0.00 0.15 0.15 0.03 0.00 0.03 0.00 0.00 0.00
Crit Volume: 1083 0 56 1
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #29
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.708
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 78 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 2 1 0 1 0 2 1 0 1 0 1 1 0 1 0 2 0 1
\*\*\*\*\*
Volume Module:
Base Vol: 160 1496 397 63 539 67 319 327 177 222 143 46
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 160 1496 397 63 539 67 319 327 177 222 143 46
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 160 1496 397 63 539 67 319 327 177 222 143 46
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 160 1496 397 63 539 67 319 327 177 222 143 46
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 46
RTOR Vol: 160 1496 397 63 539 67 319 327 177 222 143 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 160 1496 397 63 539 67 319 327 177 222 143 0
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.37 0.63 1.00 2.67 0.33 1.00 1.30 0.70 1.00 2.00 1.00
Final Sat.: 1650 3912 1038 1650 4403 547 1650 2141 1159 1650 3300 1650
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.10 0.38 0.38 0.04 0.12 0.12 0.19 0.15 0.15 0.13 0.04 0.00
Crit Volume: 631 63 252 222
Crit Moves: \*\*\*\* \*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #30
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.834
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 137 Level Of Service: D
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 2 0 3 0 1 2 0 3 0 1 2 0 2 1 0 2 0 1 1 0
Volume Module:
Base Vol: 145 1670 594 279 469 235 662 946 30 251 443 161
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 145 1670 594 279 469 235 662 946 30 251 443 161
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 145 1670 594 279 469 235 662 946 30 251 443 161
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 145 1670 594 279 469 235 662 946 30 251 443 161
RTOR Reduct: 0 0 138 0 0 235 0 0 0 0 0 0
RTOR Vol: 145 1670 456 279 469 0 662 946 30 251 443 161
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 145 1670 456 279 469 0 662 946 30 251 443 161
Saturation Flow Module:
Sat/Lane: 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650 1650
Adjustment: 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00 0.91 1.00 1.00
Lanes: 2.00 3.00 1.00 2.00 3.00 1.00 2.00 2.91 0.09 2.00 1.47 0.53
Final Sat.: 3000 4950 1650 3000 4950 1650 3000 4798 152 3000 2420 880
Capacity Analysis Module:
Vol/Sat: 0.05 0.34 0.28 0.09 0.09 0.00 0.22 0.20 0.20 0.08 0.18 0.18
Crit Volume: 557 140 331 302
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #31
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.000
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 0 Level Of Service:

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns and 3 rows showing Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #32
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.553
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 51 Level Of Service: A
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows for various adjustment factors like Base Vol, Growth Adj, etc.

Saturation Flow Module: Table with 12 columns for movements and 4 rows for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for movements and 3 rows for Vol/Sat, Crit Volume, and Crit Moves.

\*\*\*\*\*

Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #33
\*\*\*\*\*
Cycle (sec): 100 Critical Vol./Cap.(X): 0.703
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 63 Level Of Service: C
\*\*\*\*\*
Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Permitted Permitted
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 1 0 1 0 1 1 0 1 0 0 1 0
\*\*\*\*\*
Volume Module:
Base Vol: 257 624 14 21 636 51 129 9 580 19 1 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 257 624 14 21 636 51 129 9 580 19 1 2
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume: 257 624 14 21 636 51 129 9 580 19 1 2
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 257 624 14 21 636 51 129 9 580 19 1 2
RTOR Reduct: 0 0 0 0 0 0 0 0 0 0 0 0
RTOR Vol: 257 624 14 21 636 51 129 9 580 19 1 2
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume: 257 624 14 21 636 51 129 9 580 19 1 2
\*\*\*\*\*
Saturation Flow Module:
Sat/Lane: 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720 1720
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 1.96 0.04 1.00 1.85 0.15 1.00 0.02 0.98 1.00 0.33 0.67
Final Sat.: 1720 3365 75 1720 3185 255 1720 26 1694 1720 573 1147
\*\*\*\*\*
Capacity Analysis Module:
Vol/Sat: 0.15 0.19 0.19 0.01 0.20 0.20 0.08 0.34 0.34 0.01 0.00 0.00
Crit Volume: 257 344 589 19
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\* \*\*\*\*
\*\*\*\*\*



Level Of Service Computation Report
CCTALOS Method (Base Volume Alternative)

\*\*\*\*\*
Intersection #34
\*\*\*\*\*

Cycle (sec): 100 Critical Vol./Cap.(X): 0.695
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): xxxxxx
Optimal Cycle: 75 Level Of Service: B
\*\*\*\*\*

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 12 rows of adjustment factors like Growth Adj, Initial Bse, User Adj, etc.

Saturation Flow Module: Table with 13 columns and 4 rows showing Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns and 4 rows showing Vol/Sat, Crit Volume, and Crit Moves.

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ATTACHMENT 3

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# Existing Buchanan Road Widening Feasibility Study

January 2006

prepared for  
City of Pittsburg

prepared by  
RBF Consulting



January 16, 2006

JN 35-100129.200

Mr. Paul Reinders  
Senior Civil Engineer  
**CITY OF PITTSBURG**  
65 Civic Avenue  
Pittsburg, CA 94565

**Subject:** Existing Buchanan Road  
Widening Feasibility Study

Dear Mr. Reinders,

In October of 2002, RBF presented a draft Project Study Report on the proposed Buchanan Road Bypass project. Subsequent review comments from Contra Costa County indicated a feasibility study should be conducted for the widening of the existing Buchanan Road as an alternative to the proposed bypass project. As such the City of Pittsburg commissioned RBF to evaluate the feasibility of widening the existing Buchanan Road as an alternative to the Bypass project. The following represents our initial finding and evaluation of the project.

RBF performed an assessment of the proposed improvements required to widen Buchanan Road to four lanes between the intersection of Railroad Avenue and Somersville Road. The assessment included visual review and photographic documentation of existing conditions along the study area and a review of record drawings, but no formal studies were conducted on any aspect of the project.

### **Traffic Analysis**

Fehr & Peers, traffic consultant, in their attached report, studied four different highway improvement projects to determine the most favorable alternative to improve the flow of traffic within the study area of the City of Pittsburg. They included:

- No Build
- Widen Buchanan Road to Four Lanes
- Two Lane Buchanan Road Bypass
- Four Lane Buchanan Road Bypass

Fehr & Peers concluded:

- No Build – “Existing east-west corridors are operating at or near capacity during peak hours; with a “no build” scenario traffic congestion is expected to worsen. “
- Widening of Existing Buchanan – “The widening of Buchanan Road would result in a slight improvement in traffic operations. However, most roadway segments

**PLANNING ■ DESIGN ■ CONSTRUCTION**

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within the City would continue to operate at LOS E or LOS F in the peak commute direction during peak hours."

- Two Lane Buchanan Road Bypass – "The construction of a two-lane Buchanan Road Bypass would result in similar traffic operations as the widening of Buchanan Road."
- Four Lane Buchanan Road Bypass – "The construction of a four-lane Buchanan Road Bypass would reduce congestion and add additional capacity in the study area more than the other alternatives studied, but would increase congestion on James Donlon Boulevard." Existing Buchanan Road (two lane) would operate at LOS C and Buchanan Road Bypass would operate at LOS D or better during the peak commute hours.

### **Geometric Drawings**

A new ortho-photo was flown of the existing Buchanan Road in October 2005. Centerline monuments of existing road were established by field control and record right of way maps were utilized to establish the existing right of way. With this information established, an evaluation was conducted to determine the least impacting alignment to widen Buchanan Road. It was determined that utilizing the south right of way line as a fix and widen the road to the north would have the least impact on the existing homes.

Widening the road equally about the centerlines or widening the road to the south would have significantly greater impacts to the number of homes. However, as the road approaches the Railroad Avenue intersection, the Buchanan Road widening had to be centered to maintain lane alignment with Buchanan Road on the west side of Railroad Avenue.

The configuration used to develop the geometric drawings was a four lane divided highway in accordance with urban arterial road standards of the City of Pittsburg. This results in a 100' right of way width. See attached exhibit.

The impacts of the widening project are illustrated on the enclosed geometrics as an issue or impact item.

**The items listed on the geometric drawings include the following:**

#### **Issue Impact List**

- New intersection & traffic signal improvements
- Remove 10 homes, no direct access to arterial highway near intersection
- Remove 9 homes, no direct access to arterial highway near intersection
- Remove 1 home
- Kirker Creek, new box culvert
- Deep embankment, impacts to wetland, 401/1602 permits, and mitigation will be required
- Impacts to park
- Maintain access to side street with steep uphill entrance profile
- Protect pump station
- Stabilize failing slope
- Maintain access to side street with steep downhill entrance profile

- New drainage improvements
- New intersection & traffic signal improvements
- Impacts to school
- Relocate school modules
- Remove 4 homes
- Remove wooden retaining wall/replace concrete retaining wall
- New intersection & traffic signal improvements
- New intersection & traffic signal improvements
- Remove 9 homes
- Remove 13 homes
- Remove apartment complex
- New intersection & traffic signal improvements
- Impacts to Starbucks coffee drive thru entrance
- Impacts to parking lot and circulation within parking lot
- Relocate electric transmission tower
- New intersection & traffic signal improvements
- Develop new access to nursery
- New intersection & traffic signal improvements
- Expand drainage basin to accommodate new drainage
- Relocate channel
- Relocate and or lower high risk utilities
- Widen bridge culvert
- Relocate high risk utilities
- Relocate drainage structure and realign course, 401 permit
- New intersection & traffic signal improvements

**Items that are not listed on the geometric drawings, but will add significantly to the cost of the project include:**

- Complete new storm drain system throughout the length of the project
- Review of down stream facilities to evaluate necessary upgrades
- Significant utility relocation both underground and overhead
- Noise studies may reveal their existing sound walls are inadequate and may have to be removed and replaced with higher walls resulting in necessary repair to back yard improvements and side yard fences.
- Significant traffic issues during construction, which may result in unknown traffic control, and interim improvement costs.

**Drainage**

Buchanan Road runs east to west through an area where the major drainage features flow from south to north. There are approximately ten locations where drainage facilities convey runoff across the roadway, ranging in size from 18" diameter local storm drainage systems to the triple 10' by 9' Kirker Creek culvert. Additional facilities collect runoff along the roadway. The existing roadway has non-uniform drainage improvements ranging from asphalt swales and dikes to concrete curb and gutter. The study are portion of Buchanan Road is parallel to the Contra Costa Canal for approximately 3600' and crosses it at one point, where there is a gated diversion structure.

The entire roadway within the study area is above the FEMA regulatory floodplain. Kirker Creek is mapped and could be impacted by a roadway widening project. The only other location where a widening project could impact potential flooding areas mapped by FEMA is downstream from the Contra Costa Canal diversion of structure.

The most significant storm drainage issues related to a potential widening of the Buchanan Road involves culverts and storm drains that cross under the road; the most significant of these is at Kirker creek. It is expected that the existing Kirker Creek culvert would need to be lengthened as part of the roadway widening project. Lengthening the culvert would reduce its capacity and additional parallel conveyance, or other means, would likely be required to mitigate for the potential impacts. Other locations where culverts would have to be lengthened as part of a widening project may be subject to similar requirements, but not resulting from FEMA floodway impact regulations.

Design of roadway drainage improvements along the study would require hydrologic analysis to calculate the flow rate at each cross drainage location to size improvements necessary to meet current standards. The results of this analysis would likely show that improvements downstream from the study would also be required to meet current drainage standards for control of runoff along the road. At some locations, downstream improvements may be complicated by existing storm drains being located in narrow easements between structures.

Other issues that would need to be addressed include typical roadway drainage and redevelopment storm water best management practices. Typical roadway drainage and water quality requirements would not be expected to influence the feasibility of the project.

### **Right of Way**

A brief study was conducted by Associated Right-of-Way Services, Inc. to determine preliminary values of properties along Buchanan Road that would have to be obtained for the proposed project. See attached report. The most significant cost would be for the full acquisition of homes along the road. The study indicates 46 homes must be obtained at a value of \$500,000 to \$600,000 each. This number may be reduced if, as a policy matter, the City allows direct access from a residential lot to an arterial highway. Current subdivision practices do not allow direct access for individual lots to a main arterial highway. The total estimate for right of way acquisition is in excess of \$35,000,000.

### **Cost Estimate**

Three engineer's estimates were prepared as part of the feasibility study; they included an estimate for the widening of the existing Buchanan Road, and the two lane configuration and the four lane configuration for the proposed bypass project.

The widening of the existing Buchanan Road engineer's estimated was completed at a "concept" level of cost analysis. As no formal studies or engineering concepts were developed, most of the cost estimate is in terms of a "rough order of magnitude".



The estimated for the four lane configuration was revised from the previous estimate by eliminating all landscaping and irrigation, but substituting hydroseeding for the slopes and median areas, and inserting a more cost-effective structure across Kirker Creek, which will require regulatory agency approval.

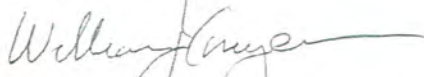
### Conclusion

The traffic analysis indicated the widening of existing Buchanan Road will not enhance the movement of traffic through the City of Pittsburg, rather the proposed bypass project represents the most favorable solution.

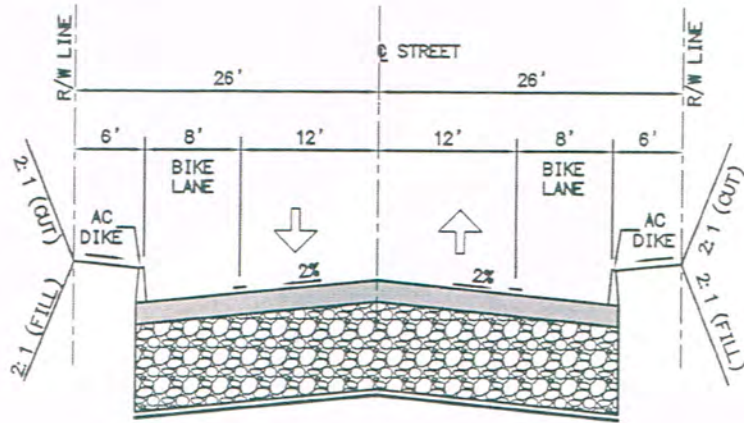
Additionally, the geometric drawings revealed **overwhelming social and monetary impacts**. Forty six homes must be removed to accommodate the widening including the removal of one apartment building and impacts to parking and drive through facilities for a mall area. Also included are impacts to school property and park property. The project also includes high-end construction items including the relocation of a major concrete drainage channel that operates year round, relocation of major utilities, eight new intersection and traffic signal improvements, new storm drain system and box culvert of Kirker Creek, along with the conventional cost of widening a road.

Should you have questions with regards to this letter report, please do not hesitate to contact me.

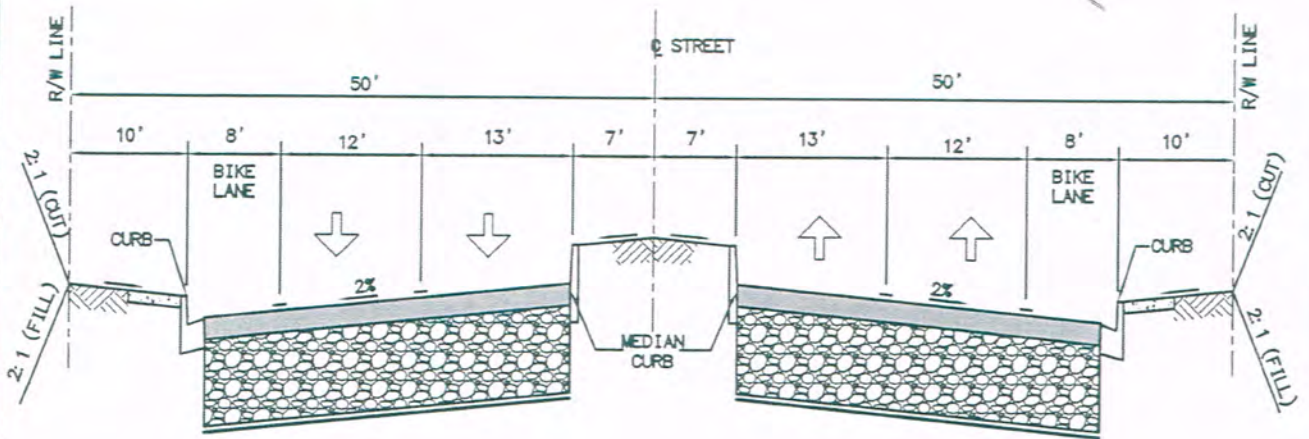
Sincerely,  
RBF Consulting



William Conyers, P.E.  
Senior Associate



**TWO LANE CROSS SECTION**  
**BUCHANAN ROAD BYPASS**



**FOUR LANE CROSS SECTION**  
**BUCHANAN ROAD BYPASS**  
**EXISTING BUCHANAN ROAD**

**EXHIBIT**

H:\PDATA\35100129\CADD\BUCHANAN RD\TRANSPWA\EXHIBITS\REPORT SHEETS\79XS\_BYPASS.DWG A TORBICA 3/16/06 2:18 pm



PLANNING ■ DESIGN ■ CONSTRUCTION

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ATTACHMENT 4

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FEHR & PEERS  
TRANSPORTATION CONSULTANTS



FEHR & PEERS  
TRANSPORTATION CONSULTANTS

# BUCHANAN ROAD BYPASS SCREENING ANALYSIS

## FINAL REPORT

*January 2006*

*Prepared for:  
RBF Consulting  
City of Pittsburg*

**1021-1822**

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## 1. INTRODUCTION

This chapter provides the background and purpose of this study. It also describes the analytical parameters used to complete the study and provides an overview of report organization.

### BACKGROUND

Eastern Contra Costa County has become one of the fastest growing areas in the County. According to regional land use data, the combined population of the Cities of Pittsburg, Antioch, Brentwood, Oakley and the unincorporated areas grew by 95,000 from 1990 to 2005. East County is forecast to continue experiencing high levels of growth with projections of another 100,000 residents and 37,000 jobs by 2025.

Along with growth in population and employment inevitably comes growth in travel demand. According to the *State Route 4 Major Investment Study*, Contra Costa Transportation Authority (CCTA), January 1999, several improvements to the transportation system are needed to adequately serve the East County in the future. One of the most important elements is the need to enhance the flow of east-west travel since many of the large regional attractions are located in Central County and points further west. Both the *Pittsburg 2000 General Plan*, November 2001 and the *East County Action Plan - Final 2000 Update*, CCTA, June 20, 2000, identify a series of improvements to better serve east-west travel, including the widening of SR 4, the extension of commuter rail service beyond Pittsburg/Bay Point, and improvements to parallel arterials such as Leland Road and Pittsburg-Antioch Highway. In addition, the plans propose the Buchanan Road Bypass – a new east-west arterial designed to provide additional capacity in the southern portion of Pittsburg and also to bypass the residential areas along existing Buchanan Road. Figure 1 shows the general location of the proposed Buchanan Road Bypass.

In 1996, the East Contra Costa Regional Fee and Financing Authority (ECCRFFA) allocated \$4 million in regional fee revenue to fund feasibility studies and initial project development of the Buchanan Road Bypass. The City of Pittsburg is now proceeding with a preliminary assessment of the feasibility of the Bypass, which includes identifying conceptual roadway alignments and potential environmental issues that will require further analysis in subsequent phases of project development.

In 2002, a *Preliminary Traffic Impact Assessment* of the Buchanan Road Bypass was prepared by Fehr & Peers and RBF Consulting for the City of Pittsburg. The report analyzed the impacts of a four-lane Buchanan Road Bypass. Subsequent to the completion of this report, the City decided that alternatives to a four-lane Buchanan Road Bypass should also be considered. Thus, this analysis was conducted to compare all of the identified Buchanan Road Bypass alternatives. This information should allow the City to narrow the range of alternatives that will be studied in detail in future project development analyses.

### PURPOSE

This report compares traffic operations under four alternatives. All four alternatives were analyzed with the aid of the recently updated Countywide Travel Demand model developed by CCTA. All four alternatives assume that other planned and funded roadway improvements in Pittsburg and eastern Contra Costa County will be completed. The following four alternatives were analyzed under 2025 conditions:

- **Alternative 1 – No Build:** This alternative assumes no Bypass and no expansion of Buchanan Road.
- **Alternative 2 – Four-lane Buchanan Road:** This alternative assumes no Bypass, and widening of the existing Buchanan Road from two to four lanes (two in each direction). It also assumes that a portion of the Buchanan Road Bypass between Somersville Road and Ventura Drive is constructed as part of residential development in the area.

- **Alternative 3 – Two-lane Buchanan Road Bypass:** This alternative assumes a two-lane Buchanan Road Bypass based on the preferred alignment described in the *Preliminary Traffic Impact Assessment*. It assumes no expansion to the existing Buchanan Road.
- **Alternative 4 – Four-lane Buchanan Road Bypass:** This alternative assumes a four-lane Buchanan Road Bypass based on the preferred alignment described in the *Preliminary Traffic Impact Assessment*. It assumes no expansion to the existing Buchanan Road.

In 2001, the City of Concord began signal metering on Kirker Pass Road at Myrtle Drive to limit the amount of southbound traffic entering Concord during the AM peak period (7:00 AM - 8:30 AM) to about 1,700 vehicles per hour. The metering project was approved under the Kirker Pass Road/Ignacio Valley Road Traffic Plan. To account for the effect of the existing metering at the Kirker Pass Road/Myrtle Drive intersection, each alternative was analyzed with and without the current metering plan.

## STUDY AREA

The study area is bounded by Railroad Avenue/Kirker Pass Road to the west, Somersville Road to the east, the future Buchanan Road Bypass to the south, and Pittsburg-Antioch Highway to the north (see Figure 1). This includes most of the City of Pittsburg, as well as the main east-west corridors that the Buchanan Road Bypass would affect: Pittsburg-Antioch Highway, State Route 4, Leland Road, and Buchanan Road.

This analysis compares the four alternatives for the Buchanan Road Bypass and provides an overview of potential impacts on the region. Thus, the analysis is limited to the roadway segments that would most directly be affected by the proposed alternatives. Traffic operations on the following roadway segments were studied:

- Pittsburg-Antioch Highway
- State Route (SR) 4
- Leland Road
- Buchanan Road
- Buchanan Road Bypass
- James Donlon Boulevard
- Kirker Pass Road
- Somersville Road

## ANALYSIS METHODOLOGY

Traffic operations throughout the study area were analyzed according to the procedures and methodologies discussed below.

### *Roadway Segment Level of Service*

Roadway operations are described using the term "Level of Service" (LOS). Level of Service is a qualitative description of traffic operations from the driver perspective and reflects the delay experienced by the driver. It ranges from LOS A, with no congestion and little delay, to LOS F, with excessive congestion and delays.

Daily Level of Service is based on the maximum traffic volume that a given roadway type can accommodate in both directions over a 24-hour period. Peak hour Level of Service is based on the maximum traffic volume that a given roadway type can accommodate in one direction over a one-hour period. Table 1 presents the daily roadway segment LOS criteria and Table 2 presents the peak hour roadway segment LOS criteria for various roadway types. These are based on LOS and capacity criteria developed in the *2000 Highway Capacity Manual*.