APPENDIX J

Traffic Data

FEHR & PEERS
TRANSPORTATION CONSULTANTS

MEMORANDUM

Date: December 20, 2007

To: Samar Hajeer, City of Sacramento
Aelita Milatzo, City of Sacramento

From: Bob Grandy, Fehr & Peers
Dan Block, Fehr & Peers

Subject: ***Delta Shores Trip Generation***

SA07-0088A

A revised project description submitted for the Delta Shores project on November 1, 2007, indicates an increase in square footage for the Village Center from 1.23 million square feet to 1.3 million square feet of retail uses. This memorandum identifies the change in trip generation that would occur as a result of the change in retail uses and whether that change is likely to result in the identification of new significant traffic impacts.

Revised Project Description

The original project description for the Delta Shores project is provided below. The change in project description referenced above involves an increase of 70,000 square feet in retail uses in the Village Center.

Original Delta Shores Project Description:

- 5,222 Residential dwelling units
  - 675 single-family residential units
  - 4,547 multi-family residential units
- 1.39 million square-feet of Commercial/Retail uses
  - 1.23 million square-feet retail in the Village Center
  - 161,000 square-feet of mixed use retail in the Town Center
- 31.3 acres of Community uses
  - two elementary schools –700 students each
  - a 22,000 square-foot community center
  - two sports fields

Revised Trip Generation

The AM and PM peak hour trip generation of the project was estimated using trip generation data contained in *Trip Generation* (7th Edition, Institute of Transportation Engineers, 2003) for all uses except the proposed elementary and high school, which was estimated using the *San Diego Trip Generators* (San Diego Association of Governments, 1993). The data from *San Diego Trip Generators* was used because it is based on California data and also has generation data for the PM peak hour; PM data is not available for schools in *Trip Generation*.

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Table 1 provides the gross number of vehicle trips that would be generated by the Delta Shores and Stone Boswell projects based on the **original** project description submitted by the applicant and the trip data from the two sources described above.

TABLE 1

DELTA SHORES

ORIGINAL TRIP GENERATION – GROSS TRIPS FOR PROPOSED PROJECT

Land Use		Amount	Source	Trips						
					AM Peak Hour			PM Peak Hour		
				Weekday	In	Out	Total	In	Out	Total
Single-Family Residential		675 DUs[2]	ITE[1] 210	5,520	119	357	476	338	198	536
Multi-Family Residential	Single-Family Attached	1,337 DUs[2]	ITE[1] 210	10,934	236	706	942	669	393	1,062
	Medium-Density	1,337 DUs[2]	ITE[1] 230	5,818	70	341	411	338	166	504
	High-Density	1,415 DUs[2]	ITE[1] 220	8,618	139	558	697	515	277	792
Town Center Mixed-Use	Residential	458 DUs[2]	ITE[1] 220	2,790	45	180	225	166	90	256
	Retail	161 ksf[3]	ITE[1] 820	9,255	127	81	208	411	446	857
Village Center Commercial Retail		1,230 ksf[3]	ITE[1] 820	34,704	430	275	705	1574	1706	3280
Community Center		22 ksf[3]	ITE[1] 495	180	22	14	36	10	26	36
Park (2 soccer fields)		2 Fields	ITE[1] 488	144	--	--	--	29	13	42
Elementary School		1,400 students	SANDAG[4]	1,960	307	203	510	29	69	98
Gross Trips				79,923	1,495	2,715	4,210	4,079	3,384	7,463

Notes:

1. Based on trip generation data from Trip Generation (ITE, 2003).
2. DU = dwelling unit
3. ksf = thousand square feet
4. Based on trip generation data from San Diego Traffic Generators (San Diego Association of Governments, 1993)

Source: Fehr & Peers, 2007.

Table 2 provides the gross number of vehicle trips that would be generated by the Delta Shores and Stone Boswell projects based on the **revised** project description submitted by the applicant and the trip data from the two sources described above.

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TABLE 2

DELTA SHORES

REVISED TRIP GENERATION – GROSS TRIPS FOR PROPOSED PROJECT

Land Use		Amount	Source	Trips						
				Weekday	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Single-Family Residential		675 DUs[2]	ITE[1] 210	5,520	119	357	476	338	198	536
Multi-Family Residential	Single-Family Attached	1,337 DUs[2]	ITE[1] 210	10,934	236	706	942	669	393	1,062
	Medium-Density	1,337 DUs[2]	ITE[1] 230	5,818	70	341	411	338	166	504
	High-Density	1,415 DUs[2]	ITE[1] 220	8,618	139	558	697	515	277	792
Town Center Mixed-Use	Residential	458 DUs[2]	ITE[1] 220	2,790	45	180	225	166	90	256
	Retail	161 ksf[3]	ITE[1] 820	9,255	127	81	208	411	446	857
Village Center Commercial Retail		1,300 ksf[3]	ITE[1] 820	35,975	445	284	729	1633	1770	3403
Community Center		22 ksf[3]	ITE[1] 495	180	22	14	36	10	26	36
Park (2 soccer fields)		2 Fields	ITE[1] 488	144	--	--	--	29	13	42
Elementary School		1,400 students	SANDAG[4]	1,960	307	203	510	29	69	98
Gross Trips				81,194	1,510	2,724	4,234	4,138	3,448	7,586

Notes:

1. Based on trip generation data from Trip Generation (ITE, 2003).
2. DU = dwelling unit
3. ksf = thousand square feet
4. Based on trip generation data from San Diego Traffic Generators (San Diego Association of Governments, 1993)

Source: Fehr & Peers, 2007.

The Village Center, as defined in the original project description, was projected to generate approximately 705 gross trips during the AM peak hour and 3,280 gross trips during the PM peak hour. The addition of 70,000 gross square feet of retail uses would generate approximately 20 additional trips during the AM peak hour and 125 additional trips during the PM peak hour.

Most of the trips generated by the Village Center would travel via Delta Shores Circle to Cosumnes River Boulevard, with the majority then destined to Interstate 5. The following is a brief summary of projected operating conditions at the study intersections between the Village Center and the I-5/Cosumnes River Boulevard interchange.

- Cosumnes River Boulevard/I-5 SB Ramps – this intersection is projected to operate at LOS B conditions in the AM peak hour and LOS C conditions in the PM peak hour under the Cumulative Plus Project scenario. Given the LOS E threshold for this intersection (i.e., Caltrans threshold), the added traffic generated by the 70,000 s.f. of additional retail uses would not likely generate significant additional impacts at this location.

- Cosumnes River Boulevard/I-5 NB Ramps – this intersection is projected to operate at LOS B conditions in the AM peak hour and LOS C conditions in the PM peak hour under the Cumulative Plus Project scenario. Given the LOS E threshold for this intersection (i.e., Caltrans threshold), the added traffic generated by the 70,000 s.f. of additional retail uses would not likely generate significant additional impacts at this location.

- Cosumnes River Boulevard/Delta Shores Circle (West) – this intersection is projected to operate at LOS D conditions in the AM peak hour and LOS E conditions in the PM peak hour under the Cumulative Plus Project scenario. These future conditions exceed the City's LOS C threshold. Additional mitigations at this intersection were deemed infeasible by the City as the improvements would be inconsistent with the City of Sacramento goals and objectives to create pedestrian-friendly streets and the Smart Growth policies. Therefore, the project's impact would be considered significant and unavoidable. The added traffic generated by the 70,000 s.f. of additional retail uses would not change this impact or mitigation determination.

- Delta Shores Circle South/Street D (North) - this intersection is projected to operate at LOS C conditions in the AM peak hour and LOS C conditions in the PM peak hour under the Cumulative Plus Project scenario. These future conditions do not exceed the City's LOS C threshold. The added traffic generated by the 70,000 s.f. of additional retail uses would not likely generate significant additional impacts at this location.

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline No Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	T	65	62	95	8	21.8	C	--
	R	52	54	104	7	12.6	B	--
	Subtotal	**117**	**116**	**99**	**--**	**17.5**	**B**	**--**
SB	L	73	71	97	7	24.4	C	--
	T	33	29	88	6	27.2	C	--
	Subtotal	**106**	**100**	**94**	**--**	**25.2**	**C**	**--**
WB	L	49	47	96	5	23.8	C	--
	R	71	75	106	6	5.9	A	--
	Subtotal	**120**	**123**	**103**	**--**	**12.8**	**B**	**--**
	Total	**342**	**339**	**99**	**--**	**18.1**	**B**	**--**

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	L	57	61	107	7	15.2	B	--
	R	22	23	100	4	7.6	A	--
	Subtotal	**79**	**84**	**106**	**--**	**13.2**	**B**	**--**
EB	T	46	47	102	7	4.2	A	--
	R	79	78	99	9	3.3	A	--
	Subtotal	**125**	**125**	**100**	**--**	**3.7**	**A**	**--**
WB	T	98	101	103	11	3.2	A	--
	R	33	33	100	5	2.5	A	--
	Subtotal	**130**	**134**	**103**	**--**	**3.0**	**A**	**--**
	Total	**334**	**342**	**102**	**--**	**5.7**	**A**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline No Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	71	77	108	7	18.9	B	--
	R	35	38	109	6	2.9	A	--
	Subtotal	**106**	**115**	**108**	**--**	**13.6**	**B**	**--**
EB	T	71	73	103	7	3.5	A	--
	R	33	33	100	5	2.2	A	--
	Subtotal	**103**	**106**	**103**	**--**	**3.1**	**A**	**--**
WB	T	60	59	98	7	3.0	A	--
	R	188	187	99	11	6.0	A	--
	Subtotal	**247**	**247**	**100**	**--**	**5.3**	**A**	**--**
	Total	**457**	**467**	**102**	**--**	**6.9**	**A**	**--**

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline No Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	T	2194	186	--	--	115	--	--
	R	150	194	Yes	--	115	--	--
SB	L	150	242	Yes	--	152	Yes	--
	T	1133	242	--	--	152	--	--
WB	L	1068	149	--	--	95	--	--
	R	1068	88	--	--	49	--	--

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	L	1433	88	--	--	58	--	--
	T	1433	70	--	--	40	--	--
	R	350	53	--	--	33	--	--
EB	T	1068	54	--	--	20	--	--
	R	250	49	--	--	27	--	--
WB	T	1047	46	--	--	17	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline No Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	87	--	--	62	--	--
	T	1532	79	--	--	60	--	--
	R	450	55	--	--	31	--	--
EB	T	1047	66	--	--	25	--	--
	R	1047	50	--	--	13	--	--
WB	T	2173	42	--	--	13	--	--
	R	2173	52	--	--	36	--	--

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline No Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	T	76	79	104	11	25.8	C	--
	R	41	40	98	5	11.1	B	--
	Subtotal	**117**	**119**	**102**	**--**	**20.8**	**C**	**--**
SB	L	147	146	99	8	42.1	D	--
	T	41	42	102	4	44.5	D	--
	Subtotal	**187**	**188**	**101**	**--**	**42.6**	**D**	**--**
WB	L	65	69	106	6	30.3	C	--
	R	5	5	100	3	1.8	A	--
	Subtotal	**71**	**74**	**104**	**--**	**28.5**	**C**	**--**
	Total	**375**	**380**	**101**	**--**	**33.1**	**C**	**--**

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	L	179	177	98	13	15.8	B	--
	R	43	46	107	7	8.3	A	--
	Subtotal	**223**	**223**	**100**	**--**	**14.2**	**B**	**--**
EB	T	41	40	98	7	10.5	B	--
	R	147	150	102	9	9.2	A	--
	Subtotal	**187**	**190**	**102**	**--**	**9.5**	**A**	**--**
WB	T	27	28	104	4	5.0	A	--
	R	38	35	92	6	1.9	A	--
	Subtotal	**65**	**63**	**97**	**--**	**3.2**	**A**	**--**
	Total	**476**	**476**	**100**	**--**	**10.9**	**B**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline No Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	14	14	100	3	19.1	B	--
	R	38	38	100	9	4.9	A	--
	Subtotal	**52**	**52**	**100**	**--**	**8.7**	**A**	**--**
EB	T	198	201	102	12	3.1	A	--
	R	22	18	82	3	3.7	A	--
	Subtotal	**220**	**220**	**100**	**--**	**3.2**	**A**	**--**
WB	T	52	48	92	6	1.5	A	--
	R	111	109	98	11	2.5	A	--
	Subtotal	**163**	**157**	**96**	**--**	**2.2**	**A**	**--**
	Total	**435**	**428**	**98**	**--**	**3.5**	**A**	**--**

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline No Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	T	2194	238	--	--	144	--	--
	R	150	145	--	--	63	--	--
SB	L	150	485	Yes	--	296	Yes	--
	T	1133	485	--	--	296	--	--
WB	L	1068	201	--	--	131	--	--
	R	1068	19	--	--	7	--	--

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	L	1433	179	--	--	113	--	--
	T	1433	151	--	--	96	--	--
	R	350	50	--	--	35	--	--
EB	T	1068	55	--	--	26	--	--
	R	250	90	--	--	64	--	--
WB	T	1047	41	--	--	17	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline No Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	39	--	--	17	--	--
	T	1532	29	--	--	15	--	--
	R	450	48	--	--	31	--	--
EB	T	1047	77	--	--	31	--	--
	R	1047	70	--	--	27	--	--
WB	T	2173	23	--	--	4	--	--
	R	2173	32	--	--	12	--	--

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	T	71	71	100	6	28.8	C	--
	R	49	47	96	8	13.3	B	--
	Subtotal	**120**	**118**	**98**	**--**	**22.7**	**C**	**--**
SB	L	87	87	100	8	19.5	B	--
	T	33	32	97	7	22.6	C	--
	Subtotal	**120**	**119**	**99**	**--**	**20.3**	**C**	**--**
WB	L	71	72	101	7	21.3	C	--
	R	103	99	96	9	10.8	B	--
	Subtotal	**174**	**171**	**98**	**--**	**15.2**	**B**	**--**
	Total	**413**	**408**	**99**	**--**	**18.9**	**B**	**--**

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	L	188	190	101	9	18.5	B	--
	R	27	29	107	5	9.9	A	--
	Subtotal	**215**	**219**	**102**	**--**	**17.4**	**B**	**--**
EB	T	90	87	97	9	11.3	B	--
	R	73	76	104	10	4.4	A	--
	Subtotal	**163**	**163**	**100**	**--**	**8.1**	**A**	**--**
WB	T	166	162	98	11	12.6	B	--
	R	84	82	98	8	3.0	A	--
	Subtotal	**250**	**245**	**98**	**--**	**9.3**	**A**	**--**
	Total	**628**	**627**	**100**	**--**	**11.8**	**B**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	54	52	96	4	34.2	C	--
	R	95	97	102	10	11.3	B	--
	Subtotal	**149**	**149**	**100**	**--**	**19.4**	**B**	**--**
EB	T	234	231	99	8	5.3	A	--
	R	43	48	112	6	3.5	A	--
	Subtotal	**277**	**279**	**101**	**--**	**5.0**	**A**	**--**
WB	T	245	241	98	7	9.8	A	--
	R	277	262	95	9	14.6	B	--
	Subtotal	**522**	**503**	**96**	**--**	**12.3**	**B**	**--**
	Total	**948**	**931**	**98**	**--**	**11.2**	**B**	**--**

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	R	11	10	91	5	0.9	A	--
	Subtotal	**11**	**10**	**91**	**--**	**0.9**	**A**	**--**
EB	T	310	306	99	18	0.5	A	--
	R	19	19	100	6	0.2	A	--
	Subtotal	**329**	**325**	**99**	**--**	**0.5**	**A**	**--**
WB	T	511	493	96	14	4.1	A	--
	R	11	11	100	4	4.2	A	--
	Subtotal	**522**	**504**	**97**	**--**	**4.1**	**A**	**--**
	Total	**861**	**840**	**98**	**--**	**2.7**	**A**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	117	106	91	10	38.6	D	--
	T	19	19	95	4	32.6	C	--
	R	8	8	100	3	9.4	A	--
	Subtotal	**144**	**132**	**92**	**--**	**36.0**	**D**	**--**
SB	L	14	12	86	5	58.4	E	--
	T	33	28	85	5	49.7	D	--
	R	128	124	97	8	32.6	C	--
	Subtotal	**174**	**164**	**94**	**--**	**37.4**	**D**	**--**
EB	L	133	124	93	13	38.4	D	--
	T	122	122	100	10	9.8	A	--
	R	54	54	100	7	2.5	A	--
	Subtotal	**310**	**300**	**97**	**--**	**20.3**	**C**	**--**
WB	L	8	9	113	3	79.5	E	--
	T	277	269	97	12	26.6	C	--
	R	5	6	120	2	8.7	A	--
	Subtotal	**291**	**284**	**98**	**--**	**27.8**	**C**	**--**
	Total	**918**	**879**	**96**	**--**	**28.3**	**C**	**--**

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	3	2	67	1	49.1	D	--
	T	54	51	94	9	15.7	B	--
	R	3	3	100	2	6.3	A	--
	Subtotal	**60**	**57**	**95**	**--**	**16.5**	**B**	**--**
SB	L	16	17	106	5	40.2	D	--
	T	46	43	93	5	7.5	A	--
	R	19	19	100	6	4.2	A	--
	U	11	10	91	4	47.5	D	--
	Subtotal	**92**	**89**	**97**	**--**	**17.4**	**B**	**--**
EB	L	22	17	77	3	46.3	D	--
	T	3	3	100	1	31.0	C	--
	R	3	3	100	2	2.5	A	--
	Subtotal	**27**	**24**	**89**	**--**	**38.5**	**D**	**--**
WB	L	3	3	100	2	55.5	E	--
	T	5	5	100	2	48.8	D	--
	R	52	54	104	5	14.5	B	--
	Subtotal	**60**	**62**	**103**	**--**	**19.4**	**B**	**--**
	Total	**239**	**231**	**97**	**--**	**19.9**	**B**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	R	33	34	103	7	5.5	A	--
	Subtotal	**33**	**34**	**103**	**--**	**5.5**	**A**	**--**
SB	R	3	2	67	1	4.6	A	--
	Subtotal	**3**	**2**	**67**	**--**	**4.6**	**A**	**--**
EB	L	3	2	67	1	7.3	A	--
	T	130	129	99	9	1.0	A	--
	R	3	3	100	2	0.9	A	--
	Subtotal	**136**	**134**	**99**	**--**	**1.1**	**A**	**--**
WB	L	16	16	100	3	6.2	A	--
	T	171	169	99	9	3.1	A	--
	R	5	6	120	3	1.9	A	--
	Subtotal	**193**	**191**	**99**	**--**	**3.3**	**A**	**--**
	Total	**364**	**361**	**99**	**--**	**2.7**	**A**	**--**

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	T	2154	212	--	--	142	--	--
	R	200	214	Yes	--	142	--	--
SB	L	165	155	--	--	110	--	--
	T	406	151	--	--	110	--	--
WB	L	370	194	--	--	118	--	--
	R	370	155	--	--	82	--	--

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	L	1427	222	--	--	144	--	--
	T	1427	211	--	--	133	--	--
	R	350	61	--	--	33	--	--
EB	T	637	101	--	--	53	--	--
	R	250	52	--	--	32	--	--
WB	T	928	189	--	--	110	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	112	--	--	73	--	--
	T	1538	112	--	--	73	--	--
	R	450	138	--	--	77	--	--
EB	T	75	165	Yes	--	59	--	--
	R	75	131	Yes	--	41	--	--
WB	T	503	730	Yes	--	131	--	--
	R	503	744	Yes	--	168	--	--

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
WB	T	437	529	Yes	--	76	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	207	--	--	112	--	--
	T	562	110	--	--	36	--	--
	R	562	105	--	--	34	--	--
SB	L	150	150	--	--	51	--	--
	T	328	444	Yes	--	213	--	--
	R	200	326	Yes	--	229	Yes	--
EB	L	500	249	--	--	167	--	--
	T	437	89	--	--	51	--	--
WB	L	300	57	--	--	26	--	--
	T	1119	284	--	--	151	--	--
	R	300	30	--	--	8	--	--

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	200	32	--	--	12	--	--
	T	1101	114	--	--	65	--	--
	R	1101	55	--	--	28	--	--
SB	L	200	71	--	--	38	--	--
	T	498	61	--	--	23	--	--
	R	498	25	--	--	8	--	--
	U	200	66	--	--	35	--	--
EB	L	2396	85	--	--	42	--	--
	T	2396	27	--	--	7	--	--
	R	200	21	--	--	6	--	--
WB	L	200	31	--	--	11	--	--
	T	901	221	--	--	95	--	--
	R	901	221	--	--	95	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project:	*Delta Shores*			***HCM:***	*2000*
Scenario:	*Baseline With Project*			***PHF:***	*0.92*
TOD:	*AM*	***Analysis Period:***	*15 Minutes*	***# of Runs:***	*10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	R	392	79	--	--	48	--	--
SB	R	403	31	--	--	9	--	--
EB	L	100	31	--	--	6	--	--
WB	L	250	52	--	--	20	--	--

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	T	92	87	95	11	36.8	D	--
	R	60	57	95	9	18.7	B	--
	Subtotal	**152**	**145**	**95**	**--**	**29.7**	**C**	**--**
SB	L	152	146	96	9	30.2	C	--
	T	49	48	98	7	34.3	C	--
	Subtotal	**201**	**194**	**97**	**--**	**31.2**	**C**	**--**
WB	L	68	66	97	8	21.8	C	--
	R	46	46	100	7	7.9	A	--
	Subtotal	**114**	**112**	**98**	**--**	**16.1**	**B**	**--**
	Total	**467**	**450**	**96**	**--**	**27.0**	**C**	**--**

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	L	372	367	99	17	23.4	C	--
	R	38	39	103	4	13.0	B	--
	Subtotal	**410**	**406**	**99**	**--**	**22.4**	**C**	**--**
EB	T	111	108	97	6	17.9	B	--
	R	120	111	93	12	7.0	A	--
	Subtotal	**231**	**218**	**94**	**--**	**12.4**	**B**	**--**
WB	T	120	118	98	12	17.1	B	--
	R	133	125	93	12	3.4	A	--
	Subtotal	**253**	**243**	**96**	**--**	**10.1**	**B**	**--**
	Total	**894**	**867**	**97**	**--**	**16.4**	**B**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	14	12	86	4	20.7	C	--
	R	149	148	99	11	23.6	C	--
	Subtotal	**163**	**160**	**98**	**--**	**23.4**	**C**	**--**
EB	T	470	455	97	18	13.6	B	--
	R	14	15	100	5	10.1	B	--
	Subtotal	**484**	**470**	**97**	**--**	**13.5**	**B**	**--**
WB	T	285	280	98	22	16.1	B	--
	R	261	254	97	17	19.7	B	--
	Subtotal	**546**	**534**	**98**	**--**	**17.8**	**B**	**--**
	Total	**1193**	**1164**	**98**	**--**	**16.8**	**B**	**--**

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	R	52	45	87	7	1.3	A	--
	Subtotal	**52**	**45**	**87**	**--**	**1.3**	**A**	**--**
EB	T	552	533	97	16	1.4	A	--
	R	68	67	99	7	1.1	A	--
	Subtotal	**620**	**601**	**97**	**--**	**1.4**	**A**	**--**
WB	T	495	489	99	18	4.8	A	--
	R	27	6	22	1	3.8	A	--
	Subtotal	**522**	**495**	**95**	**--**	**4.8**	**A**	**--**
	Total	**1193**	**1141**	**96**	**--**	**2.9**	**A**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	217	205	94	9	51.3	D	--
	T	63	61	98	6	32.2	C	--
	R	24	23	96	6	19.8	B	--
	Subtotal	**304**	**289**	**95**	**--**	**44.8**	**D**	**--**
SB	L	27	26	96	5	60.2	E	--
	T	79	76	96	10	48.2	D	--
	R	109	102	94	7	26.3	C	--
	Subtotal	**215**	**205**	**95**	**--**	**38.8**	**D**	**--**
EB	L	152	141	93	10	39.9	D	--
	T	245	250	102	11	24.8	C	--
	R	155	147	95	9	5.0	A	--
	Subtotal	**552**	**538**	**97**	**--**	**23.4**	**C**	**--**
WB	L	30	31	103	7	53.2	D	--
	T	196	187	95	19	33.7	C	--
	R	5	26	520	7	9.3	A	--
	Subtotal	**231**	**244**	**106**	**--**	**33.6**	**C**	**--**
	Total	**1302**	**1275**	**98**	**--**	**32.6**	**C**	**--**

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	8	7	88	3	53.7	D	--
	T	114	107	94	8	34.0	C	--
	R	3	3	67	1	20.5	C	--
	Subtotal	**125**	**117**	**94**	**--**	**35.0**	**C**	**--**
SB	L	33	37	112	5	39.0	D	--
	T	128	128	100	11	17.9	B	--
	R	54	55	102	9	6.5	A	--
	Subtotal	**215**	**219**	**102**	**--**	**18.6**	**B**	**--**
EB	L	166	121	73	10	42.6	D	--
	T	24	24	100	4	27.9	C	--
	R	8	8	100	3	4.5	A	--
	Subtotal	**198**	**153**	**77**	**--**	**38.3**	**D**	**--**
WB	L	3	3	100	2	65.1	E	--
	T	8	8	100	3	49.7	D	--
	R	27	30	111	7	20.4	C	--
	Subtotal	**38**	**41**	**105**	**--**	**29.3**	**C**	**--**
	Total	**576**	**530**	**92**	**--**	**28.7**	**C**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	R	24	21	88	4	6.5	A	--
	Subtotal	**24**	**21**	**88**	**--**	**6.5**	**A**	**--**
SB	R	3	3	100	1	3.0	A	--
	Subtotal	**3**	**3**	**100**	**--**	**3.0**	**A**	**--**
EB	L	3	3	100	1	3.9	A	--
	T	207	199	96	16	1.3	A	--
	R	3	3	100	2	0.6	A	--
	Subtotal	**212**	**204**	**96**	**--**	**1.3**	**A**	**--**
WB	L	33	33	100	6	10.5	B	--
	T	111	109	98	9	3.2	A	--
	R	14	13	93	4	2.0	A	--
	Subtotal	**158**	**154**	**97**	**--**	**4.7**	**A**	**--**
	Total	**397**	**383**	**96**	**--**	**3.0**	**A**	**--**

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	T	2154	352	--	--	211	--	--
	R	200	352	Yes	--	211	Yes	--
SB	L	165	462	Yes	--	257	Yes	--
	T	406	462	Yes	--	257	--	--
WB	L	370	193	--	--	101	--	--
	R	370	72	--	--	38	--	--

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	L	1427	413	--	--	260	--	--
	T	1427	372	--	--	247	--	--
	R	350	94	--	--	39	--	--
EB	T	637	126	--	--	76	--	--
	R	250	83	--	--	52	--	--
WB	T	928	142	--	--	89	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	42	--	--	20	--	--
	T	1538	42	--	--	19	--	--
	R	450	204	--	--	138	--	--
EB	T	75	408	Yes	--	230	Yes	--
	R	75	407	Yes	--	229	Yes	--
WB	T	503	580	Yes	--	215	--	--
	R	503	546	Yes	--	215	--	--

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
WB	T	437	104	--	--	33	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	324	--	--	214	--	--
	T	562	171	--	--	93	--	--
	R	562	163	--	--	91	--	--
SB	L	150	189	Yes	--	65	--	--
	T	328	403	Yes	--	168	--	--
	R	200	324	Yes	--	184	--	--
EB	L	500	268	--	--	187	--	--
	T	437	234	--	--	174	--	--
	R	300	34	--	--	6	--	--
WB	L	300	111	--	--	67	--	--
	T	1119	267	--	--	183	--	--
	R	300	70	--	--	40	--	--

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	200	95	--	--	35	--	--
	T	1101	219	--	--	154	--	--
	R	1101	187	--	--	119	--	--
SB	L	200	569	Yes	--	170	--	--
	T	498	572	Yes	--	143	--	--
	R	498	448	--	--	84	--	--
	U	200	174	--	--	114	--	--
EB	L	2396	256	--	--	177	--	--
	T	2396	102	--	--	53	--	--
	R	200	37	--	--	12	--	--
WB	L	200	44	--	--	12	--	--
	T	901	172	--	--	86	--	--
	R	901	172	--	--	86	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Baseline With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	R	392	67	--	--	39	--	--
SB	R	403	33	--	--	11	--	--
EB	L	100	31	--	--	6	--	--
	T	370	3	--	--	0	--	--
WB	L	250	94	--	--	48	--	--

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative No Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	T	111	105	95	4	94.8	F	--
	R	76	90	118	10	75.8	E	--
	Subtotal	**188**	**195**	**104**	**--**	**86.0**	**F**	**--**
SB	L	71	65	92	10	159.7	F	--
	T	46	40	87	6	163.4	F	--
	Subtotal	**117**	**105**	**90**	**--**	**161.1**	**F**	**--**
WB	L	98	126	129	10	41.0	D	--
	R	130	124	95	9	16.7	B	--
	Subtotal	**228**	**250**	**110**	**--**	**28.9**	**C**	**--**
	Total	**533**	**550**	**103**	**--**	**74.4**	**E**	**--**

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	L	71	115	162	6	18.2	B	--
	R	27	31	115	5	11.1	B	--
	Subtotal	**98**	**146**	**149**	**--**	**16.7**	**B**	**--**
EB	T	63	64	103	13	6.8	A	--
	R	84	91	108	8	4.4	A	--
	Subtotal	**147**	**155**	**105**	**--**	**5.4**	**A**	**--**
WB	T	201	228	113	12	6.4	A	--
	R	54	54	100	5	3.8	A	--
	Subtotal	**255**	**282**	**111**	**--**	**5.9**	**A**	**--**
	Total	**500**	**583**	**117**	**--**	**8.5**	**A**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative No Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	160	180	113	12	22.0	C	--
	R	71	76	107	12	4.6	A	--
	Subtotal	**231**	**257**	**111**	**--**	**16.8**	**B**	**--**
EB	T	92	142	154	9	5.1	A	--
	R	41	38	93	7	3.3	A	--
	Subtotal	**133**	**180**	**135**	**--**	**4.7**	**A**	**--**
WB	T	95	102	107	9	10.8	B	--
	R	245	247	100	9	7.2	A	--
	Subtotal	**340**	**349**	**102**	**--**	**8.3**	**A**	**--**
	Total	**704**	**785**	**112**	**--**	**10.3**	**B**	**--**

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative No Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	T	2194	1169	--	--	783	--	--
	R	150	1169	Yes	--	783	Yes	--
SB	L	150	913	Yes	--	685	Yes	--
	T	1133	913	--	--	685	--	--
WB	L	1068	419	--	--	293	--	--
	R	1068	221	--	--	144	--	--

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	L	1433	143	--	--	96	--	--
	T	1433	122	--	--	81	--	--
	R	350	74	--	--	40	--	--
EB	T	1068	83	--	--	34	--	--
	R	250	57	--	--	36	--	--
WB	T	1047	105	--	--	53	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative No Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	189	--	--	127	--	--
	T	1532	179	--	--	120	--	--
	R	450	64	--	--	38	--	--
EB	T	1047	88	--	--	39	--	--
	R	1047	70	--	--	27	--	--
WB	T	2173	167	--	--	94	--	--
	R	2173	169	--	--	94	--	--

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative No Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	T	98	89	91	8	69.6	E	--
	R	106	140	132	14	48.7	D	--
	Subtotal	**204**	**229**	**112**	**--**	**56.9**	**E**	**--**
SB	L	111	132	119	8	70.3	E	--
	T	63	56	90	6	74.3	E	--
	Subtotal	**174**	**188**	**108**	**--**	**71.5**	**E**	**--**
WB	L	76	99	130	8	47.9	D	--
	R	68	53	78	8	7.0	A	--
	Subtotal	**144**	**152**	**106**	**--**	**33.6**	**C**	**--**
	Total	**522**	**569**	**109**	**--**	**55.5**	**E**	**--**

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	L	207	227	109	17	18.6	B	--
	R	43	54	126	8	10.1	B	--
	Subtotal	**250**	**280**	**112**	**--**	**16.9**	**B**	**--**
EB	T	71	90	127	7	12.2	B	--
	R	147	182	124	10	10.5	B	--
	Subtotal	**217**	**272**	**125**	**--**	**11.0**	**B**	**--**
WB	T	101	101	100	11	8.5	A	--
	R	65	75	115	6	3.4	A	--
	Subtotal	**166**	**176**	**106**	**--**	**6.3**	**A**	**--**
	Total	**633**	**728**	**115**	**--**	**12.2**	**B**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative No Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	84	72	86	10	23.2	C	--
	R	52	47	90	6	5.9	A	--
	Subtotal	**136**	**119**	**88**	**--**	**16.4**	**B**	**--**
EB	T	239	277	116	19	5.5	A	--
	R	38	37	97	6	6.0	A	--
	Subtotal	**277**	**314**	**113**	**--**	**5.5**	**A**	**--**
WB	T	82	105	128	6	7.3	A	--
	R	166	190	114	10	5.0	A	--
	Subtotal	**247**	**295**	**119**	**--**	**5.8**	**A**	**--**
	Total	**660**	**727**	**110**	**--**	**7.4**	**A**	**--**

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: Delta Shores **HCM:** 2000
Scenario: Cumulative No Project **PHF:** 0.92
TOD: PM **Analysis Period:** 15 Minutes **# of Runs:** 10

Intersection: 9: Consumnes River Blvd & Freeport Blvd **Type:** Signalized

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	T	2194	1084	--	--	612	--	--
	R	150	180	Yes	--	170	Yes	--
SB	L	150	946	Yes	--	552	Yes	--
	T	1133	946	--	--	552	--	--
WB	L	1068	377	--	--	247	--	--
	R	1068	78	--	--	44	--	--

Intersection: 10: Consumnes River Blvd & I-5 SB Ramps **Type:** Signalized

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	L	1433	217	--	--	155	--	--
	T	1433	201	--	--	143	--	--
	R	350	65	--	--	43	--	--
EB	T	1068	304	--	--	101	--	--
	R	250	122	--	--	73	--	--
WB	T	1047	99	--	--	51	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative No Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	94	--	--	61	--	--
	T	1532	88	--	--	59	--	--
	R	450	58	--	--	35	--	--
EB	T	1047	132	--	--	72	--	--
	R	1047	122	--	--	65	--	--
WB	T	2173	109	--	--	58	--	--
	R	2173	109	--	--	58	--	--

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	T	111	102	92	5	118.7	F	--
	R	101	93	92	12	88.9	F	--
	Subtotal	**212**	**195**	**92**	**--**	**104.6**	**F**	**--**
SB	L	92	93	101	7	24.0	C	--
	T	46	42	91	7	26.9	C	--
	Subtotal	**139**	**136**	**98**	**--**	**24.9**	**C**	**--**
WB	L	149	122	82	4	98.6	F	--
	R	136	122	90	13	39.6	D	--
	Subtotal	**285**	**244**	**86**	**--**	**69.0**	**E**	**--**
	Total	**636**	**574**	**90**	**--**	**70.6**	**E**	**--**

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	L	209	211	101	16	21.9	C	--
	R	35	35	100	4	13.2	B	--
	Subtotal	**245**	**246**	**100**	**--**	**20.7**	**C**	**--**
EB	T	120	119	98	12	12.1	B	--
	R	101	93	92	10	5.3	A	--
	Subtotal	**220**	**212**	**96**	**--**	**9.1**	**A**	**--**
WB	T	272	242	89	20	14.5	B	--
	R	101	94	93	12	4.0	A	--
	Subtotal	**372**	**336**	**90**	**--**	**11.6**	**B**	**--**
	Total	**837**	**793**	**95**	**--**	**13.7**	**B**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	168	152	90	6	94.4	F	--
	R	130	133	102	13	13.6	B	--
	Subtotal	**299**	**284**	**95**	**--**	**56.7**	**E**	**--**
EB	T	280	279	99	21	5.5	A	--
	R	49	47	96	9	3.6	A	--
	Subtotal	**329**	**326**	**99**	**--**	**5.2**	**A**	**--**
WB	T	269	249	92	21	28.1	C	--
	R	364	306	84	3	58.0	E	--
	Subtotal	**633**	**555**	**88**	**--**	**44.6**	**D**	**--**
	Total	**1261**	**1165**	**92**	**--**	**36.5**	**D**	**--**

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	R	8	9	113	4	0.7	A	--
	Subtotal	**8**	**9**	**113**	**--**	**0.7**	**A**	**--**
EB	T	391	391	100	26	0.6	A	--
	R	19	19	100	3	0.1	A	--
	Subtotal	**410**	**410**	**100**	**--**	**0.6**	**A**	**--**
WB	T	625	557	89	21	14.2	B	--
	R	11	11	100	3	16.5	C	--
	Subtotal	**636**	**567**	**89**	**--**	**14.3**	**B**	**--**
	Total	**1054**	**986**	**94**	**--**	**8.5**	**A**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	117	111	95	12	41.0	D	--
	T	16	16	100	3	32.3	C	--
	R	11	10	91	2	10.8	B	--
	Subtotal	**144**	**136**	**94**	**--**	**37.9**	**D**	**--**
SB	L	14	11	79	3	87.8	F	--
	T	24	24	100	5	70.5	E	--
	R	114	95	83	11	100.6	F	--
	Subtotal	**152**	**130**	**86**	**--**	**94.0**	**F**	**--**
EB	L	120	114	95	12	60.6	E	--
	T	223	221	99	19	11.3	B	--
	R	49	50	102	7	2.5	A	--
	Subtotal	**391**	**385**	**98**	**--**	**24.7**	**C**	**--**
WB	L	5	7	120	2	85.6	F	--
	T	405	374	92	18	54.4	D	--
	R	5	4	80	3	36.3	D	--
	Subtotal	**416**	**384**	**92**	**--**	**54.7**	**D**	**--**
	Total	**1103**	**1036**	**94**	**--**	**46.3**	**D**	**--**

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	8	9	113	2	56.1	E	--
	T	52	49	92	7	21.4	C	--
	R	3	4	133	2	9.4	A	--
	Subtotal	**63**	**61**	**98**	**--**	**25.6**	**C**	**--**
SB	L	16	17	106	3	39.5	D	--
	T	43	46	107	5	9.4	A	--
	R	11	12	109	3	4.2	A	--
	U	11	12	109	3	38.5	D	--
	Subtotal	**82**	**88**	**107**	**--**	**18.6**	**B**	**--**
EB	L	22	21	95	6	44.9	D	--
	T	3	3	100	2	32.4	C	--
	R	5	5	100	2	2.2	A	--
	Subtotal	**30**	**29**	**97**	**--**	**35.9**	**D**	**--**
WB	L	3	3	100	1	56.4	E	--
	T	8	8	100	3	49.0	D	--
	R	54	54	100	8	17.7	B	--
	Subtotal	**65**	**65**	**100**	**--**	**23.4**	**C**	**--**
	Total	**239**	**243**	**102**	**--**	**23.7**	**C**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	R	33	30	91	7	6.5	A	--
	Subtotal	**33**	**30**	**91**	**--**	**6.5**	**A**	**--**
SB	R	3	3	100	2	7.4	A	--
	Subtotal	**3**	**3**	**100**	**--**	**7.4**	**A**	**--**
EB	L	3	3	100	2	9.2	A	--
	T	188	180	96	16	1.2	A	--
	R	3	3	100	2	0.8	A	--
	Subtotal	**193**	**186**	**96**	**--**	**1.3**	**A**	**--**
WB	L	19	15	79	4	18.0	C	--
	T	283	242	86	16	25.4	D	--
	R	5	5	100	1	6.0	A	--
	Subtotal	**307**	**262**	**85**	**--**	**24.6**	**C**	**--**
	Total	**535**	**481**	**90**	**--**	**14.4**	**B**	**--**

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	T	2154	1370	--	--	950	--	--
	R	200	1370	Yes	--	950	Yes	--
SB	L	165	236	Yes	--	155	--	--
	T	406	236	--	--	155	--	--
WB	L	370	878	Yes	--	573	Yes	--
	R	370	853	Yes	--	391	Yes	--

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	L	1427	249	--	--	171	--	--
	T	1427	236	--	--	160	--	--
	R	350	81	--	--	44	--	--
EB	T	637	129	--	--	67	--	--
	R	250	63	--	--	38	--	--
WB	T	928	278	--	--	141	--	--
	R	175	59	--	--	6	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	421	--	--	298	--	--
	T	1538	420	--	--	297	--	--
	R	450	196	--	--	111	--	--
EB	T	75	135	Yes	--	58	--	--
	R	75	121	Yes	--	56	--	--
WB	T	503	955	Yes	--	548	Yes	--
	R	503	1382	Yes	--	1008	Yes	--

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
EB	T	151	98	--	--	14	--	--
WB	T	437	568	Yes	--	292	--	--
	R	150	160	Yes	--	45	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	183	--	--	122	--	--
	T	562	75	--	--	37	--	--
	R	562	74	--	--	37	--	--
SB	L	150	358	Yes	--	173	Yes	--
	T	328	688	Yes	--	452	Yes	--
	R	200	528	Yes	--	366	Yes	--
EB	L	500	276	--	--	193	--	--
	T	437	192	--	--	102	--	--
WB	L	300	47	--	--	23	--	--
	T	1119	712	--	--	371	--	--
	R	300	143	--	--	25	--	--

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	200	73	--	--	37	--	--
	T	1101	128	--	--	74	--	--
	R	1101	89	--	--	42	--	--
SB	L	200	94	--	--	44	--	--
	T	498	70	--	--	34	--	--
	R	498	30	--	--	9	--	--
	U	200	89	--	--	39	--	--
EB	L	2396	78	--	--	49	--	--
	T	2396	22	--	--	6	--	--
	R	200	21	--	--	8	--	--
WB	L	200	37	--	--	12	--	--
	T	901	229	--	--	116	--	--
	R	901	229	--	--	116	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	R	392	73	--	--	46	--	--
SB	R	403	39	--	--	12	--	--
EB	L	100	31	--	--	8	--	--
WB	L	250	143	--	--	42	--	--
	T	637	475	--	--	213	--	--
	R	637	429	--	--	136	--	--

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	T	111	95	86	5	120.7	F	--
	R	147	130	88	15	96.6	F	--
	Subtotal	**258**	**225**	**87**	**--**	**106.8**	**F**	**--**
SB	L	152	138	91	10	75.4	E	--
	T	65	63	97	7	78.3	E	--
	Subtotal	**217**	**201**	**93**	**--**	**76.3**	**E**	**--**
WB	L	109	105	96	6	57.9	E	--
	R	52	49	94	5	14.0	B	--
	Subtotal	**160**	**154**	**96**	**--**	**44.0**	**D**	**--**
	Total	**636**	**579**	**91**	**--**	**79.5**	**E**	**--**

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	L	459	444	97	13	38.2	D	--
	R	52	51	98	6	22.7	C	--
	Subtotal	**511**	**495**	**97**	**--**	**36.6**	**D**	**--**
EB	T	144	132	92	11	29.3	C	--
	R	174	160	92	15	10.6	B	--
	Subtotal	**318**	**292**	**92**	**--**	**19.1**	**B**	**--**
WB	T	152	147	97	13	34.6	C	--
	R	171	157	91	11	4.8	A	--
	Subtotal	**323**	**304**	**94**	**--**	**19.2**	**B**	**--**
	Total	**1152**	**1090**	**95**	**--**	**27.1**	**C**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	54	52	96	8	35.3	D	--
	R	171	170	99	13	40.4	D	--
	Subtotal	**226**	**221**	**98**	**--**	**39.2**	**D**	**--**
EB	T	571	540	95	17	15.5	B	--
	R	33	31	94	4	12.5	B	--
	Subtotal	**603**	**571**	**95**	**--**	**15.3**	**B**	**--**
WB	T	329	310	94	22	24.0	C	--
	R	345	309	90	4	44.8	D	--
	Subtotal	**674**	**619**	**92**	**--**	**34.4**	**C**	**--**
	Total	**1503**	**1411**	**94**	**--**	**27.4**	**C**	**--**

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	R	52	51	98	4	1.6	A	--
	Subtotal	**52**	**51**	**98**	**--**	**1.6**	**A**	**--**
EB	T	674	639	95	22	1.6	A	--
	R	68	69	101	9	0.9	A	--
	Subtotal	**742**	**708**	**95**	**--**	**1.5**	**A**	**--**
WB	T	622	580	93	22	10.2	B	--
	R	8	9	113	3	11.2	B	--
	Subtotal	**630**	**589**	**93**	**--**	**10.2**	**B**	**--**
	Total	**1424**	**1347**	**95**	**--**	**5.3**	**A**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	209	192	92	13	54.0	D	--
	T	57	55	96	9	33.3	C	--
	R	27	26	96	6	25.2	C	--
	Subtotal	**293**	**273**	**93**	**--**	**47.1**	**D**	**--**
SB	L	27	27	100	3	63.7	E	--
	T	68	69	101	9	52.2	D	--
	R	95	92	97	10	49.0	D	--
	Subtotal	**190**	**188**	**99**	**--**	**52.3**	**D**	**--**
EB	L	147	135	92	6	52.8	D	--
	T	378	370	98	21	23.5	C	--
	R	149	140	94	8	5.2	A	--
	Subtotal	**674**	**644**	**96**	**--**	**25.7**	**C**	**--**
WB	L	33	32	97	6	66.9	E	--
	T	326	314	96	15	73.6	E	--
	R	27	24	89	5	37.7	D	--
	Subtotal	**386**	**370**	**96**	**--**	**70.7**	**E**	**--**
	Total	**1543**	**1475**	**96**	**--**	**44.3**	**D**	**--**

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	14	13	93	4	65.5	E	--
	T	111	110	99	9	37.1	D	--
	R	3	2	67	1	15.6	B	--
	Subtotal	**128**	**125**	**98**	**--**	**39.7**	**D**	**--**
SB	L	46	46	100	9	39.3	D	--
	T	125	119	95	8	20.0	C	--
	R	54	53	98	5	6.5	A	--
	U	46	46	100	5	42.7	D	--
	Subtotal	**272**	**264**	**97**	**--**	**24.6**	**C**	**--**
EB	L	111	103	93	12	43.7	D	--
	T	16	17	106	5	23.9	C	--
	R	14	13	93	3	5.3	A	--
	Subtotal	**141**	**133**	**94**	**--**	**37.2**	**D**	**--**
WB	L	3	2	67	2	47.6	D	--
	T	16	16	100	5	46.3	D	--
	R	27	29	107	5	26.9	C	--
	Subtotal	**46**	**47**	**102**	**--**	**34.5**	**C**	**--**
	Total	**587**	**569**	**97**	**--**	**31.7**	**C**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	R	24	26	108	7	11.7	B	--
	Subtotal	**24**	**26**	**108**	**--**	**11.7**	**B**	**--**
SB	R	3	4	133	2	3.5	A	--
	Subtotal	**3**	**4**	**133**	**--**	**3.5**	**A**	**--**
EB	L	3	3	100	2	5.8	A	--
	T	293	264	90	19	1.6	A	--
	R	3	2	67	1	1.2	A	--
	Subtotal	**299**	**269**	**90**	**--**	**1.6**	**A**	**--**
WB	L	33	27	82	5	21.3	C	--
	T	158	155	97	9	6.6	A	--
	R	14	14	100	4	2.9	A	--
	Subtotal	**204**	**195**	**96**	**--**	**8.4**	**A**	**--**
	Total	**530**	**494**	**93**	**--**	**4.8**	**A**	**--**

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	T	2154	1774	--	--	1118	--	--
	R	200	1774	Yes	--	1118	Yes	--
SB	L	165	896	Yes	--	675	Yes	--
	T	406	896	Yes	--	675	Yes	--
WB	L	370	436	Yes	--	303	--	--
	R	370	197	--	--	73	--	--

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	L	1427	715	--	--	505	--	--
	T	1427	705	--	--	498	--	--
	R	350	349	--	--	112	--	--
EB	T	637	184	--	--	121	--	--
	R	250	141	--	--	82	--	--
WB	T	928	329	--	--	207	--	--
	R	175	79	--	--	14	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	127	--	--	73	--	--
	T	1538	127	--	--	73	--	--
	R	450	276	--	--	196	--	--
EB	T	75	444	Yes	--	266	Yes	--
	R	75	443	Yes	--	265	Yes	--
WB	T	503	1037	Yes	--	490	--	--
	R	503	1283	Yes	--	762	Yes	--

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	R	758	46	--	--	7	--	--
WB	T	437	472	Yes	--	185	--	--
	R	150	124	--	--	20	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	313	--	--	218	--	--
	T	562	173	--	--	98	--	--
	R	562	170	--	--	98	--	--
SB	L	150	233	Yes	--	91	--	--
	T	328	467	Yes	--	251	--	--
	R	200	352	Yes	--	236	Yes	--
EB	L	500	286	--	--	210	--	--
	T	437	315	--	--	237	--	--
	R	300	49	--	--	9	--	--
WB	L	300	192	--	--	85	--	--
	T	1119	689	--	--	502	--	--
	R	300	302	Yes	--	124	--	--

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	200	130	--	--	56	--	--
	T	1101	242	--	--	166	--	--
	R	1101	207	--	--	127	--	--
SB	L	200	581	Yes	--	203	Yes	--
	T	498	601	Yes	--	175	--	--
	R	498	432	--	--	106	--	--
	U	200	192	--	--	128	--	--
EB	L	2396	226	--	--	155	--	--
	T	2396	79	--	--	33	--	--
	R	200	37	--	--	16	--	--
WB	L	200	28	--	--	9	--	--
	T	901	193	--	--	109	--	--
	R	901	193	--	--	109	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	R	392	92	--	--	48	--	--
SB	R	403	33	--	--	14	--	--
EB	L	100	32	--	--	7	--	--
WB	L	250	125	--	--	57	--	--
	T	637	67	--	--	16	--	--
	R	637	9	--	--	0	--	--

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	T	111	98	88	8	55.8	E	--
	R	101	102	101	8	25.1	C	--
	Subtotal	**212**	**200**	**94**	**--**	**40.1**	**D**	**--**
SB	L	92	93	101	9	39.4	D	--
	T	46	46	100	8	40.9	D	--
	Subtotal	**139**	**139**	**100**	**--**	**39.9**	**D**	**--**
WB	L	149	145	97	10	46.0	D	--
	R	136	137	101	13	22.8	C	--
	Subtotal	**285**	**282**	**99**	**--**	**34.7**	**C**	**--**
	Total	**636**	**620**	**97**	**--**	**37.6**	**D**	**--**

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	L	209	209	100	19	28.0	C	--
	R	35	35	100	7	16.0	B	--
	Subtotal	**245**	**245**	**100**	**--**	**26.3**	**C**	**--**
EB	T	120	116	97	9	17.2	B	--
	R	101	104	103	9	6.4	A	--
	Subtotal	**220**	**220**	**100**	**--**	**12.1**	**B**	**--**
WB	T	272	263	96	20	28.6	C	--
	R	101	90	89	12	13.1	B	--
	Subtotal	**372**	**352**	**95**	**--**	**24.6**	**C**	**--**
	Total	**837**	**817**	**98**	**--**	**21.8**	**C**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	168	167	99	13	36.1	D	--
	R	130	125	96	15	13.0	B	--
	Subtotal	**299**	**292**	**98**	**--**	**26.2**	**C**	**--**
EB	T	280	277	99	16	13.6	B	--
	R	49	48	98	5	12.7	B	--
	Subtotal	**329**	**325**	**99**	**--**	**13.4**	**B**	**--**
WB	T	204	186	91	11	15.5	B	--
	R	429	365	85	11	12.6	B	--
	Subtotal	**633**	**551**	**87**	**--**	**13.6**	**B**	**--**
	Total	**1261**	**1168**	**93**	**--**	**16.7**	**B**	**--**

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	R	8	8	100	4	1.0	A	--
	Subtotal	**8**	**8**	**100**	**--**	**1.0**	**A**	**--**
EB	T	391	380	97	20	2.4	A	--
	R	19	18	95	4	1.7	A	--
	Subtotal	**410**	**399**	**97**	**--**	**2.4**	**A**	**--**
WB	T	625	548	88	15	6.1	A	--
	R	11	10	91	2	5.3	A	--
	Subtotal	**636**	**559**	**88**	**--**	**6.1**	**A**	**--**
	Total	**1054**	**966**	**92**	**--**	**4.5**	**A**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	117	104	89	6	38.7	D	--
	T	16	20	125	4	31.4	C	--
	R	11	11	100	2	12.4	B	--
	Subtotal	**144**	**135**	**94**	**--**	**35.5**	**D**	**--**
SB	L	14	12	86	4	83.5	F	--
	T	24	24	100	4	80.3	F	--
	R	114	102	89	4	110.0	F	--
	Subtotal	**152**	**138**	**91**	**--**	**102.5**	**F**	**--**
EB	L	120	110	92	6	48.5	D	--
	T	223	220	99	17	11.7	B	--
	R	49	50	102	9	2.7	A	--
	Subtotal	**391**	**380**	**97**	**--**	**21.2**	**C**	**--**
WB	L	5	5	100	2	77.4	E	--
	T	405	355	88	13	105.9	F	--
	R	5	5	80	3	75.7	E	--
	Subtotal	**416**	**365**	**88**	**--**	**105.1**	**F**	**--**
	Total	**1103**	**1018**	**92**	**--**	**64.2**	**E**	**--**

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	8	8	100	2	55.7	E	--
	T	52	51	98	4	18.3	B	--
	R	3	3	100	1	3.3	A	--
	Subtotal	**63**	**62**	**100**	**--**	**22.5**	**C**	**--**
SB	L	16	15	94	4	47.3	D	--
	T	43	48	112	7	8.2	A	--
	R	11	12	109	3	4.3	A	--
	U	11	9	82	3	49.5	D	--
	Subtotal	**82**	**84**	**102**	**--**	**19.0**	**B**	**--**
EB	L	22	20	91	3	48.7	D	--
	T	3	3	100	2	38.6	D	--
	R	5	5	100	2	2.5	A	--
	Subtotal	**30**	**28**	**93**	**--**	**39.4**	**D**	**--**
WB	L	3	4	133	2	60.6	E	--
	T	8	9	113	3	36.7	D	--
	R	54	51	94	6	14.8	B	--
	Subtotal	**65**	**63**	**97**	**--**	**20.5**	**C**	**--**
	Total	**239**	**238**	**100**	**--**	**22.7**	**C**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	R	33	32	97	5	8.6	A	--
	Subtotal	**33**	**32**	**97**	**--**	**8.6**	**A**	**--**
SB	R	3	3	100	1	12.0	B	--
	Subtotal	**3**	**3**	**100**	**--**	**12.0**	**B**	**--**
EB	L	3	3	100	1	12.5	B	--
	T	188	190	101	10	1.3	A	--
	R	3	3	100	2	1.1	A	--
	Subtotal	**193**	**195**	**101**	**--**	**1.5**	**A**	**--**
WB	L	19	18	95	4	13.9	B	--
	T	283	276	98	13	8.3	A	--
	R	5	6	120	2	4.0	A	--
	Subtotal	**307**	**299**	**97**	**--**	**8.6**	**A**	**--**
	Total	**535**	**529**	**99**	**--**	**6.0**	**A**	**--**

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	T	2154	644	--	--	357	--	--
	R	200	229	Yes	--	151	--	--
SB	L	165	334	Yes	--	218	Yes	--
	T	406	334	--	--	218	--	--
WB	L	370	571	Yes	--	398	Yes	--
	R	370	547	Yes	--	275	--	--

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	L	1427	315	--	--	227	--	--
	T	1427	285	--	--	204	--	--
	R	350	96	--	--	57	--	--
EB	T	637	187	--	--	91	--	--
	R	250	85	--	--	45	--	--
WB	T	1048	508	--	--	309	--	--
	R	175	182	Yes	--	43	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	279	--	--	192	--	--
	T	1535	259	--	--	175	--	--
	R	450	148	--	--	96	--	--
EB	T	1048	364	--	--	181	--	--
	R	1048	360	--	--	179	--	--
WB	T	710	330	--	--	119	--	--
	R	710	200	--	--	74	--	--

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
WB	T	437	134	--	--	30	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumulative With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *AM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	185	--	--	114	--	--
	T	562	82	--	--	43	--	--
	R	562	82	--	--	43	--	--
SB	L	150	425	Yes	--	237	Yes	--
	T	328	758	Yes	--	547	Yes	--
	R	200	599	Yes	--	434	Yes	--
EB	L	500	240	--	--	173	--	--
	T	437	178	--	--	104	--	--
WB	L	300	44	--	--	18	--	--
	T	1119	1045	--	--	793	--	--
	R	300	181	--	--	40	--	--

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	200	76	--	--	36	--	--
	T	1101	111	--	--	63	--	--
	R	1101	73	--	--	31	--	--
SB	L	200	85	--	--	45	--	--
	T	498	56	--	--	25	--	--
	R	498	33	--	--	8	--	--
	U	200	72	--	--	41	--	--
EB	L	2396	85	--	--	48	--	--
	T	2396	22	--	--	6	--	--
	R	200	21	--	--	8	--	--
WB	L	200	37	--	--	17	--	--
	T	901	216	--	--	98	--	--
	R	901	216	--	--	98	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project:	*Delta Shores*			***HCM:***	*2000*
Scenario:	*Cumulative With Project - Mitigated 2*			***PHF:***	*0.92*
TOD:	*AM*	***Analysis Period:***	*15 Minutes*	***# of Runs:***	*10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	R	392	78	--	--	49	--	--
SB	R	403	32	--	--	10	--	--
EB	L	100	32	--	--	8	--	--
	T	370	8	--	--	1	--	--
	R	370	8	--	--	1	--	--
WB	L	250	69	--	--	28	--	--
	T	637	170	--	--	72	--	--
	R	637	57	--	--	9	--	--

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumualtive With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *9: Consumnes River Blvd & Freeport Blvd* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	T	111	106	95	12	62.1	E	--
	R	147	138	94	14	39.3	D	--
	Subtotal	**258**	**244**	**95**	**--**	**49.2**	**D**	**--**
SB	L	152	138	91	10	85.0	F	--
	T	65	65	100	6	89.0	F	--
	Subtotal	**217**	**203**	**94**	**--**	**86.3**	**F**	**--**
WB	L	109	96	88	8	55.2	E	--
	R	52	45	87	5	13.2	B	--
	Subtotal	**160**	**142**	**89**	**--**	**41.8**	**D**	**--**
	Total	**636**	**589**	**93**	**--**	**60.2**	**E**	**--**

Intersection: *10: Consumnes River Blvd & I-5 SB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	L	459	453	99	19	27.6	C	--
	R	52	45	87	4	17.0	B	--
	Subtotal	**511**	**498**	**97**	**--**	**26.6**	**C**	**--**
EB	T	144	131	91	20	36.5	D	--
	R	174	160	92	14	11.9	B	--
	Subtotal	**318**	**291**	**92**	**--**	**23.0**	**C**	**--**
WB	T	152	139	91	15	49.9	D	--
	R	171	154	90	10	7.7	A	--
	Subtotal	**323**	**293**	**91**	**--**	**27.7**	**C**	**--**
	Total	**1152**	**1082**	**94**	**--**	**25.9**	**C**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumualtive With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	54	51	93	9	35.3	D	--
	R	171	169	99	10	53.5	D	--
	Subtotal	**226**	**220**	**97**	**--**	**49.3**	**D**	**--**
EB	T	571	555	97	19	20.7	C	--
	R	33	29	88	7	23.6	C	--
	Subtotal	**603**	**584**	**97**	**--**	**20.8**	**C**	**--**
WB	T	269	246	91	11	14.6	B	--
	R	405	366	90	9	15.0	B	--
	Subtotal	**674**	**612**	**91**	**--**	**14.8**	**B**	**--**
	Total	**1503**	**1416**	**94**	**--**	**22.6**	**C**	**--**

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
SB	R	52	50	96	7	1.8	A	--
	Subtotal	**52**	**50**	**96**	**--**	**1.8**	**A**	**--**
EB	T	674	656	97	21	4.8	A	--
	R	68	64	94	9	4.6	A	--
	Subtotal	**742**	**720**	**97**	**--**	**4.8**	**A**	**--**
WB	T	622	566	91	13	7.6	A	--
	R	8	7	88	3	5.5	A	--
	Subtotal	**630**	**573**	**91**	**--**	**7.5**	**A**	**--**
	Total	**1424**	**1344**	**94**	**--**	**5.9**	**A**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumualtive With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	209	193	92	15	63.3	E	--
	T	57	55	95	7	34.6	C	--
	R	27	24	89	5	23.5	C	--
	Subtotal	**293**	**271**	**92**	**--**	**54.1**	**D**	**--**
SB	L	27	27	100	4	67.0	E	--
	T	68	64	94	8	56.7	E	--
	R	95	91	95	11	50.9	D	--
	Subtotal	**190**	**182**	**96**	**--**	**55.4**	**E**	**--**
EB	L	147	134	91	12	53.1	D	--
	T	378	374	99	19	23.1	C	--
	R	149	150	101	11	5.4	A	--
	Subtotal	**674**	**658**	**98**	**--**	**25.2**	**C**	**--**
WB	L	33	29	88	5	70.2	E	--
	T	326	292	90	9	111.5	F	--
	R	27	25	93	4	70.0	E	--
	Subtotal	**386**	**346**	**90**	**--**	**105.1**	**F**	**--**
	Total	**1543**	**1457**	**94**	**--**	**53.3**	**D**	**--**

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	L	14	14	100	4	61.3	E	--
	T	111	104	94	9	36.0	D	--
	R	3	3	100	2	21.0	C	--
	Subtotal	**128**	**120**	**94**	**--**	**38.6**	**D**	**--**
SB	L	46	42	91	7	42.1	D	--
	T	125	123	98	10	20.0	B	--
	R	54	52	96	7	6.9	A	--
	U	46	47	102	5	45.3	D	--
	Subtotal	**272**	**264**	**97**	**--**	**25.5**	**C**	**--**
EB	L	111	106	95	9	44.5	D	--
	T	16	20	125	5	27.6	C	--
	R	14	13	93	2	4.1	A	--
	Subtotal	**141**	**139**	**99**	**--**	**38.3**	**D**	**--**
WB	L	3	1	33	1	55.9	E	--
	T	16	17	100	4	53.6	D	--
	R	27	29	107	4	26.3	C	--
	Subtotal	**46**	**47**	**102**	**--**	**36.8**	**D**	**--**
	Total	**587**	**570**	**97**	**--**	**32.3**	**C**	**--**

SIMTRAFFIC LEVEL OF SERVICE REPORT
Including Upstream Delays

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumualtive With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Demand Volume	Volume Served			Delay/Veh (sec)		
			Avg	%	Std Dev	Avg	LOS	Std Dev
NB	R	24	23	96	6	12.4	B	--
	Subtotal	**24**	**23**	**96**	**--**	**12.4**	**B**	**--**
SB	R	3	2	67	1	3.7	A	--
	Subtotal	**3**	**2**	**67**	**--**	**3.7**	**A**	**--**
EB	L	3	3	100	2	6.1	A	--
	T	293	269	92	21	1.6	A	--
	R	3	3	100	2	1.1	A	--
	Subtotal	**299**	**275**	**92**	**--**	**1.6**	**A**	**--**
WB	L	33	27	82	7	23.4	C	--
	T	158	144	91	9	5.6	A	--
	R	14	13	93	5	3.0	A	--
	Subtotal	**204**	**184**	**90**	**--**	**8.0**	**A**	**--**
	Total	**530**	**484**	**91**	**--**	**4.6**	**A**	**--**

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: Delta Shores **HCM:** 2000
Scenario: Cumualtive With Project - Mitigated 2 **PHF:** 0.92
TOD: PM **Analysis Period:** 15 Minutes **# of Runs:** 10

Intersection: 9: Consumnes River Blvd & Freeport Blvd **Type:** Signalized

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	T	2154	940	--	--	562	--	--
	R	200	240	Yes	--	199	--	--
SB	L	165	1027	Yes	--	770	Yes	--
	T	406	1027	Yes	--	770	Yes	--
WB	L	370	379	Yes	--	259	--	--
	R	370	131	--	--	58	--	--

Intersection: 10: Consumnes River Blvd & I-5 SB Ramps **Type:** Signalized

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
SB	L	1427	586	--	--	384	--	--
	T	1427	577	--	--	365	--	--
	R	350	142	--	--	57	--	--
EB	T	637	279	--	--	158	--	--
	R	250	192	--	--	96	--	--
WB	T	1048	333	--	--	238	--	--
	R	175	158	--	--	40	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumualtive With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *11: Consumnes River Blvd & I-5 NB Ramps* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	105	--	--	63	--	--
	T	1539	98	--	--	52	--	--
	R	450	337	--	--	245	--	--
EB	T	1048	674	--	--	423	--	--
	R	1048	672	--	--	423	--	--
WB	T	711	486	--	--	192	--	--
	R	711	388	--	--	135	--	--

Intersection: *12: Consumnes River Blvd & Driveway* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
WB	T	437	175	--	--	70	--	--
	R	150	18	--	--	3	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project: *Delta Shores* ***HCM:*** *2000*
Scenario: *Cumualtive With Project - Mitigated 2* ***PHF:*** *0.92*
TOD: *PM* ***Analysis Period:*** *15 Minutes* ***# of Runs:*** *10*

Intersection: *13: Consumnes River Blvd & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	450	385	--	--	251	--	--
	T	562	168	--	--	97	--	--
	R	562	167	--	--	95	--	--
SB	L	150	253	Yes	--	106	--	--
	T	328	498	Yes	--	273	--	--
	R	200	390	Yes	--	255	Yes	--
EB	L	500	277	--	--	210	--	--
	T	437	334	--	--	237	--	--
	R	300	55	--	--	8	--	--
WB	L	300	195	--	--	68	--	--
	T	1119	975	--	--	658	--	--
	R	300	300	Yes	--	121	--	--

Intersection: *19: Driveway & Delta Shores Circle* ***Type:*** *Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	L	200	99	--	--	54	--	--
	T	1101	233	--	--	157	--	--
	R	1101	193	--	--	120	--	--
SB	L	200	666	Yes	--	182	--	--
	T	498	669	Yes	--	158	--	--
	R	498	512	Yes	--	82	--	--
	U	200	201	Yes	--	131	--	--
EB	L	2396	227	--	--	167	--	--
	T	2396	94	--	--	41	--	--
	R	200	37	--	--	15	--	--
WB	L	200	26	--	--	4	--	--
	T	901	229	--	--	107	--	--
	R	901	229	--	--	107	--	--

SIMTRAFFIC QUEUING REPORT
Including Upstream Queues

Project:	*Delta Shores*			***HCM:***	*2000*
Scenario:	*Cumualtive With Project - Mitigated 2*			***PHF:***	*0.92*
TOD:	*PM*	***Analysis Period:***	*15 Minutes*	***# of Runs:***	*10*

Intersection: *35: Consumnes River Blvd & West Project Access* ***Type:*** *Un-Signalized*

Approach	Movement	Storage Length	Maximum Queue (ft)			Average Queue (ft)		
			Avg	> Storage	Std Dev	Avg	> Storage	Std Dev
NB	R	392	78	--	--	43	--	--
SB	R	403	35	--	--	10	--	--
EB	L	100	24	--	--	5	--	--
	T	370	23	--	--	3	--	--
	R	370	23	--	--	3	--	--
WB	L	250	111	--	--	56	--	--
	T	637	25	--	--	5	--	--
	R	637	2	--	--	0	--	--

CITY OF SACRAMENTO

All Traffic Data
(916) 771-8700

MANORSIDE DRIVE SOUTH OF MEADOWVIEW ROAD

Site Code : 000000003000
Start Date: 01/31/2007
File I.D. : MANOR-2

Direction 1

Page : 1

Begin	<------ NB ------>				<------ SB ------>				<------ Combined ------>				Wednesday
Time	A.M.		P.M.		A.M.		P.M.		A.M.		P.M.		
12:00 01/31	3		5		2		19		5		24		
12:15	1		9		0		28		1		27		
12:30	2		11		2		18		4		29		
12:45	5	11	11	36	3	7	16	71	8	18	27	107	
01:00	0		15		3		17		3		32		
01:15	0		12		5		15		5		27		
01:30	3		21		0		8		3		29		
01:45	3	6	9	57	4	12	21	61	6	17	30	118	
02:00	1		23		2		28		3		51		
02:15	0		17		1		21		1		38		
02:30	1		16		3		22		4		38		
02:45	0	2	15	71	0	6	31	102	0	8	46	173	
03:00	2		18		2		18		4		36		
03:15	0		12		0		31		0		43		
03:30	7		13		2		34		9		47		
03:45	2	11	29	72	0	4	39	122	2	15	68	194	
04:00	2		12		3		31		5		43		
04:15	2		13		1		24		3		37		
04:30	2		7		2		20		4		27		
04:45	3	9	16	48	0	6	24	99	3	15	40	147	
05:00	5		18		2		30		7		48		
05:15	11		19		5		33		16		52		
05:30	9		19		1		28		10		47		
05:45	10	35	14	70	3	11	33	124	13	46	47	194	
06:00	15		15		5		32		20		47		
06:15	14		18		0		42		14		60		
06:30	21		15		6		38		27		53		
06:45	11	61	20	68	5	16	27	130	16	77	47	207	
07:00	27		19		6		19		33		38		
07:15	30		10		8		31		38		41		
07:30	30		11		16		18		46		29		
07:45	24	111	9	49	19	49	21	89	43	160	30	138	
08:00	22		6		22		19		44		25		
08:15	17		15		6		18		23		33		
08:30	19		8		11		24		30		32		
08:45	14	72	8	37	11	50	10	71	25	122	18	108	
09:00	17		7		16		13		33		20		
09:15	12		7		14		15		26		22		
09:30	12		4		20		13		32		17		
09:45	6	47	7	25	7	57	11	52	13	104	18	77	
10:00	9		8		8		12		17		20		
10:15	9		8		9		25		18		33		
10:30	4		9		13		12		17		21		
10:45	20	42	4	29	18	48	8	57	38	90	12	86	
11:00	11		1		14		15		25		16		
11:15	17		3		19		10		36		13		
11:30	24		2		29		5		53		7		
11:45	13	65	2	8	11	73	5	35	24	138	7	43	
Totals	471		570		339		1022		810		1592		
Day Totals		1041				1361				2402			
Split %	58.1%		35.8%		41.8%		64.2%						
Peak Hour	07:00		03:00		10:45		05:45		07:15		05:45		
Volume	111		72		80		145		171		207		
P.H.F.	.92		.62		.68		.86		.92		.86		

CITY OF SACRAMENTO

All Traffic Data
(916) 771-8700

Site Code : 00000000000
Start Date: 01/31/2007
File I.D. : FREE-V
Page : 1

FREEPORT BLVD. BETWEEN MEADOWVIEW ROAD
AND STONECREST AVENUE

Direction 1

Begin	<------ NB ------>		<------ SB ------>		<------Combined------>		Wednesday
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00 01/31	24	38	4	41	28	79	
12:15	2	41	0	47	2	88	
12:30	5	51	2	28	7	79	
12:45	0 31	44 174	5 11	45 161	5 42	89 335	
01:00	1	38	3	52	4	90	
01:15	0	46	4	41	4	87	
01:30	3	41	3	35	6	76	
01:45	7 11	34 159	2 12	44 172	9 23	78 331	
02:00	1	49	1	45	2	94	
02:15	1	63	0	36	1	99	
02:30	0	52	1	54	1	106	
02:45	2 4	59 223	4 6	44 179	6 10	103 402	
03:00	1	60	1	45	2	105	
03:15	0	60	2	47	2	107	
03:30	2	75	1	37	3	112	
03:45	3 6	66 261	1 5	59 188	4 11	125 449	
04:00	0	59	2	58	2	117	
04:15	1	59	1	67	2	126	
04:30	2	58	1	61	3	119	
04:45	2 5	55 231	4 8	50 236	6 13	105 467	
05:00	5	84	6	45	11	129	
05:15	7	81	9	50	16	131	
05:30	19	85	7	50	26	135	
05:45	14 45	64 314	16 38	52 197	30 83	116 511	
06:00	16	57	19	37	35	94	
06:15	18	46	34	33	52	79	
06:30	25	31	28	23	53	54	
06:45	31 90	15 149	46 127	39 132	77 217	54 281	
07:00	35	18	49	29	84	47	
07:15	65	22	41	32	106	54	
07:30	59	21	65	20	124	41	
07:45	67 226	17 78	58 213	27 108	125 439	44 186	
08:00	54	25	61	23	115	48	
08:15	47	14	56	33	103	47	
08:30	50	12	42	16	92	28	
08:45	41 192	13 64	34 193	17 79	75 385	30 143	
09:00	45	14	21	18	66	32	
09:15	29	14	44	16	73	30	
09:30	39	14	28	16	67	30	
09:45	30 143	7 49	36 129	12 62	66 272	19 111	
10:00	34	6	36	13	70	19	
10:15	29	8	30	8	59	16	
10:30	31	6	43	5	74	11	
10:45	44 138	3 23	38 147	4 30	82 285	7 53	
11:00	37	4	36	7	73	11	
11:15	43	6	28	5	71	11	
11:30	41	4	48	9	89	13	
11:45	44 165	2 16	55 167	4 25	99 332	6 41	
Totals	1056	1741	1056	1569	2112	3310	
Day Totals	2797		2625		5422		
Split %	50.0%	52.6%	50.0%	47.4%			
Peak Hour	07:15	05:00	07:30	03:45	07:15	05:00	
Volume	245	314	240	245	470	511	
P.H.F.	.91	.92	.92	.91	.94	.94	

CITY OF SACRAMENTO

All Traffic Data
(916) 771-8700

24TH STREET SOUTH OF MEADOWVIEW ROAD

Site Code : 000000000000
Start Date: 01/31/2007
File I.D. : 24TH8T-V
Page : 1

Direction)

Begin	<------ NB ------>		<------ SB ------>		<------ Combined ------>		Wednesday
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00 01/31	12	56	7	50	19	106	
12:15	2	61	13	55	15	116	
12:30	3	64	7	40	10	104	
12:45	7 24	55 236	9 36	44 189	16 60	99 425	
01:00	6	56	9	59	15	115	
01:15	3	52	8	47	11	99	
01:30	4	38	3	52	7	90	
01:45	1 14	57 203	7 27	83 241	8 41	140 444	
02:00	5	105	7	80	12	185	
02:15	2	58	3	64	5	122	
02:30	6	81	4	62	10	143	
02:45	6 19	72 316	2 16	53 265	8 35	135 585	
03:00	2	76	5	56	7	132	
03:15	2	59	4	79	6	138	
03:30	3	68	2	92	5	160	
03:45	3 10	65 268	1 12	83 310	4 22	148 578	
04:00	10	71	4	68	14	139	
04:15	9	60	3	75	12	135	
04:30	13	85	1	81	14	166	
04:45	7 39	77 293	2 10	75 299	9 49	152 592	
05:00	16	68	5	96	21	164	
05:15	17	82	6	74	22	156	
05:30	34	74	9	88	43	162	
05:45	31 98	56 280	6 25	90 348	37 123	146 628	
06:00	34	92	9	110	43	202	
06:15	27	67	6	81	33	148	
06:30	49	61	16	77	65	138	
06:45	55 165	48 268	21 52	42 310	76 217	90 578	
07:00	68	62	32	55	100	117	
07:15	77	49	39	60	116	109	
07:30	120	50	91	69	211	119	
07:45	155 420	52 213	108 270	47 231	263 690	99 444	
08:00	91	40	50	54	141	94	
08:15	52	42	40	42	92	84	
08:30	48	37	23	39	71	76	
08:45	60 251	32 151	51 164	44 179	111 415	76 330	
09:00	46	29	34	47	80	76	
09:15	43	36	40	32	83	68	
09:30	44	21	39	37	83	58	
09:45	52 185	27 113	43 156	35 151	95 341	62 264	
10:00	36	20	29	28	65	48	
10:15	36	18	34	24	70	42	
10:30	37	30	44	25	81	55	
10:45	37 146	18 86	36 143	21 98	73 289	39 184	
11:00	48	10	32	21	80	31	
11:15	59	16	60	19	119	35	
11:30	48	8	40	13	88	21	
11:45	44 199	11 45	46 178	10 63	90 377	21 108	
Totals	1570	2472	1089	2688	2659	5160	
Day Totals	4042		3777		7819		
Split %	59.0%	47.9%	40.9%	52.0%			
Peak Hour	07:15	02:00	07:30	05:30	07:15	05:15	
Volume	443	316	289	369	731	666	
P.H.F.	.71	.75	.66	.83	.69	.82	

CITY OF SACRAMENTO

All Traffic Data
(916) 771-8700

DETROIT BLVD. SOUTH OF MEADOWVIEW ROAD

Site Code : 00000000000
Start Date: 01/31/2007
File I.D : DETROIT
Page : 1

Direction 1

Begin	<------ SB		------ >< ------ NB		------><------ Combined		------> Wednesday	
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		
12:00 01/31	7	27	3	27	10	54		
12:15	8	32	2	23	10	55		
12:30	5	33	1	28	6	61		
12:45	5 25	38 130	6 12	30 108	11 37	68 238		
01:00	7	32	1	33	8	65		
01:15	6	48	3	35	9	83		
01:30	7	42	4	44	11	86		
01:45	6 26	53 175	1 9	45 157	7 35	98 332		
02:00	3	52	4	51	7	103		
02:15	3	43	5	40	8	83		
02:30	6	49	2	49	8	98		
02:45	5 17	45 189	0 11	53 193	5 28	98 382		
03:00	3	39	4	53	7	92		
03:15	5	65	5	40	10	105		
03:30	5	75	4	35	9	110		
03:45	5 18	56 235	5 18	41 169	10 36	97 404		
04:00	6	63	5	49	11	112		
04:15	5	60	19	55	24	115		
04:30	1	69	8	49	9	118		
04:45	5 17	63 255	6 38	45 198	11 55	108 453		
05:00	5	68	15	41	20	109		
05:15	5	51	19	50	24	101		
05:30	1	67	32	51	33	118		
05:45	11 22	61 247	27 93	43 185	38 115	104 432		
06:00	12	56	28	53	40	109		
06:15	7	58	31	41	38	99		
06:30	8	50	26	30	34	80		
06:45	13 40	34 198	42 127	27 151	55 167	61 349		
07:00	21	50	32	34	53	84		
07:15	22	41	51	30	73	71		
07:30	48	40	95	25	143	65		
07:45	55 146	37 168	77 255	37 126	132 401	74 294		
08:00	50	42	53	20	103	62		
08:15	20	38	53	32	73	70		
08:30	22	30	46	15	68	45		
08:45	31 123	26 136	41 193	19 86	72 316	45 222		
09:00	17	31	43	23	60	54		
09:15	32	26	53	23	85	49		
09:30	31	23	36	19	67	42		
09:45	23 103	21 101	26 158	13 78	49 261	34 179		
10:00	25	20	18	8	43	28		
10:15	17	24	26	26	43	50		
10:30	15	22	28	16	43	38		
10:45	26 83	12 78	24 96	24 64	50 179	26 142		
11:00	15	18	25	8	40	26		
11:15	29	13	17	3	46	16		
11:30	38	12	37	12	75	24		
11:45	28 110	12 55	32 111	8 31	60 221	20 86		
Totals	730	1967	1121	1546	1851	3513		
Day Totals	2697		2667		5364			
Split %	39.4%	55.9%	60.6%	44.0%				
Peak Hour	07:15	04:15	07:30	04:00	07:15	04:00		
Volume	175	260	278	190	451	453		
P.H.F.	.79	.96	.73	.9	.78	.95		

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File Name : COSUMNES-FRANKLIN-F
Site Code : 00000000
Start Date : 2/7/2007
Page No : 1

Groups Printed- Unshifted

	FRANKLIN BLVD. Southbound				COSUMNES RIVER BLVD. Westbound				FRANKLIN BLVD. Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	0	70	34	104	80	0	41	121	84	296	0	380	0	0	0	0	605
07:15	0	140	59	199	105	0	42	147	59	353	0	412	0	0	0	0	758
07:30	0	224	103	327	104	0	60	164	72	353	0	425	0	0	0	0	916
07:45	0	224	117	341	89	0	57	146	70	406	0	476	0	0	0	0	963
Total	0	658	313	971	378	0	200	578	285	1408	0	1693	0	0	0	0	3242
08:00	0	103	64	167	94	0	55	149	51	313	0	364	0	0	0	0	680
08:15	0	106	41	147	96	0	58	154	121	383	0	504	0	0	0	0	805
08:30	0	79	48	127	67	0	49	116	86	223	0	309	0	0	0	0	552
08:45	0	79	50	129	71	0	49	120	74	183	0	257	0	0	0	0	506
Total	0	367	203	570	328	0	211	539	332	1102	0	1434	0	0	0	0	2543
*** BREAK ***																	
16:00	0	244	73	317	108	0	95	203	63	172	0	235	0	0	0	0	755
16:15	0	228	84	312	75	0	82	157	65	147	0	212	0	0	0	0	681
16:30	0	237	104	341	73	0	100	173	73	149	0	222	0	0	0	0	736
16:45	0	297	73	370	82	0	80	162	48	191	0	239	0	0	0	0	771
Total	0	1006	334	1340	338	0	357	695	249	659	0	908	0	0	0	0	2943
17:00	0	278	101	379	90	0	106	196	56	179	0	235	0	0	0	0	810
17:15	0	323	97	420	69	0	93	162	67	164	0	231	0	0	0	0	813
17:30	0	270	90	360	66	0	148	214	70	186	0	256	0	0	0	0	830
17:45	0	317	95	412	83	0	120	203	88	167	0	255	0	0	0	0	870
Total	0	1188	383	1571	308	0	467	775	281	696	0	977	0	0	0	0	3323
Grand Total	0	3219	1233	4452	1352	0	1235	2587	1147	3865	0	5012	0	0	0	0	12051
Apprch %	0	72.3	27.7		52.3	0	47.7		22.9	77.1	0		0	0	0		
Total %	0	26.7	10.2	36.9	11.2	0	10.2	21.5	9.5	32.1	0	41.6	0	0	0	0	

	FRANKLIN BLVD. Southbound				COSUMNES RIVER BLVD. Westbound				FRANKLIN BLVD. Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	**224**	103	327	**104**	0	**60**	**164**	72	353	0	425	0	0	0	0	916
07:45	0	224	**117**	**341**	89	0	57	146	70	**406**	0	476	0	0	0	0	**963**
08:00	0	103	64	167	94	0	55	149	51	313	0	364	0	0	0	0	680
08:15	0	106	41	147	96	0	58	154	**121**	383	0	**504**	0	0	0	0	805
Total Volume	0	657	325	982	383	0	230	613	314	1455	0	1769	0	0	0	0	3364
% App. Total	0	66.9	33.1		62.5	0	37.5		17.8	82.2	0		0	0	0		
PHF	.000	.733	.694	.720	.921	.000	.958	.934	.649	.896	.000	.877	.000	.000	.000	.000	.873

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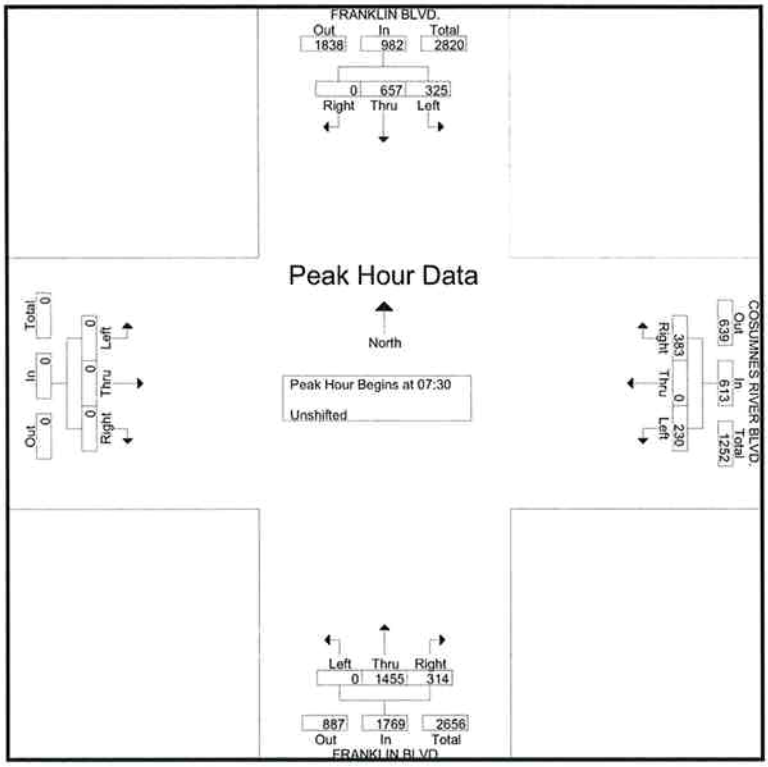
File Name : COSUMNES-FRANKLIN-F
Site Code : 00000000
Start Date : 2/7/2007
Page No : 2



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	0	278	**101**	379	**90**	0	106	196	56	179	0	235	0	0	0	0	810
17:15	0	**323**	97	**420**	69	0	93	162	67	164	0	231	0	0	0	0	813
17:30	0	270	90	360	66	0	**148**	**214**	70	**186**	0	**256**	0	0	0	0	830
17:45	0	317	95	412	83	0	120	203	**88**	167	0	255	0	0	0	0	**870**
Total Volume	0	1188	383	1571	308	0	467	775	281	696	0	977	0	0	0	0	3323
% App. Total	0	75.6	24.4		39.7	0	60.3		28.8	71.2	0		0	0	0		
PHF	.000	.920	.948	.935	.856	.000	.789	.905	.798	.935	.000	.954	.000	.000	.000	.000	.955

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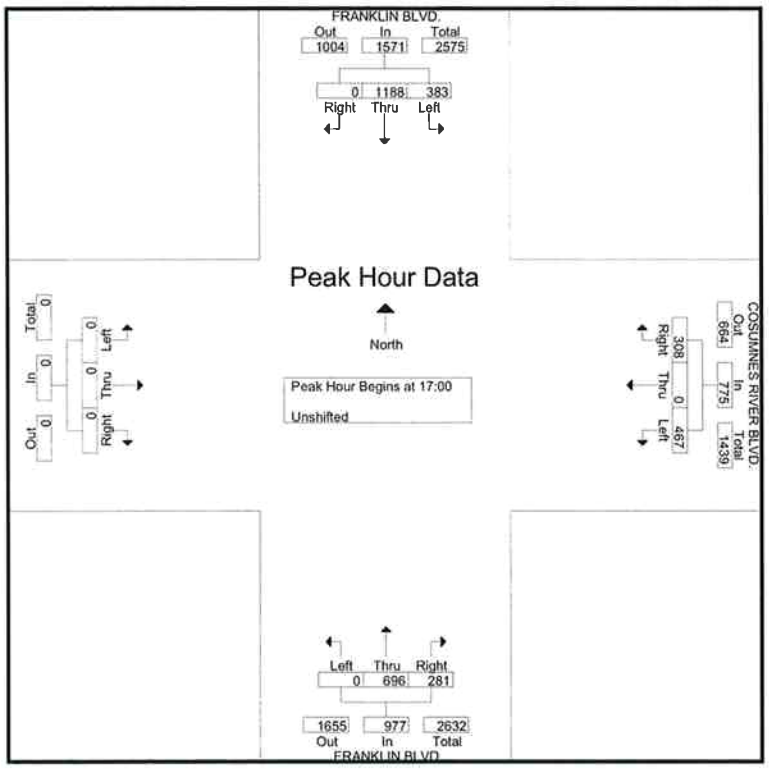
File Name : COSUMNES-FRANKLIN-F
Site Code : 00000000
Start Date : 2/7/2007
Page No : 3



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File Name : MACK-FRANKLIN-F
Site Code : 00000000
Start Date : 2/8/2007
Page No : 1

Groups Printed- Unshifted

	FRANKLIN BLVD. Southbound				MACK RD. Westbound				FRANKLIN BLVD. Northbound				MACK RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	10	75	21	106	40	132	20	192	38	251	135	424	9	60	20	89	811
07:15 AM	12	81	27	120	48	185	25	258	41	255	144	440	12	65	27	104	922
07:30 AM	15	90	26	131	50	211	28	289	44	249	154	447	19	91	31	141	1008
07:45 AM	20	76	33	129	50	197	40	287	49	244	159	452	28	71	36	135	1003
Total	57	322	107	486	188	725	113	1026	172	999	592	1763	68	287	114	469	3744
08:00 AM	13	48	35	96	48	158	19	225	46	256	155	457	11	59	42	112	890
08:15 AM	8	58	23	89	40	133	19	192	59	227	144	430	10	61	30	101	812
08:30 AM	4	76	28	108	40	124	32	196	33	204	130	367	8	73	27	108	779
08:45 AM	10	76	35	121	44	104	28	176	22	170	114	306	15	78	41	134	737
Total	35	258	121	414	172	519	98	789	160	857	543	1560	44	271	140	455	3218
*** BREAK ***																	
04:00 PM	24	178	91	293	45	199	54	298	35	136	99	270	116	174	28	318	1179
04:15 PM	13	167	76	256	65	179	64	308	41	124	112	277	122	221	32	375	1216
04:30 PM	26	194	88	308	57	180	50	287	27	118	109	254	166	191	26	383	1232
04:45 PM	31	166	75	272	66	195	72	333	32	109	110	251	168	246	31	445	1301
Total	94	705	330	1129	233	753	240	1226	135	487	430	1052	572	832	117	1521	4928
05:00 PM	25	211	93	329	49	205	65	319	39	135	113	287	184	205	25	414	1349
05:15 PM	32	231	73	336	40	208	74	322	42	116	106	264	170	173	23	366	1288
05:30 PM	26	215	85	326	54	167	72	293	39	121	109	269	155	162	21	338	1226
05:45 PM	39	166	64	269	63	194	64	321	41	108	102	251	158	224	29	411	1252
Total	122	823	315	1260	206	774	275	1255	161	480	430	1071	667	764	98	1529	5115
Grand Total	308	2108	873	3289	799	2771	726	4296	628	2823	1995	5446	1351	2154	469	3974	17005
Apprch %	9.4	64.1	26.5		18.6	64.5	16.9		11.5	51.8	36.6		34	54.2	11.8		
Total %	1.8	12.4	5.1	19.3	4.7	16.3	4.3	25.3	3.7	16.6	11.7	32	7.9	12.7	2.8	23.4	

	FRANKLIN BLVD. Southbound				MACK RD. Westbound				FRANKLIN BLVD. Northbound				MACK RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	12	81	27	120	48	185	25	258	41	255	144	440	12	65	27	104	922
07:30 AM	15	**90**	26	**131**	**50**	**211**	28	**289**	44	249	154	447	19	**91**	31	**141**	**1008**
07:45 AM	**20**	76	33	129	50	197	**40**	287	**49**	244	**159**	452	**28**	71	36	135	1003
08:00 AM	13	48	**35**	96	48	158	19	225	46	**256**	155	**457**	11	59	**42**	112	890
Total Volume	60	295	121	476	196	751	112	1059	180	1004	612	1796	70	286	136	492	3823
% App. Total	12.6	62	25.4		18.5	70.9	10.6		10	55.9	34.1		14.2	58.1	27.6		
PHF	.750	.819	.864	.908	.980	.890	.700	.916	.918	.980	.962	.982	.625	.786	.810	.872	.948

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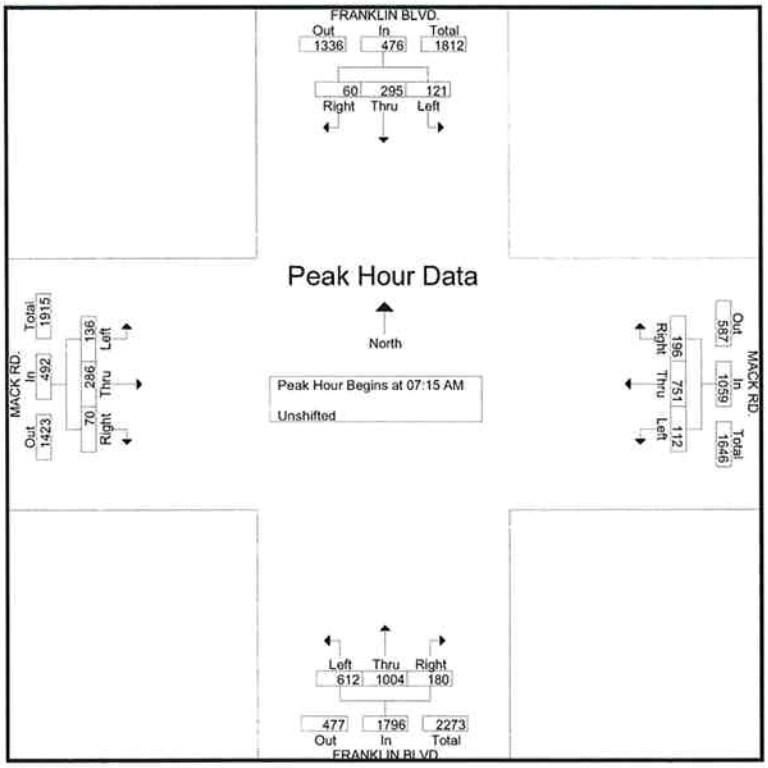
File Name : MACK-FRANKLIN-F
Site Code : 00000000
Start Date : 2/8/2007
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:30 PM

04:30 PM	26	194	88	308	57	180	50	287	27	118	109	254	166	191	26	383	1232
04:45 PM	31	166	75	272	**66**	195	72	**333**	32	109	110	251	168	**246**	**31**	**445**	1301
05:00 PM	25	211	**93**	329	49	205	65	319	39	**135**	**113**	**287**	**184**	205	25	414	**1349**
05:15 PM	**32**	**231**	73	**336**	40	**208**	**74**	322	**42**	116	106	264	170	173	23	366	1288
Total Volume	114	802	329	1245	212	788	261	1261	140	478	438	1056	688	815	105	1608	5170
% App. Total	9.2	64.4	26.4		16.8	62.5	20.7		13.3	45.3	41.5		42.8	50.7	6.5		
PHF	.891	.868	.884	.926	.803	.947	.882	.947	.833	.885	.969	.920	.935	.828	.847	.903	.958

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File Name : MACK-FRANKLIN-F
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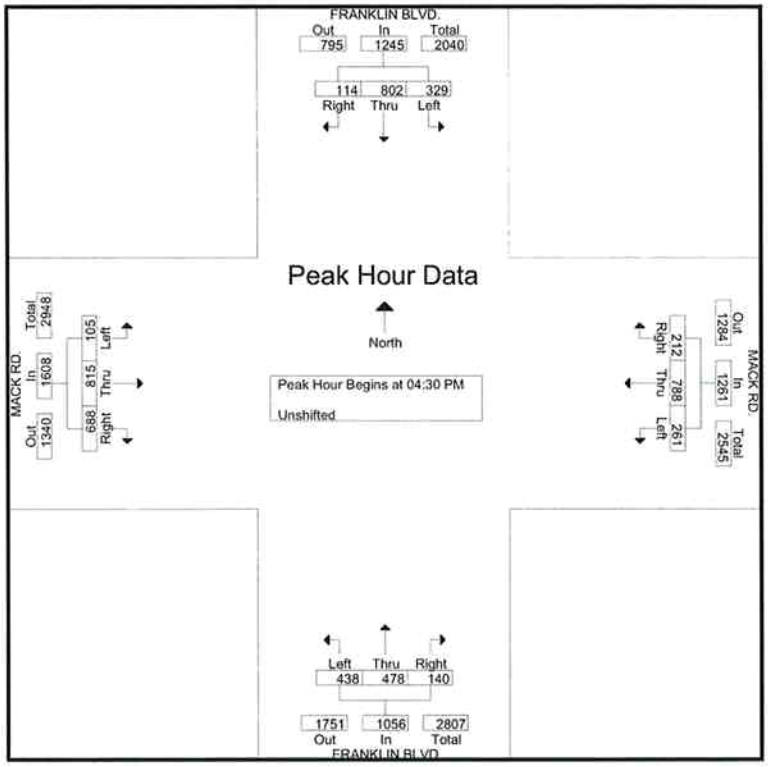

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File Name : MEADOWVIEW-24TH-F
Site Code : 00000000
Start Date : 2/7/2007
Page No : 1

Groups Printed- Unshifted

	24TH ST. Southbound				MEADOWVIEW RD. Westbound				24TH ST. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	17	20	32	69	52	188	17	257	15	32	13	60	9	145	41	195	581
07:15	19	21	35	75	60	206	27	293	15	40	21	76	11	138	48	197	641
07:30	16	39	38	93	103	245	36	384	35	59	13	107	7	202	42	251	835
07:45	24	40	50	114	116	242	55	413	36	85	20	141	18	164	61	243	911
Total	76	120	155	351	331	881	135	1347	101	216	67	384	45	649	192	886	2968
08:00	31	25	44	100	116	202	21	339	23	42	13	78	17	156	46	219	736
08:15	29	14	47	90	81	186	19	286	17	40	7	64	17	150	32	199	639
08:30	24	20	38	82	75	185	16	276	15	30	8	53	5	128	29	162	573
08:45	18	11	34	63	51	158	11	220	19	35	7	61	10	128	43	181	525
Total	102	70	163	335	323	731	67	1121	74	147	35	256	49	562	150	761	2473
*** BREAK ***																	
16:00	51	42	101	194	71	167	17	255	34	32	6	72	9	231	40	280	801
16:15	44	54	106	204	59	191	31	281	17	28	9	54	10	235	38	283	822
16:30	45	44	127	216	52	187	32	271	21	34	18	73	14	209	48	271	831
16:45	39	43	107	189	55	194	31	280	25	39	14	78	16	263	45	324	871
Total	179	183	441	803	237	739	111	1087	97	133	47	277	49	938	171	1158	3325
17:00	61	53	133	247	58	166	37	261	17	28	16	61	18	220	34	272	841
17:15	48	74	120	242	55	227	23	305	28	44	5	77	13	256	31	300	924
17:30	66	47	150	263	54	174	34	262	21	30	8	59	10	224	43	277	861
17:45	56	50	160	266	56	194	27	277	24	31	14	69	18	206	52	276	888
Total	231	224	563	1018	223	761	121	1105	90	133	43	266	59	906	160	1125	3514
Grand Total	588	597	1322	2507	1114	3112	434	4660	362	629	192	1183	202	3055	673	3930	12280
Apprch %	23.5	23.8	52.7		23.9	66.8	9.3		30.6	53.2	16.2		5.1	77.7	17.1		
Total %	4.8	4.9	10.8	20.4	9.1	25.3	3.5	37.9	2.9	5.1	1.6	9.6	1.6	24.9	5.5	32	

	24TH ST. Southbound				MEADOWVIEW RD. Westbound				24TH ST. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	19	21	35	75	60	206	27	293	15	40	**21**	76	11	138	48	197	641
07:30	16	39	38	93	103	**245**	36	384	35	59	13	107	7	**202**	42	**251**	835
07:45	24	**40**	**50**	**114**	**116**	242	**55**	**413**	**36**	**85**	20	**141**	**18**	164	**61**	243	**911**
08:00	**31**	25	44	100	116	202	21	339	23	42	13	78	17	156	46	219	736
Total Volume	90	125	167	382	395	895	139	1429	109	226	67	402	53	660	197	910	3123
% App. Total	23.6	32.7	43.7		27.6	62.6	9.7		27.1	56.2	16.7		5.8	72.5	21.6		
PHF	.726	.781	.835	.838	.851	.913	.632	.865	.757	.665	.798	.713	.736	.817	.807	.906	.857

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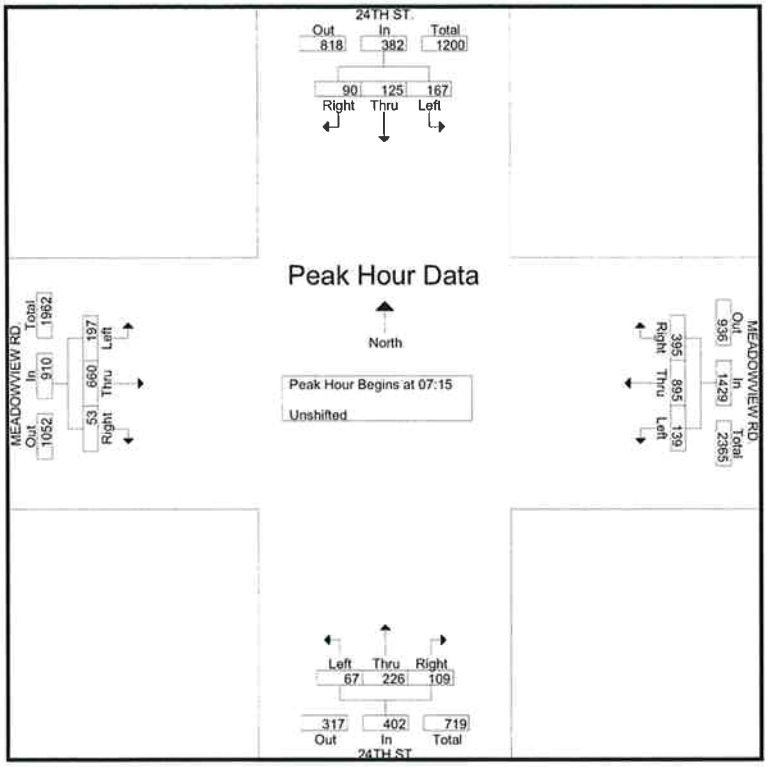

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	61	53	133	247	**58**	166	**37**	261	17	28	**16**	61	**18**	220	34	272	841
17:15	48	**74**	120	242	55	**227**	23	**305**	**28**	**44**	5	**77**	13	**256**	31	**300**	**924**
17:30	**66**	47	150	263	54	174	34	262	21	30	8	59	10	224	43	277	861
17:45	56	50	**160**	**266**	56	194	27	277	24	31	14	69	18	206	**52**	276	888
Total Volume	231	224	563	1018	223	761	121	1105	90	133	43	266	59	906	160	1125	3514
% App. Total	22.7	22	55.3		20.2	68.9	11		33.8	50	16.2		5.2	80.5	14.2		
PHF	.875	.757	.880	.957	.961	.838	.818	.906	.804	.756	.672	.864	.819	.885	.769	.938	.951

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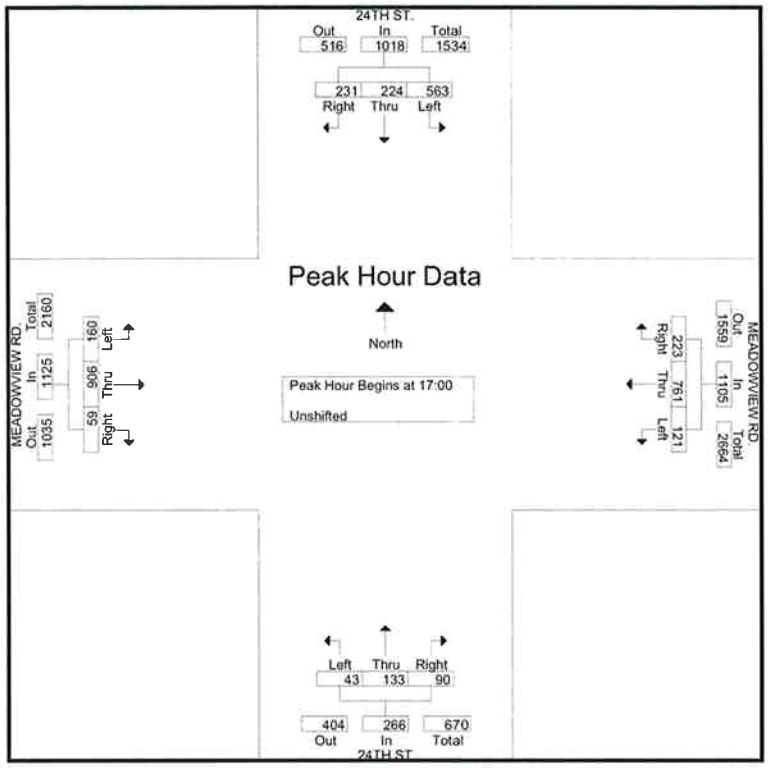

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	DETROIT BLVD. Southbound				MEADOWVIEW RD. Westbound				DETROIT BLVD. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	6	0	8	14	35	292	11	338	26	1	15	42	9	195	10	214	608
07:15	10	2	12	24	76	339	14	429	35	1	18	54	11	180	16	207	714
07:30	4	1	16	21	65	369	33	467	49	1	45	95	25	268	11	304	887
07:45	12	0	10	22	42	380	27	449	50	1	43	94	34	223	6	263	828
Total	32	3	46	81	218	1380	85	1683	160	4	121	285	79	866	43	988	3037
08:00	6	0	13	19	46	347	29	422	31	0	25	56	18	228	13	259	756
08:15	6	0	9	15	21	255	18	294	31	2	21	54	9	198	3	210	573
08:30	5	1	9	15	35	282	13	330	30	1	11	42	5	207	3	215	602
08:45	3	0	7	10	19	234	12	265	24	1	11	36	7	198	6	211	522
Total	20	1	38	59	121	1118	72	1311	116	4	68	188	39	831	25	895	2453
*** BREAK ***																	
16:00	18	29	45	92	19	252	33	304	36	10	17	63	21	346	15	382	841
16:15	14	1	56	71	16	253	42	311	34	0	16	50	26	361	4	391	823
16:30	13	1	52	66	11	258	36	305	38	0	19	57	23	332	7	362	790
16:45	12	0	57	69	17	266	52	335	36	1	25	62	26	304	6	336	802
Total	57	31	210	298	63	1029	163	1255	144	11	77	232	96	1343	32	1471	3256
17:00	11	3	80	94	18	287	44	349	30	1	17	48	15	360	6	381	872
17:15	14	1	61	76	27	308	36	371	39	0	17	56	20	427	4	451	954
17:30	16	1	70	87	13	260	38	311	34	0	16	50	16	361	4	381	829
17:45	14	0	78	92	15	284	39	338	32	1	14	47	20	338	7	365	842
Total	55	5	289	349	73	1139	157	1369	135	2	64	201	71	1486	21	1578	3497
Grand Total	164	40	583	787	475	4666	477	5618	555	21	330	906	285	4526	121	4932	12243
Apprch %	20.8	5.1	74.1		8.5	83.1	8.5		61.3	2.3	36.4		5.8	91.8	2.5		
Total %	1.3	0.3	4.8	6.4	3.9	38.1	3.9	45.9	4.5	0.2	2.7	7.4	2.3	37	1	40.3	

	DETROIT BLVD. Southbound				MEADOWVIEW RD. Westbound				DETROIT BLVD. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	10	**2**	12	**24**	**76**	339	14	429	35	**1**	18	54	11	180	**16**	207	714
07:30	4	1	**16**	21	65	369	**33**	**467**	49	1	**45**	**95**	25	**268**	11	**304**	**887**
07:45	**12**	0	10	22	42	**380**	27	449	**50**	1	43	94	**34**	223	6	263	828
08:00	6	0	13	19	46	347	29	422	31	0	25	56	18	228	13	259	756
Total Volume	32	3	51	86	229	1435	103	1767	165	3	131	299	88	899	46	1033	3185
% App. Total	37.2	3.5	59.3		13	81.2	5.8		55.2	1	43.8		8.5	87	4.5		
PHF	.667	.375	.797	.896	.753	.944	.780	.946	.825	.750	.728	.787	.647	.839	.719	.850	.898

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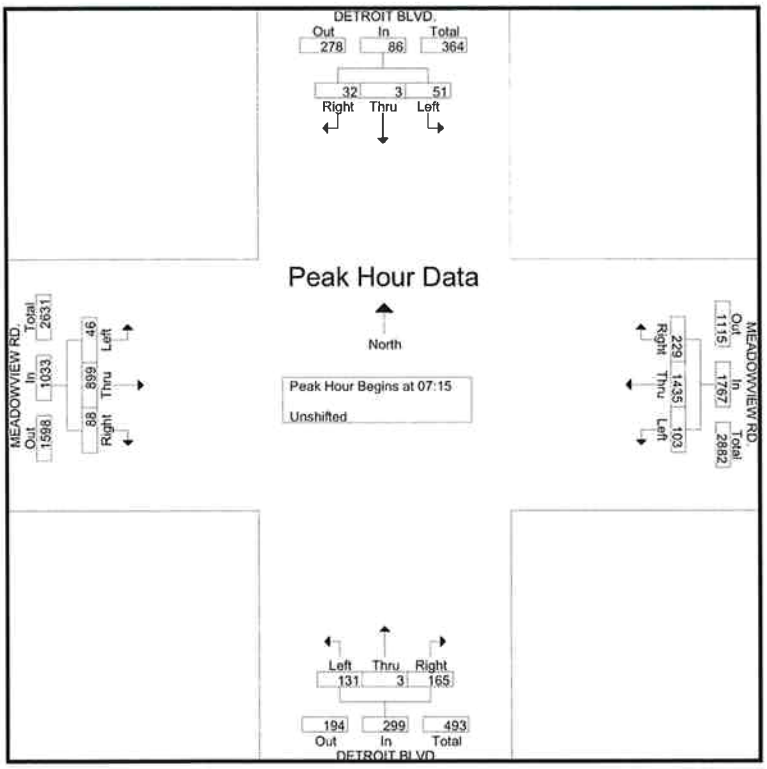

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	11	**3**	**80**	**94**	18	287	**44**	349	30	**1**	**17**	48	15	360	6	381	872
17:15	14	1	61	76	**27**	**308**	36	**371**	**39**	0	17	**56**	**20**	**427**	4	**451**	**954**
17:30	**16**	1	70	87	13	260	38	311	34	0	16	50	16	361	4	381	829
17:45	14	0	78	92	15	284	39	338	32	1	14	47	20	338	**7**	365	842
Total Volume	55	5	289	349	73	1139	157	1369	135	2	64	201	71	1486	21	1578	3497
% App. Total	15.8	1.4	82.8		5.3	83.2	11.5		67.2	1	31.8		4.5	94.2	1.3		
PHF	.859	.417	.903	.928	.676	.925	.892	.923	.865	.500	.941	.897	.888	.870	.750	.875	.916

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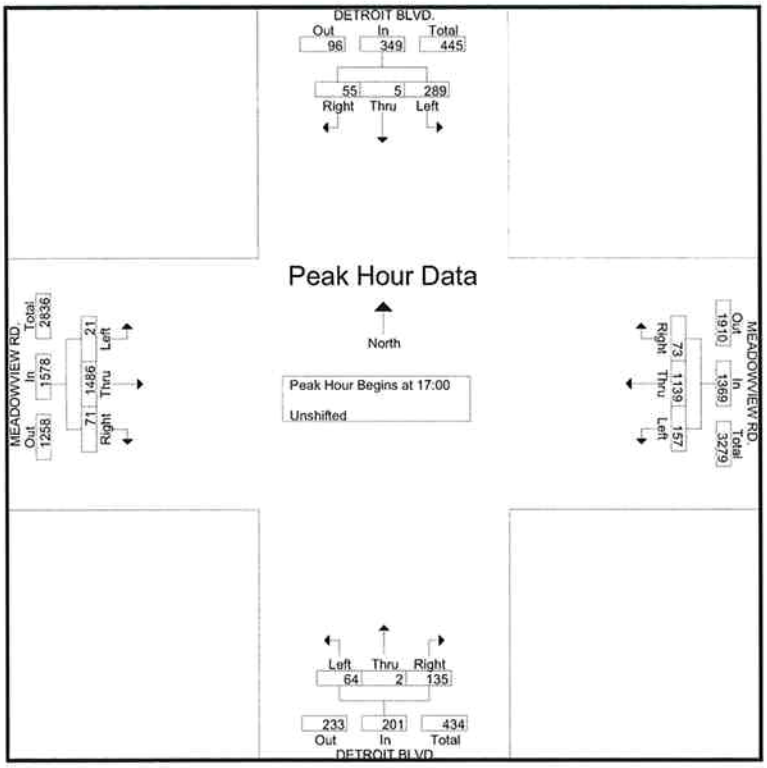

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	FREEPORT BLVD. Southbound				MEADOWVIEW RD. Westbound				FREEPORT BLVD. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	7	22	14	43	50	215	8	273	9	15	18	42	20	150	83	253	611
07:15	5	29	19	53	78	184	10	272	15	41	24	80	29	174	100	303	708
07:30	12	44	16	72	81	187	14	282	12	37	14	63	34	198	119	351	768
07:45	14	26	18	58	59	204	7	270	16	26	20	62	33	208	114	355	745
Total	38	121	67	226	268	790	39	1097	52	119	76	247	116	730	416	1262	2832
08:00	16	18	25	59	61	197	7	265	14	22	30	66	29	211	82	322	712
08:15	8	28	24	60	58	150	10	218	6	23	23	52	21	175	72	268	598
08:30	4	18	19	41	66	137	10	213	9	26	22	57	21	118	67	206	517
08:45	5	18	14	37	53	139	10	202	8	19	20	47	23	101	53	177	463
Total	33	82	82	197	238	623	37	898	37	90	95	222	94	605	274	973	2290
*** BREAK ***																	
16:00	45	21	101	167	54	193	9	256	14	15	34	63	21	205	32	258	744
16:15	55	24	100	179	47	229	21	297	18	13	29	60	33	247	32	312	848
16:30	45	19	89	153	38	228	11	277	15	15	34	64	25	262	40	327	821
16:45	59	31	93	183	53	181	14	248	21	21	38	80	33	228	42	303	814
Total	204	95	383	682	192	831	55	1078	68	64	135	267	112	942	146	1200	3227
17:00	85	21	82	188	54	193	8	255	13	17	31	61	32	232	45	309	813
17:15	111	15	112	238	51	181	9	241	22	21	44	87	43	250	31	324	890
17:30	66	14	89	169	39	168	9	216	16	15	52	83	20	241	31	292	760
17:45	80	17	86	183	55	200	13	268	16	8	46	70	27	252	28	307	828
Total	342	67	369	778	199	742	39	980	67	61	173	301	122	975	135	1232	3291
Grand Total	617	365	901	1883	897	2986	170	4053	224	334	479	1037	444	3252	971	4667	11640
Apprch %	32.8	19.4	47.8		22.1	73.7	4.2		21.6	32.2	46.2		9.5	69.7	20.8		
Total %	5.3	3.1	7.7	16.2	7.7	25.7	1.5	34.8	1.9	2.9	4.1	8.9	3.8	27.9	8.3	40.1	

	FREEPORT BLVD. Southbound				MEADOWVIEW RD. Westbound				FREEPORT BLVD. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	5	29	19	53	78	184	10	272	15	**41**	24	**80**	29	174	100	303	708
07:30	12	**44**	16	**72**	**81**	187	**14**	**282**	12	37	14	63	**34**	198	**119**	351	**768**
07:45	14	26	18	58	59	**204**	7	270	**16**	26	20	62	33	208	114	**355**	745
08:00	16	18	25	59	61	197	7	265	14	22	30	66	29	**211**	82	322	712
Total Volume	47	117	78	242	279	772	38	1089	57	126	88	271	125	791	415	1331	2933
% App. Total	19.4	48.3	32.2		25.6	70.9	3.5		21	46.5	32.5		9.4	59.4	31.2		
PHF	.734	.665	.780	.840	.861	.946	.679	.965	.891	.768	.733	.847	.919	.937	.872	.937	.955

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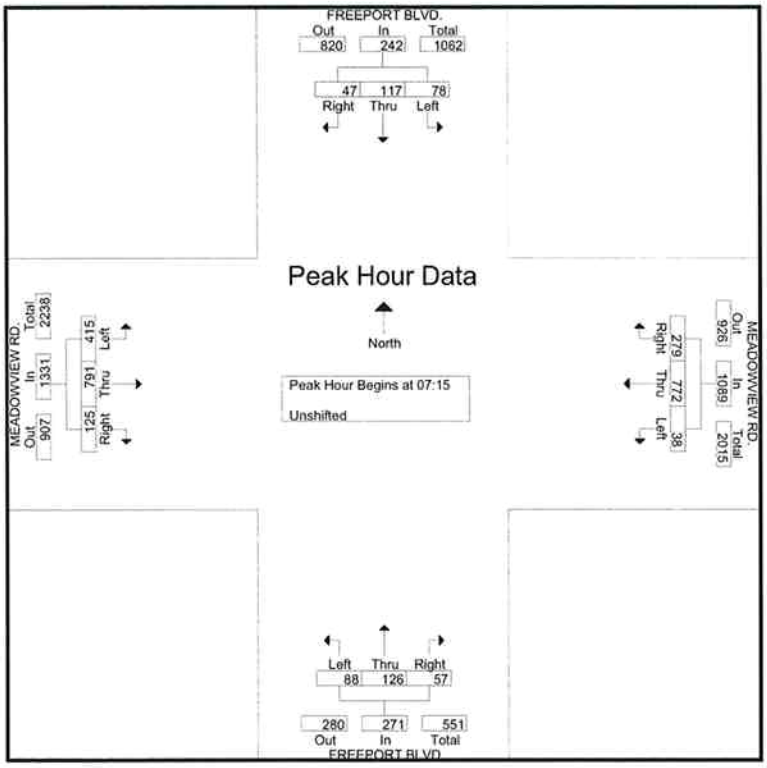

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:30

16:30	45	19	89	153	38	**228**	11	**277**	15	15	34	64	25	**262**	40	**327**	821
16:45	59	**31**	93	183	53	181	**14**	248	21	**21**	38	80	33	228	42	303	814
17:00	85	21	82	188	**54**	193	8	255	13	17	31	61	32	232	**45**	309	813
17:15	**111**	15	**112**	**238**	51	181	9	241	**22**	21	**44**	**87**	**43**	250	31	324	**890**
Total Volume	300	86	376	762	196	783	42	1021	71	74	147	292	133	972	158	1263	3338
% App. Total	39.4	11.3	49.3		19.2	76.7	4.1		24.3	25.3	50.3		10.5	77	12.5		
PHF	.676	.694	.839	.800	.907	.859	.750	.921	.807	.881	.835	.839	.773	.927	.878	.966	.938

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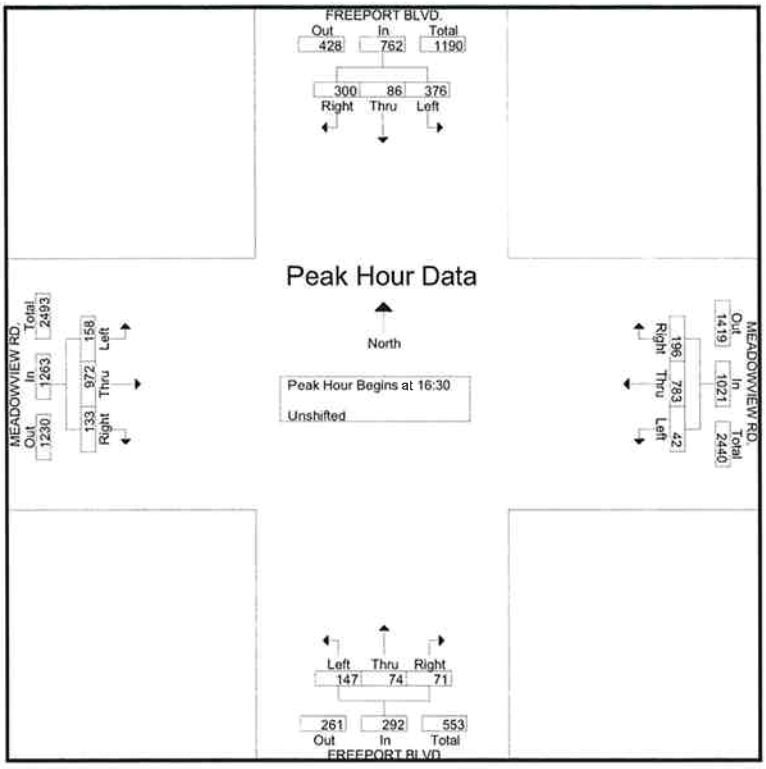

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Groups Printed- Unshifted

	Southbound				MEADOWVIEW RD. Westbound				MANORSIDE DR. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	0	0	0	0	0	237	5	242	12	0	11	23	3	152	0	155	420
07:15	0	0	0	0	0	250	5	255	20	0	15	35	6	196	0	202	492
07:30	0	0	0	0	0	232	15	247	18	0	16	34	12	231	0	243	524
07:45	0	0	0	0	0	267	6	273	13	0	21	34	14	255	0	269	576
Total	0	0	0	0	0	986	31	1017	63	0	63	126	35	834	0	869	2012
08:00	0	0	0	0	0	258	6	264	13	0	16	29	19	235	0	254	547
08:15	0	0	0	0	0	224	10	234	5	0	6	11	12	187	0	199	444
08:30	0	0	0	0	0	174	9	183	7	0	5	12	10	139	0	149	344
08:45	0	0	0	0	0	195	3	198	10	0	10	20	4	127	0	131	349
Total	0	0	0	0	0	851	28	879	35	0	37	72	45	688	0	733	1684
*** BREAK ***																	
16:00	0	0	0	0	0	238	14	252	9	0	11	20	13	295	0	308	580
16:15	0	0	0	0	0	294	12	306	11	0	6	17	15	284	0	299	622
16:30	0	0	0	0	0	235	21	256	10	0	7	17	23	291	0	314	587
16:45	0	0	0	0	0	219	17	236	10	0	5	15	12	261	0	273	524
Total	0	0	0	0	0	986	64	1050	40	0	29	69	63	1131	0	1194	2313
17:00	0	0	0	0	0	237	22	259	15	0	5	20	16	288	0	304	583
17:15	0	0	0	0	0	230	14	244	7	0	6	13	13	297	0	310	567
17:30	0	0	0	0	0	212	17	229	10	0	11	21	11	299	0	310	560
17:45	0	0	0	0	0	260	14	274	8	0	3	11	14	304	0	318	603
Total	0	0	0	0	0	939	67	1006	40	0	25	65	54	1188	0	1242	2313
Grand Total	0	0	0	0	0	3762	190	3952	178	0	154	332	197	3841	0	4038	8322
Apprch %	0	0	0		0	95.2	4.8		53.6	0	46.4		4.9	95.1	0		
Total %	0	0	0	0	0	45.2	2.3	47.5	2.1	0	1.9	4	2.4	46.2	0	48.5	

	Southbound				MEADOWVIEW RD. Westbound				MANORSIDE DR. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	0	0	0	0	0	250	5	255	**20**	0	15	**35**	6	196	0	202	492
07:30	0	0	0	0	0	232	**15**	247	18	0	16	34	12	231	0	243	524
07:45	0	0	0	0	0	**267**	6	**273**	13	0	**21**	34	14	**255**	0	**269**	**576**
08:00	0	0	0	0	0	258	6	264	13	0	16	29	**19**	235	0	254	547
Total Volume	0	0	0	0	0	1007	32	1039	64	0	68	132	51	917	0	968	2139
% App. Total	0	0	0		0	96.9	3.1		48.5	0	51.5		5.3	94.7	0		
PHF	.000	.000	.000	.000	.000	.943	.533	.951	.800	.000	.810	.943	.671	.899	.000	.900	.928

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File Name : MEADOWVIEW-MANORSIDE-F
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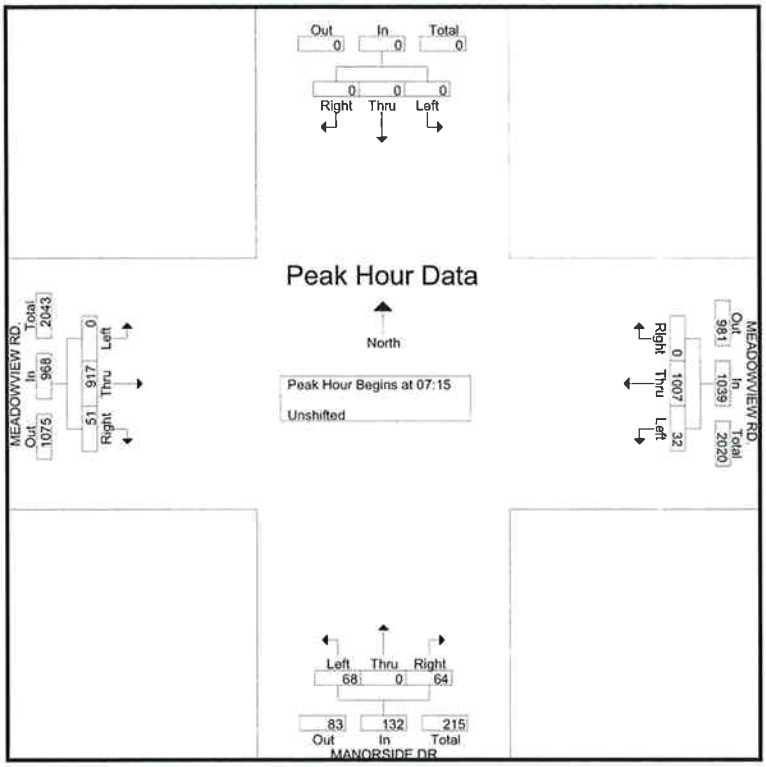

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:15

16:15	0	0	0	0	0	**294**	12	**306**	11	0	6	17	15	284	0	299	**622**
16:30	0	0	0	0	0	235	21	256	10	0	**7**	17	**23**	**291**	0	**314**	587
16:45	0	0	0	0	0	219	17	236	10	0	5	15	12	261	0	273	524
17:00	0	0	0	0	0	237	**22**	259	**15**	0	5	**20**	16	288	0	304	583
Total Volume	0	0	0	0	0	985	72	1057	46	0	23	69	66	1124	0	1190	2316
% App. Total	0	0	0		0	93.2	6.8		66.7	0	33.3		5.5	94.5	0		
PHF	.000	.000	.000	.000	.000	.838	.818	.864	.767	.000	.821	.862	.717	.966	.000	.947	.931

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File Name : MEADOWVIEW-MANORSIDE-F
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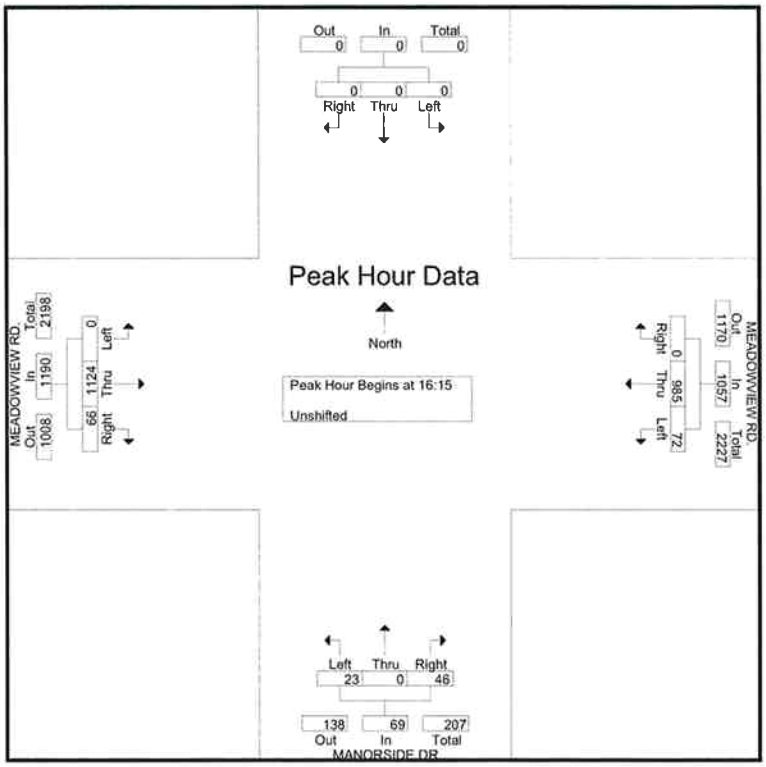

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File Name : POCKET-I-5 NB RAMPS
Site Code : 00000000
Start Date : 2/6/2007
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Groups Printed- Unshifted

	I-5 NORTHBOUND RAMPS Southbound				POCKET RD. Westbound				I-5 NORTHBOUND RAMPS Northbound				POCKET RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	0	0	0	0	182	55	0	237	63	0	25	88	121	178	0	299	624
07:15	0	0	0	0	171	58	0	229	94	0	50	144	126	213	0	339	712
07:30	0	0	0	0	152	97	0	249	79	0	39	118	90	284	0	374	741
07:45	0	0	0	0	133	104	0	237	101	0	62	163	91	263	0	354	754
Total	0	0	0	0	638	314	0	952	337	0	176	513	428	938	0	1366	2831
08:00	0	0	0	0	165	111	0	276	0	0	58	58	109	234	0	343	677
08:15	0	0	0	0	227	83	0	310	100	0	63	163	118	192	0	310	783
08:30	0	0	0	0	182	73	0	255	79	0	48	127	131	130	0	261	643
08:45	0	0	0	0	212	100	0	312	92	0	43	135	109	129	0	238	685
Total	0	0	0	0	786	367	0	1153	271	0	212	483	467	685	0	1152	2788
*** BREAK ***																	
16:00	0	0	0	0	120	150	0	270	44	0	55	99	31	236	0	267	636
16:15	0	0	0	0	120	182	0	302	53	0	44	97	41	286	0	327	726
16:30	0	0	0	0	122	174	0	296	49	0	50	99	50	263	0	313	708
16:45	0	0	0	0	112	190	0	302	67	0	50	117	30	235	0	265	684
Total	0	0	0	0	474	696	0	1170	213	0	199	412	152	1020	0	1172	2754
17:00	0	0	0	0	107	215	0	322	46	0	53	99	59	288	0	347	768
17:15	0	0	0	0	94	228	0	322	38	0	73	111	47	280	0	327	760
17:30	0	0	0	0	93	191	0	284	47	0	69	116	52	253	0	305	705
17:45	0	0	0	0	98	199	0	297	50	0	72	122	41	236	0	277	696
Total	0	0	0	0	392	833	0	1225	181	0	267	448	199	1057	0	1256	2929
Grand Total	0	0	0	0	2290	2210	0	4500	1002	0	854	1856	1246	3700	0	4946	11302
Apprch %	0	0	0		50.9	49.1	0		54	0	46		25.2	74.8	0		
Total %	0	0	0	0	20.3	19.6	0	39.8	8.9	0	7.6	16.4	11	32.7	0	43.8	

	I-5 NORTHBOUND RAMPS Southbound				POCKET RD. Westbound				I-5 NORTHBOUND RAMPS Northbound				POCKET RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	0	0	0	152	97	0	249	79	0	39	118	90	**284**	0	**374**	741
07:45	0	0	0	0	133	104	0	237	**101**	0	62	**163**	91	263	0	354	754
08:00	0	0	0	0	165	**111**	0	276	0	0	58	58	109	234	0	343	677
08:15	0	0	0	0	**227**	83	0	**310**	100	0	**63**	163	**118**	192	0	310	**783**
Total Volume	0	0	0	0	677	395	0	1072	280	0	222	502	408	973	0	1381	2955
% App. Total	0	0	0		63.2	36.8	0		55.8	0	44.2		29.5	70.5	0		
PHF	.000	.000	.000	.000	.746	.890	.000	.865	.693	.000	.881	.770	.864	.857	.000	.923	.943

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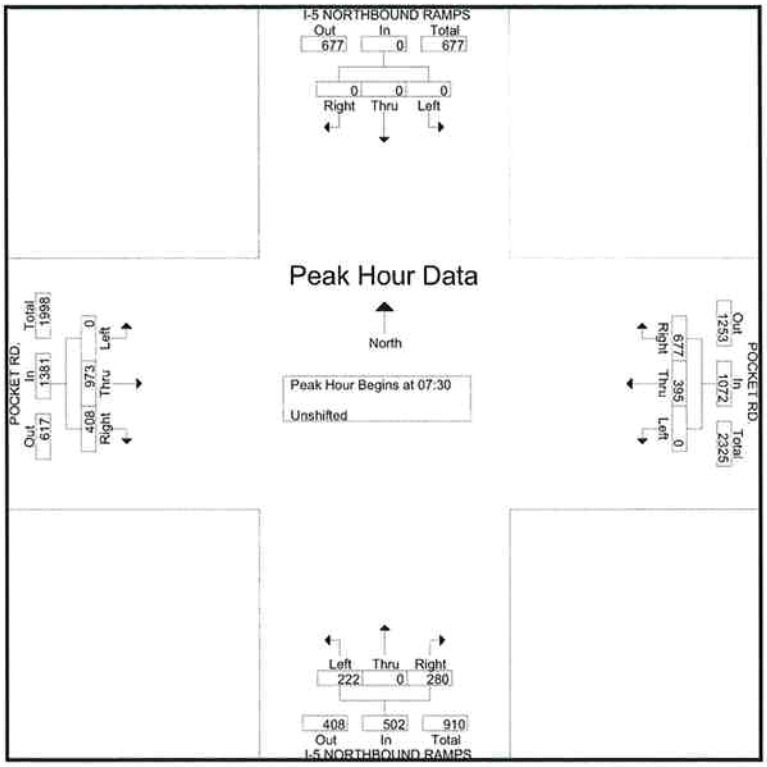

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	0	0	0	0	**107**	215	0	**322**	46	0	53	99	**59**	**288**	0	**347**	**768**
17:15	0	0	0	0	94	**228**	0	322	38	0	**73**	111	47	280	0	327	760
17:30	0	0	0	0	93	191	0	284	47	0	69	116	52	253	0	305	705
17:45	0	0	0	0	98	199	0	297	**50**	0	72	**122**	41	236	0	277	696
Total Volume	0	0	0	0	392	833	0	1225	181	0	267	448	199	1057	0	1256	2929
% App. Total	0	0	0		32	68	0		40.4	0	59.6		15.8	84.2	0		
PHF	.000	.000	.000	.000	.916	.913	.000	.951	.905	.000	.914	.918	.843	.918	.000	.905	.953

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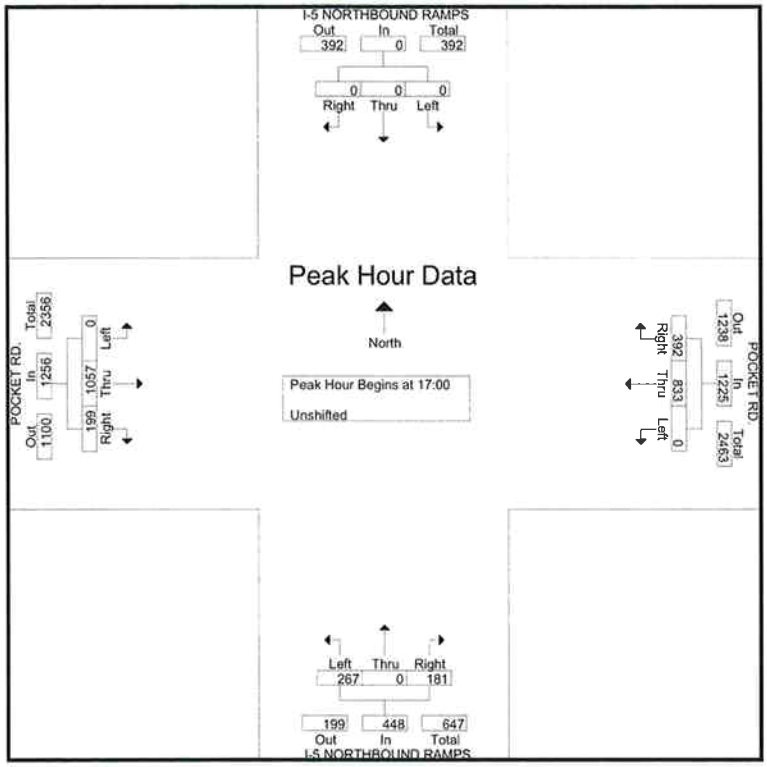

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File Name : POCKET-I-5 SB RAMPS
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Groups Printed- Unshifted

	I-5 SOUTHBOUND RAMPS Southbound				POCKET RD. Westbound				I-5 SOUTHBOUND RAMPS Northbound				POCKET RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	18	0	79	97	29	51	0	80	0	0	0	0	53	220	0	273	450
07:15	22	0	96	118	28	80	0	108	0	0	0	0	66	243	0	309	535
07:30	35	0	112	147	30	106	0	136	0	0	0	0	49	262	0	311	594
07:45	25	0	115	140	24	142	0	166	0	0	0	0	64	239	0	303	609
Total	100	0	402	502	111	379	0	490	0	0	0	0	232	964	0	1196	2188
08:00	43	0	105	148	21	148	0	169	0	0	0	0	57	238	0	295	612
08:15	44	0	95	139	22	124	0	146	0	0	0	0	38	215	0	253	538
08:30	41	0	57	98	23	98	0	121	0	0	0	0	51	204	0	255	474
08:45	26	0	72	98	34	109	0	143	0	0	0	0	29	166	0	195	436
Total	154	0	329	483	100	479	0	579	0	0	0	0	175	823	0	998	2060
*** BREAK ***																	
16:00	94	0	169	263	48	157	0	205	0	0	0	0	41	98	0	139	607
16:15	107	0	210	317	51	175	0	226	0	0	0	0	45	117	0	162	705
16:30	93	0	193	286	53	171	0	224	0	0	0	0	54	120	0	174	684
16:45	116	0	152	268	69	171	0	240	0	0	0	0	51	113	0	164	672
Total	410	0	724	1134	221	674	0	895	0	0	0	0	191	448	0	639	2668
17:00	100	0	182	282	73	195	0	268	0	0	0	0	61	165	0	226	776
17:15	117	0	193	310	89	212	0	301	0	0	0	0	59	134	0	193	804
17:30	132	0	164	296	56	204	0	260	0	0	0	0	60	141	0	201	757
17:45	117	0	148	265	68	213	0	281	0	0	0	0	51	129	0	180	726
Total	466	0	687	1153	286	824	0	1110	0	0	0	0	231	569	0	800	3063
Grand Total	1130	0	2142	3272	718	2356	0	3074	0	0	0	0	829	2804	0	3633	9979
Apprch %	34.5	0	65.5		23.4	76.6	0		0	0	0		22.8	77.2	0		
Total %	11.3	0	21.5	32.8	7.2	23.6	0	30.8	0	0	0	0	8.3	28.1	0	36.4	

	I-5 SOUTHBOUND RAMPS Southbound				POCKET RD. Westbound				I-5 SOUTHBOUND RAMPS Northbound				POCKET RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	35	0	112	147	**30**	106	0	136	0	0	0	0	49	**262**	0	**311**	594
07:45	25	**0**	**115**	140	24	142	0	166	0	0	0	0	**64**	239	0	303	609
08:00	43	**0**	105	**148**	21	**148**	0	**169**	0	0	0	0	57	238	0	295	**612**
08:15	**44**	0	95	139	22	124	0	146	0	0	0	0	38	215	0	253	538
Total Volume	147	0	427	574	97	520	0	617	0	0	0	0	208	954	0	1162	2353
% App. Total	25.6	0	74.4		15.7	84.3	0		0	0	0		17.9	82.1	0		
PHF	.835	.000	.928	.970	.808	.878	.000	.913	.000	.000	.000	.000	.812	.910	.000	.934	.961

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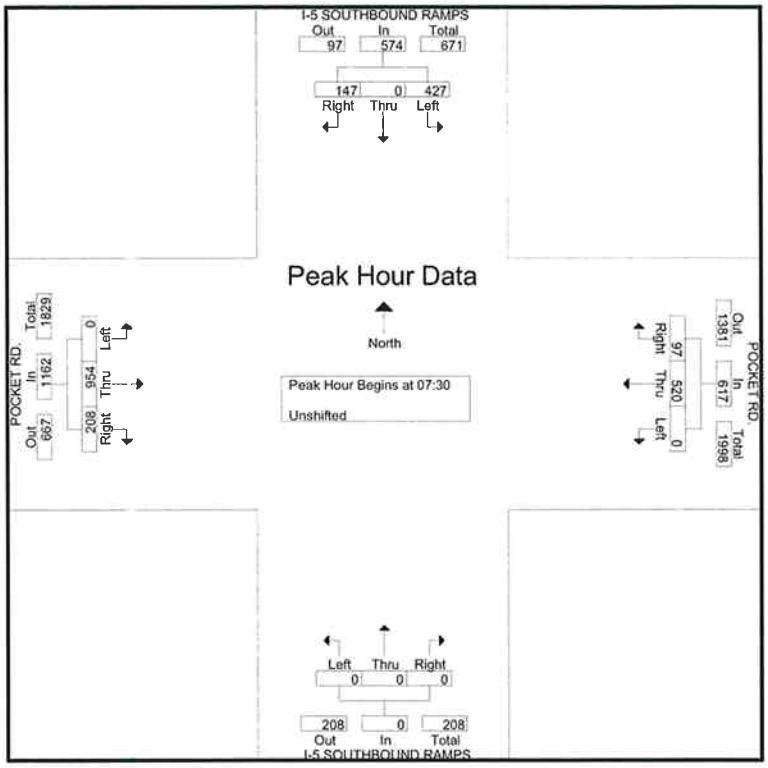

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	100	0	182	282	73	195	0	268	0	0	0	0	**61**	**165**	0	**226**	776
17:15	117	0	**193**	**310**	**89**	212	0	**301**	0	0	0	0	59	134	0	193	**804**
17:30	**132**	0	164	296	56	204	0	260	0	0	0	0	60	141	0	201	757
17:45	117	0	148	265	68	**213**	0	281	0	0	0	0	51	129	0	180	726
Total Volume	466	0	687	1153	286	824	0	1110	0	0	0	0	231	569	0	800	3063
% App. Total	40.4	0	59.6		25.8	74.2	0		0	0	0		28.9	71.1	0		
PHF	.883	.000	.890	.930	.803	.967	.000	.922	.000	.000	.000	.000	.947	.862	.000	.885	.952

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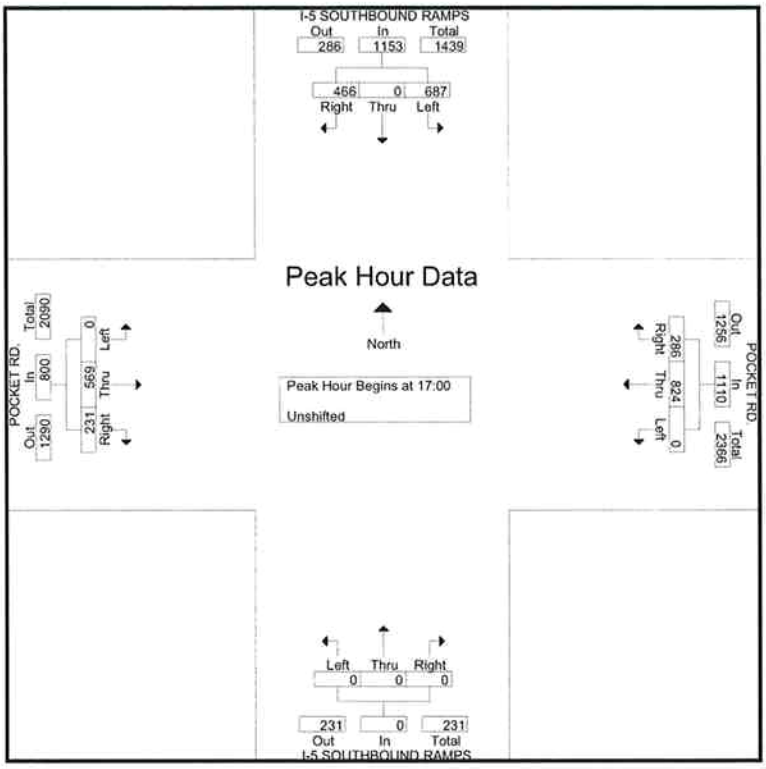

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File Name : STONECREST-FREEPORT-F
Site Code : 00000000
Start Date : 2/7/2007
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Groups Printed- Unshifted

	FREEPORT BLVD. Southbound				STONECREST AVE. Westbound				FREEPORT BLVD. Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	0	36	0	36	1	0	0	1	0	70	0	70	0	0	0	0	107
07:15	0	41	1	42	0	0	0	0	1	85	0	86	0	0	0	0	128
07:30	0	51	1	52	0	0	0	0	0	84	0	84	0	0	0	0	136
07:45	0	40	0	40	0	0	0	0	1	73	0	74	0	0	0	0	114
Total	0	168	2	170	1	0	0	1	2	312	0	314	0	0	0	0	485
08:00	0	42	0	42	2	0	1	3	0	40	0	40	0	0	0	0	85
08:15	0	54	2	56	0	0	0	0	0	52	0	52	0	0	0	0	108
08:30	0	25	1	26	0	0	0	0	0	42	0	42	0	0	0	0	68
08:45	0	29	0	29	0	0	0	0	0	39	0	39	0	0	0	0	68
Total	0	150	3	153	2	0	1	3	0	173	0	173	0	0	0	0	329
*** BREAK ***																	
16:00	0	48	1	49	0	0	0	0	0	60	0	60	0	0	0	0	109
16:15	0	65	0	65	0	0	0	0	0	58	0	58	0	0	0	0	123
16:30	0	58	0	58	1	0	0	1	0	55	0	55	0	0	0	0	114
16:45	0	65	1	66	1	0	0	1	0	78	0	78	0	0	0	0	145
Total	0	236	2	238	2	0	0	2	0	251	0	251	0	0	0	0	491
17:00	0	61	1	62	2	0	0	2	0	59	0	59	0	0	0	0	123
17:15	0	52	0	52	1	0	0	1	1	81	0	82	0	0	0	0	135
17:30	0	45	0	45	1	0	0	1	0	86	0	86	0	0	0	0	132
17:45	0	47	1	48	2	0	0	2	0	60	0	60	0	0	0	0	110
Total	0	205	2	207	6	0	0	6	1	286	0	287	0	0	0	0	500
Grand Total	0	759	9	768	11	0	1	12	3	1022	0	1025	0	0	0	0	1805
Apprch %	0	98.8	1.2		91.7	0	8.3		0.3	99.7	0		0	0	0		
Total %	0	42	0.5	42.5	0.6	0	0.1	0.7	0.2	56.6	0	56.8	0	0	0	0	

	FREEPORT BLVD. Southbound				STONECREST AVE. Westbound				FREEPORT BLVD. Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00																	
07:00	0	36	0	36	**1**	0	0	**1**	0	70	0	70	0	0	0	0	107
07:15	0	41	**1**	42	0	0	0	0	**1**	**85**	0	**86**	0	0	0	0	128
07:30	0	**51**	1	**52**	0	0	0	0	0	84	0	84	0	0	0	0	**136**
07:45	0	40	0	40	0	0	0	0	1	73	0	74	0	0	0	0	114
Total Volume	0	168	2	170	1	0	0	1	2	312	0	314	0	0	0	0	485
% App. Total	0	98.8	1.2		100	0	0		0.6	99.4	0		0	0	0		
PHF	.000	.824	.500	.817	.250	.000	.000	.250	.500	.918	.000	.913	.000	.000	.000	.000	.892

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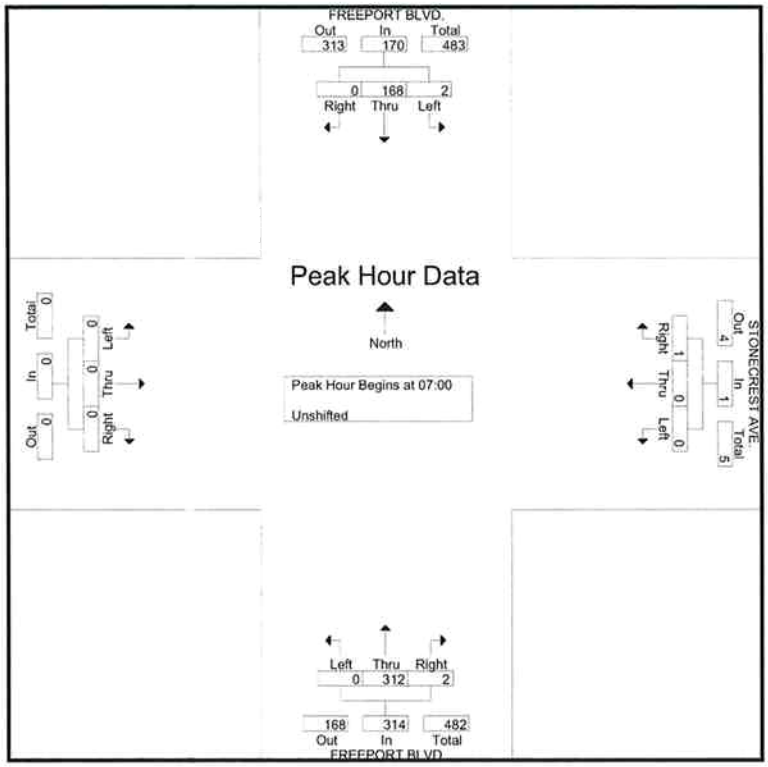

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:45

16:45	0	**65**	**1**	**66**	1	0	0	1	0	78	0	78	0	0	0	0	**145**
17:00	0	61	1	62	**2**	0	0	**2**	0	59	0	59	0	0	0	0	123
17:15	0	52	0	52	1	0	0	1	**1**	81	0	82	0	0	0	0	135
17:30	0	45	0	45	1	0	0	1	0	**86**	0	**86**	0	0	0	0	132
Total Volume	0	223	2	225	5	0	0	5	1	304	0	305	0	0	0	0	535
% App. Total	0	99.1	0.9		100	0	0		0.3	99.7	0		0	0	0		
PHF	.000	.858	.500	.852	.625	.000	.000	.625	.250	.884	.000	.887	.000	.000	.000	.000	.922

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File Name : STONECREST-FREEPORT-F
Site Code : 00000000
Start Date : 2/7/2007
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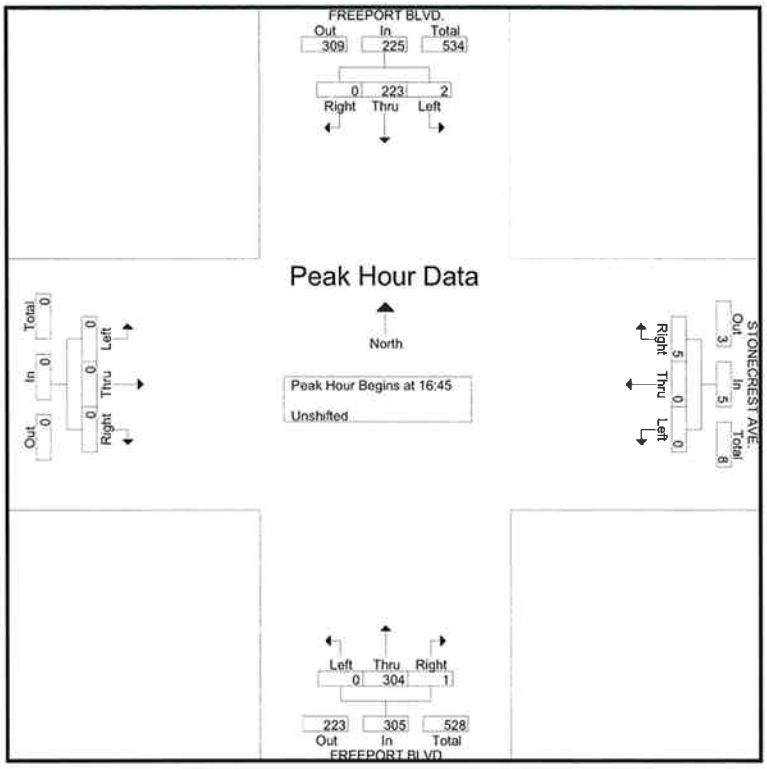

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File Name : MEADOWVIEW-FREEPORT-F
Site Code : 00000000
Start Date : 2/6/2007
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Groups Printed- Unshifted

	FREEPORT BLVD. Southbound				MEADOWVIEW RD. Westbound				FREEPORT BLVD. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	7	22	14	43	50	215	8	273	9	15	18	42	20	150	83	253	611
07:15	5	29	19	53	78	184	10	272	15	41	24	80	29	174	100	303	708
07:30	12	44	16	72	81	187	14	282	12	37	14	63	34	198	119	351	768
07:45	14	26	18	58	59	204	7	270	16	26	20	62	33	208	114	355	745
Total	38	121	67	226	268	790	39	1097	52	119	76	247	116	730	416	1262	2832
08:00	16	18	25	59	61	197	7	265	14	22	30	66	29	211	82	322	712
08:15	8	28	24	60	58	150	10	218	6	23	23	52	21	175	72	268	598
08:30	4	18	19	41	66	137	10	213	9	26	22	57	21	118	67	206	517
08:45	5	18	14	37	53	139	10	202	8	19	20	47	23	101	53	177	463
Total	33	82	82	197	238	623	37	898	37	90	95	222	94	605	274	973	2290
*** BREAK ***																	
16:00	45	21	101	167	54	193	9	256	14	15	34	63	21	205	32	258	744
16:15	55	24	100	179	47	229	21	297	18	13	29	60	33	247	32	312	848
16:30	45	19	89	153	38	228	11	277	15	15	34	64	25	262	40	327	821
16:45	59	31	93	183	53	181	14	248	21	21	38	80	33	228	42	303	814
Total	204	95	383	682	192	831	55	1078	68	64	135	267	112	942	146	1200	3227
17:00	85	21	82	188	54	193	8	255	13	17	31	61	32	232	45	309	813
17:15	111	15	112	238	51	181	9	241	22	21	44	87	43	250	31	324	890
17:30	66	14	89	169	39	168	9	216	16	15	52	83	20	241	31	292	760
17:45	80	17	86	183	55	200	13	268	16	8	46	70	27	252	28	307	828
Total	342	67	369	778	199	742	39	980	67	61	173	301	122	975	135	1232	3291
Grand Total	617	365	901	1883	897	2986	170	4053	224	334	479	1037	444	3252	971	4667	11640
Apprch %	32.8	19.4	47.8		22.1	73.7	4.2		21.6	32.2	46.2		9.5	69.7	20.8		
Total %	5.3	3.1	7.7	16.2	7.7	25.7	1.5	34.8	1.9	2.9	4.1	8.9	3.8	27.9	8.3	40.1	

	FREEPORT BLVD. Southbound				MEADOWVIEW RD. Westbound				FREEPORT BLVD. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	5	29	19	53	78	184	10	272	15	**41**	24	**80**	29	174	100	303	708
07:30	12	**44**	16	**72**	**81**	187	**14**	**282**	12	37	14	63	**34**	198	**119**	351	**768**
07:45	14	26	18	58	59	**204**	7	270	**16**	26	20	62	33	208	114	**355**	745
08:00	**16**	18	**25**	59	61	197	7	265	14	22	**30**	66	29	**211**	82	322	712
Total Volume	47	117	78	242	279	772	38	1089	57	126	88	271	125	791	415	1331	2933
% App. Total	19.4	48.3	32.2		25.6	70.9	3.5		21	46.5	32.5		9.4	59.4	31.2		
PHF	.734	.665	.780	.840	.861	.946	.679	.965	.891	.768	.733	.847	.919	.937	.872	.937	.955

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File Name : MEADOWVIEW-FREEPORT-F
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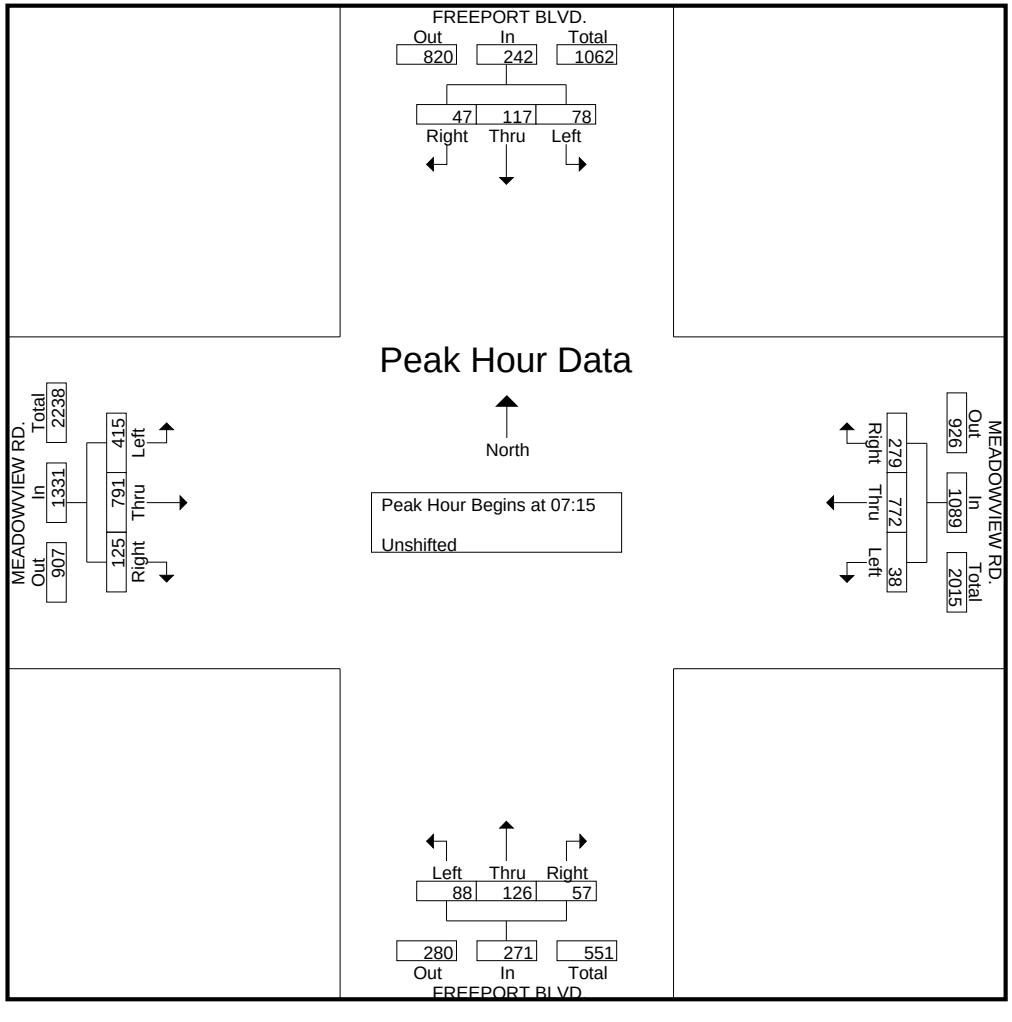

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:30

16:30	45	19	89	153	38	**228**	11	**277**	15	15	34	64	25	**262**	40	**327**	821
16:45	59	**31**	93	183	53	181	**14**	248	21	**21**	38	80	33	228	42	303	814
17:00	85	21	82	188	**54**	193	8	255	13	17	31	61	32	232	**45**	309	813
17:15	**111**	15	**112**	**238**	51	181	9	241	**22**	21	**44**	**87**	**43**	250	31	324	**890**
Total Volume	300	86	376	762	196	783	42	1021	71	74	147	292	133	972	158	1263	3338
% App. Total	39.4	11.3	49.3		19.2	76.7	4.1		24.3	25.3	50.3		10.5	77	12.5		
PHF	.676	.694	.839	.800	.907	.859	.750	.921	.807	.881	.835	.839	.773	.927	.878	.966	.938

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File Name : MEADOWVIEW-FREEPORT-F
Site Code : 00000000
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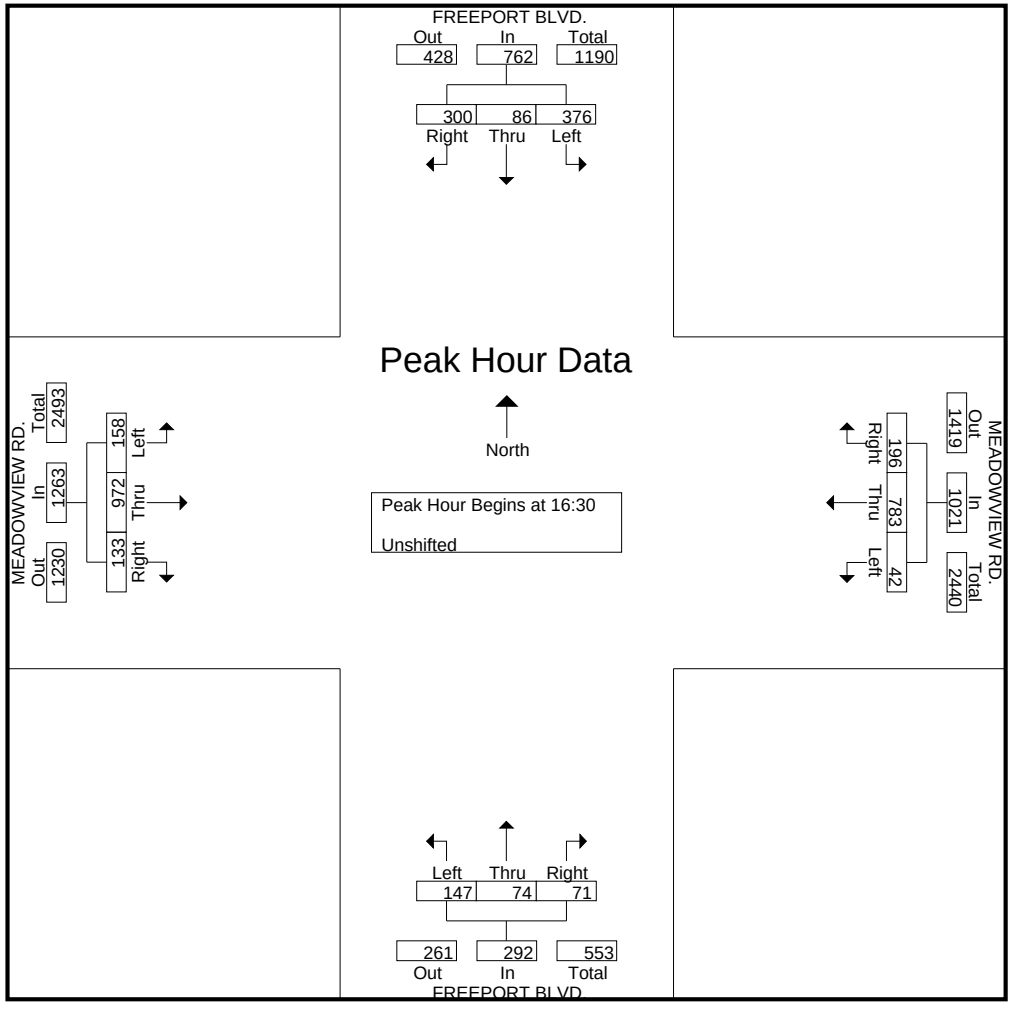

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File Name : MEADOWVIEW-MANORSIDE-F
Site Code : 00000000
Start Date : 2/6/2007
Page No : 1

Groups Printed- Unshifted

	Southbound				MEADOWVIEW RD. Westbound				MANORSIDE DR. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	0	0	0	0	0	237	5	242	12	0	11	23	3	152	0	155	420
07:15	0	0	0	0	0	250	5	255	20	0	15	35	6	196	0	202	492
07:30	0	0	0	0	0	232	15	247	18	0	16	34	12	231	0	243	524
07:45	0	0	0	0	0	267	6	273	13	0	21	34	14	255	0	269	576
Total	0	0	0	0	0	986	31	1017	63	0	63	126	35	834	0	869	2012
08:00	0	0	0	0	0	258	6	264	13	0	16	29	19	235	0	254	547
08:15	0	0	0	0	0	224	10	234	5	0	6	11	12	187	0	199	444
08:30	0	0	0	0	0	174	9	183	7	0	5	12	10	139	0	149	344
08:45	0	0	0	0	0	195	3	198	10	0	10	20	4	127	0	131	349
Total	0	0	0	0	0	851	28	879	35	0	37	72	45	688	0	733	1684
*** BREAK ***																	
16:00	0	0	0	0	0	238	14	252	9	0	11	20	13	295	0	308	580
16:15	0	0	0	0	0	294	12	306	11	0	6	17	15	284	0	299	622
16:30	0	0	0	0	0	235	21	256	10	0	7	17	23	291	0	314	587
16:45	0	0	0	0	0	219	17	236	10	0	5	15	12	261	0	273	524
Total	0	0	0	0	0	986	64	1050	40	0	29	69	63	1131	0	1194	2313
17:00	0	0	0	0	0	237	22	259	15	0	5	20	16	288	0	304	583
17:15	0	0	0	0	0	230	14	244	7	0	6	13	13	297	0	310	567
17:30	0	0	0	0	0	212	17	229	10	0	11	21	11	299	0	310	560
17:45	0	0	0	0	0	260	14	274	8	0	3	11	14	304	0	318	603
Total	0	0	0	0	0	939	67	1006	40	0	25	65	54	1188	0	1242	2313
Grand Total	0	0	0	0	0	3762	190	3952	178	0	154	332	197	3841	0	4038	8322
Apprch %	0	0	0		0	95.2	4.8		53.6	0	46.4		4.9	95.1	0		
Total %	0	0	0	0	0	45.2	2.3	47.5	2.1	0	1.9	4	2.4	46.2	0	48.5	

	Southbound				MEADOWVIEW RD. Westbound				MANORSIDE DR. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	0	0	0	0	0	250	5	255	**20**	0	15	**35**	6	196	0	202	492
07:30	0	0	0	0	0	232	**15**	247	18	0	16	34	12	231	0	243	524
07:45	0	0	0	0	0	**267**	6	**273**	13	0	**21**	34	14	**255**	0	**269**	**576**
08:00	0	0	0	0	0	258	6	264	13	0	16	29	**19**	235	0	254	547
Total Volume	0	0	0	0	0	1007	32	1039	64	0	68	132	51	917	0	968	2139
% App. Total	0	0	0		0	96.9	3.1		48.5	0	51.5		5.3	94.7	0		
PHF	.000	.000	.000	.000	.000	.943	.533	.951	.800	.000	.810	.943	.671	.899	.000	.900	.928

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File Name : MEADOWVIEW-MANORSIDE-F
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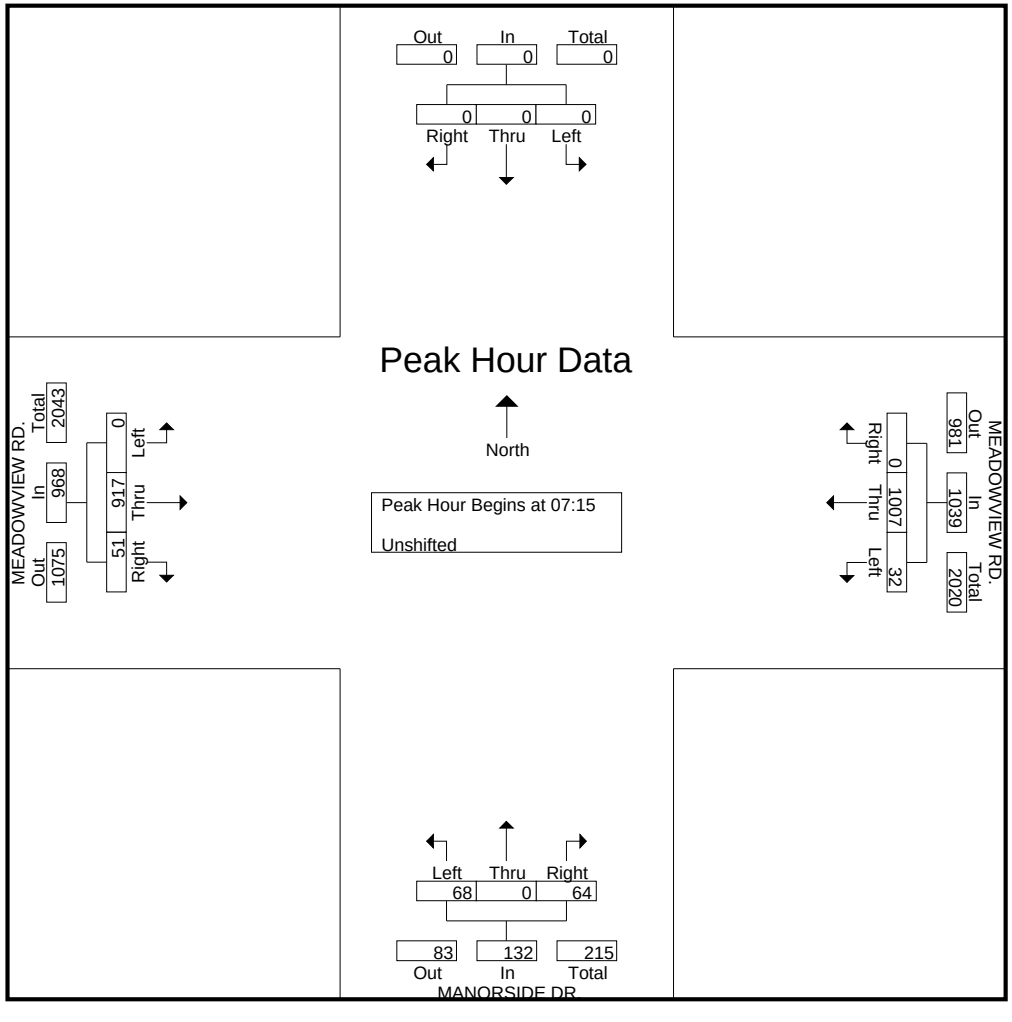

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:15

16:15	0	0	0	0	0	**294**	12	**306**	11	0	6	17	15	284	0	299	**622**
16:30	0	0	0	0	0	235	21	256	10	0	**7**	17	**23**	**291**	0	**314**	587
16:45	0	0	0	0	0	219	17	236	10	0	5	15	12	261	0	273	524
17:00	0	0	0	0	0	237	**22**	259	**15**	0	5	**20**	16	288	0	304	583
Total Volume	0	0	0	0	0	985	72	1057	46	0	23	69	66	1124	0	1190	2316
% App. Total	0	0	0		0	93.2	6.8		66.7	0	33.3		5.5	94.5	0		
PHF	.000	.000	.000	.000	.000	.838	.818	.864	.767	.000	.821	.862	.717	.966	.000	.947	.931

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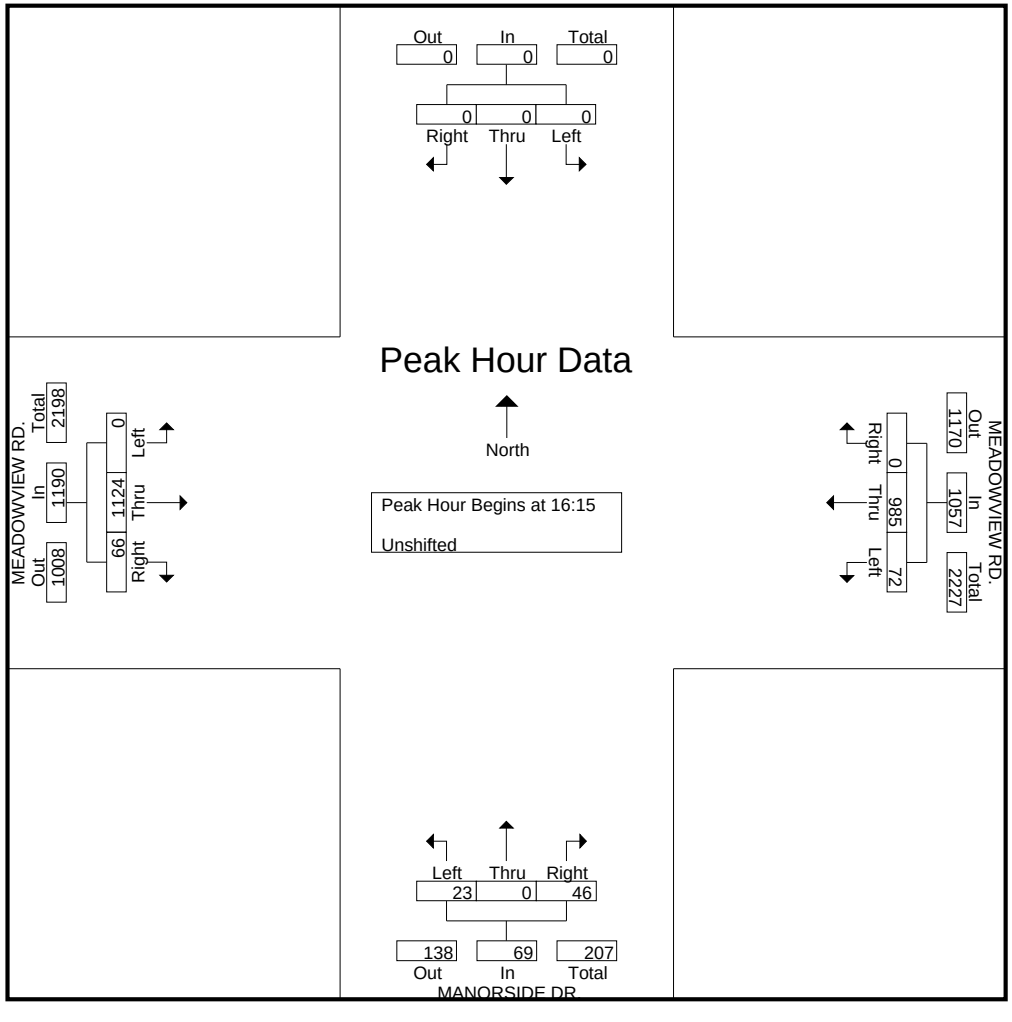

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File Name : POCKET-I-5 NB RAMPS
Site Code : 00000000
Start Date : 2/6/2007
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Groups Printed- Unshifted

	I-5 NORTHBOUND RAMPS Southbound				POCKET RD. Westbound				I-5 NORTHBOUND RAMPS Northbound				POCKET RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	0	0	0	0	182	55	0	237	63	0	25	88	121	178	0	299	624
07:15	0	0	0	0	171	58	0	229	94	0	50	144	126	213	0	339	712
07:30	0	0	0	0	152	97	0	249	79	0	39	118	90	284	0	374	741
07:45	0	0	0	0	133	104	0	237	101	0	62	163	91	263	0	354	754
Total	0	0	0	0	638	314	0	952	337	0	176	513	428	938	0	1366	2831
08:00	0	0	0	0	165	111	0	276	0	0	58	58	109	234	0	343	677
08:15	0	0	0	0	227	83	0	310	100	0	63	163	118	192	0	310	783
08:30	0	0	0	0	182	73	0	255	79	0	48	127	131	130	0	261	643
08:45	0	0	0	0	212	100	0	312	92	0	43	135	109	129	0	238	685
Total	0	0	0	0	786	367	0	1153	271	0	212	483	467	685	0	1152	2788
*** BREAK ***																	
16:00	0	0	0	0	120	150	0	270	44	0	55	99	31	236	0	267	636
16:15	0	0	0	0	120	182	0	302	53	0	44	97	41	286	0	327	726
16:30	0	0	0	0	122	174	0	296	49	0	50	99	50	263	0	313	708
16:45	0	0	0	0	112	190	0	302	67	0	50	117	30	235	0	265	684
Total	0	0	0	0	474	696	0	1170	213	0	199	412	152	1020	0	1172	2754
17:00	0	0	0	0	107	215	0	322	46	0	53	99	59	288	0	347	768
17:15	0	0	0	0	94	228	0	322	38	0	73	111	47	280	0	327	760
17:30	0	0	0	0	93	191	0	284	47	0	69	116	52	253	0	305	705
17:45	0	0	0	0	98	199	0	297	50	0	72	122	41	236	0	277	696
Total	0	0	0	0	392	833	0	1225	181	0	267	448	199	1057	0	1256	2929
Grand Total	0	0	0	0	2290	2210	0	4500	1002	0	854	1856	1246	3700	0	4946	11302
Apprch %	0	0	0		50.9	49.1	0		54	0	46		25.2	74.8	0		
Total %	0	0	0	0	20.3	19.6	0	39.8	8.9	0	7.6	16.4	11	32.7	0	43.8	

	I-5 NORTHBOUND RAMPS Southbound				POCKET RD. Westbound				I-5 NORTHBOUND RAMPS Northbound				POCKET RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	0	0	0	152	97	0	249	79	0	39	118	90	**284**	0	**374**	741
07:45	0	0	0	0	133	104	0	237	**101**	0	62	**163**	91	263	0	354	754
08:00	0	0	0	0	165	**111**	0	276	0	0	58	58	109	234	0	343	677
08:15	0	0	0	0	**227**	83	0	**310**	100	0	**63**	163	**118**	192	0	310	**783**
Total Volume	0	0	0	0	677	395	0	1072	280	0	222	502	408	973	0	1381	2955
% App. Total	0	0	0		63.2	36.8	0		55.8	0	44.2		29.5	70.5	0		
PHF	.000	.000	.000	.000	.746	.890	.000	.865	.693	.000	.881	.770	.864	.857	.000	.923	.943

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File Name : POCKET-I-5 NB RAMPS
Site Code : 00000000
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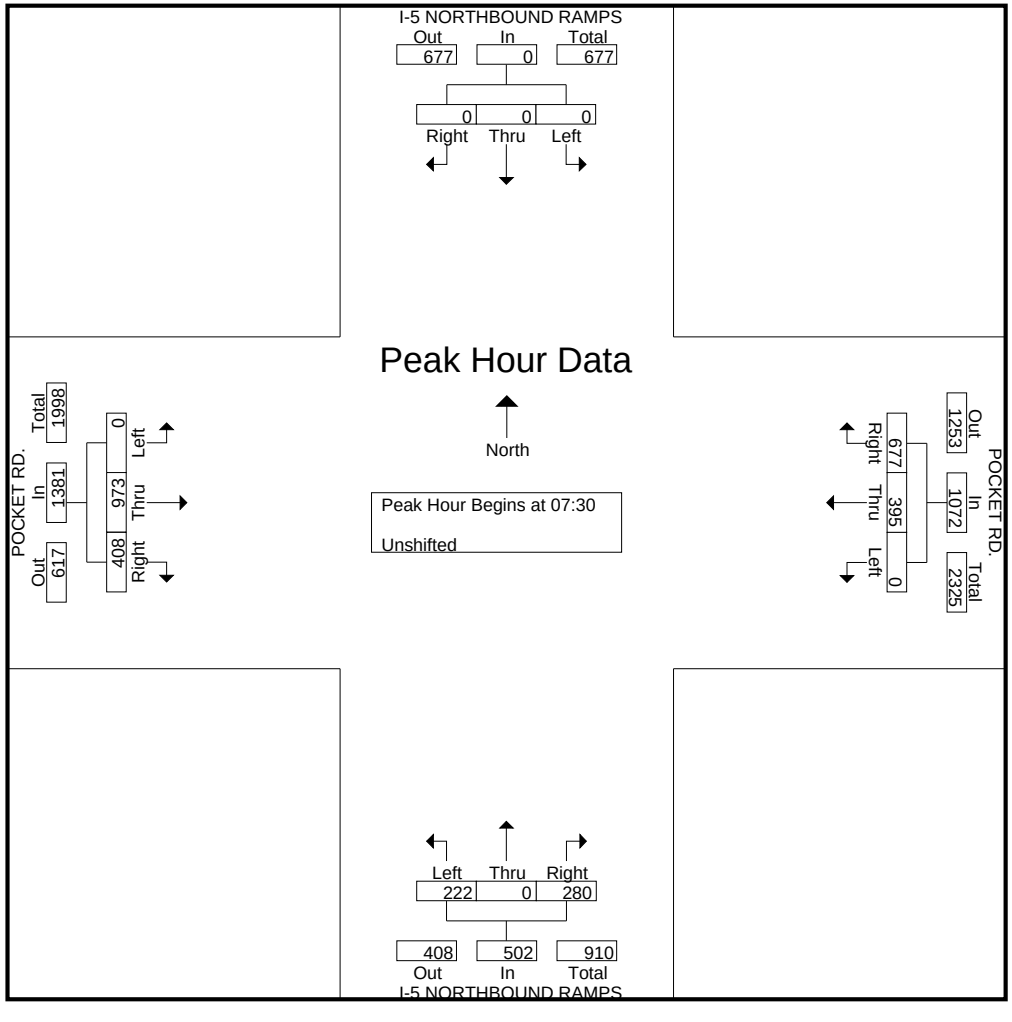

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	0	0	0	0	**107**	215	0	**322**	46	0	53	99	**59**	**288**	0	**347**	**768**
17:15	0	0	0	0	94	**228**	0	322	38	0	**73**	111	47	280	0	327	760
17:30	0	0	0	0	93	191	0	284	47	0	69	116	52	253	0	305	705
17:45	0	0	0	0	98	199	0	297	**50**	0	72	**122**	41	236	0	277	696
Total Volume	0	0	0	0	392	833	0	1225	181	0	267	448	199	1057	0	1256	2929
% App. Total	0	0	0		32	68	0		40.4	0	59.6		15.8	84.2	0		
PHF	.000	.000	.000	.000	.916	.913	.000	.951	.905	.000	.914	.918	.843	.918	.000	.905	.953

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File Name : POCKET-I-5 NB RAMPS
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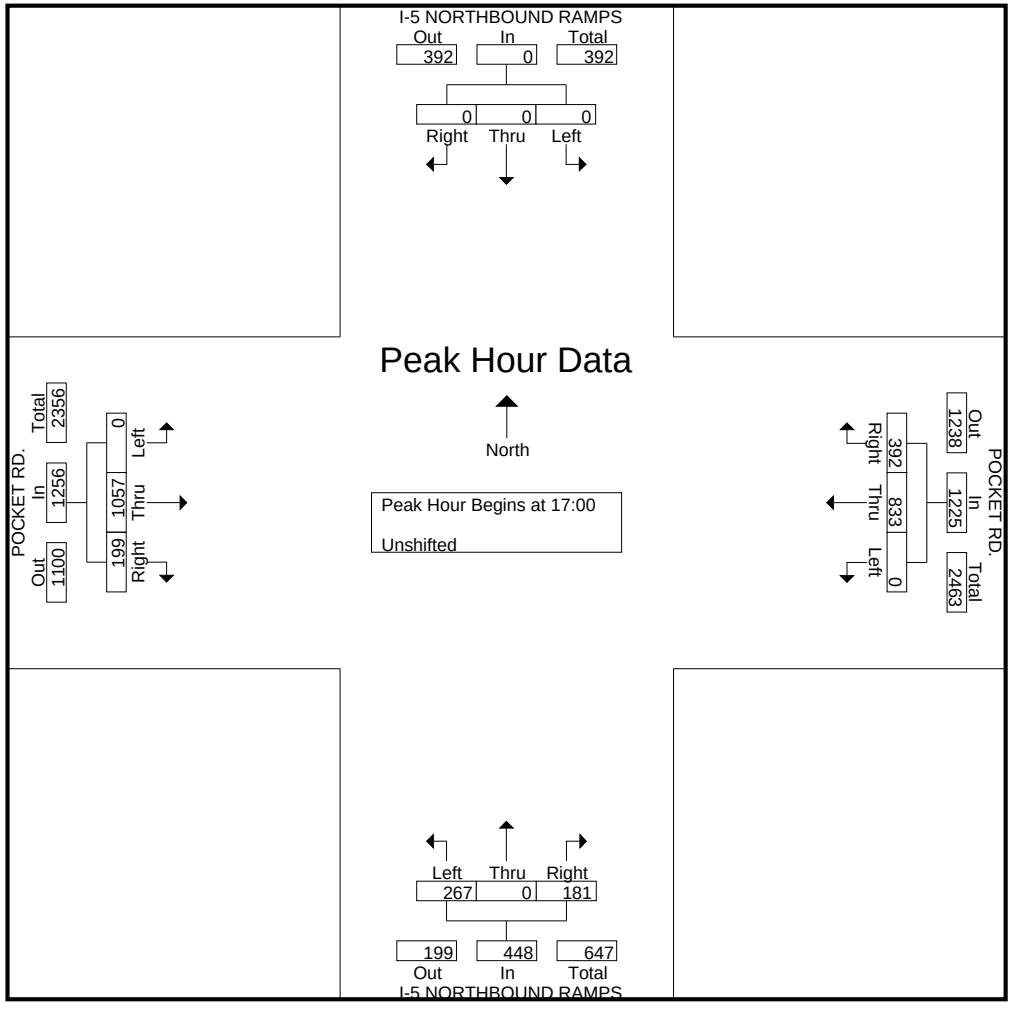

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File Name : POCKET-I-5 SB RAMPS
Site Code : 00000000
Start Date : 2/6/2007
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Groups Printed- Unshifted

	I-5 SOUTHBOUND RAMPS Southbound				POCKET RD. Westbound				I-5 SOUTHBOUND RAMPS Northbound				POCKET RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	18	0	79	97	29	51	0	80	0	0	0	0	53	220	0	273	450
07:15	22	0	96	118	28	80	0	108	0	0	0	0	66	243	0	309	535
07:30	35	0	112	147	30	106	0	136	0	0	0	0	49	262	0	311	594
07:45	25	0	115	140	24	142	0	166	0	0	0	0	64	239	0	303	609
Total	100	0	402	502	111	379	0	490	0	0	0	0	232	964	0	1196	2188
08:00	43	0	105	148	21	148	0	169	0	0	0	0	57	238	0	295	612
08:15	44	0	95	139	22	124	0	146	0	0	0	0	38	215	0	253	538
08:30	41	0	57	98	23	98	0	121	0	0	0	0	51	204	0	255	474
08:45	26	0	72	98	34	109	0	143	0	0	0	0	29	166	0	195	436
Total	154	0	329	483	100	479	0	579	0	0	0	0	175	823	0	998	2060
*** BREAK ***																	
16:00	94	0	169	263	48	157	0	205	0	0	0	0	41	98	0	139	607
16:15	107	0	210	317	51	175	0	226	0	0	0	0	45	117	0	162	705
16:30	93	0	193	286	53	171	0	224	0	0	0	0	54	120	0	174	684
16:45	116	0	152	268	69	171	0	240	0	0	0	0	51	113	0	164	672
Total	410	0	724	1134	221	674	0	895	0	0	0	0	191	448	0	639	2668
17:00	100	0	182	282	73	195	0	268	0	0	0	0	61	165	0	226	776
17:15	117	0	193	310	89	212	0	301	0	0	0	0	59	134	0	193	804
17:30	132	0	164	296	56	204	0	260	0	0	0	0	60	141	0	201	757
17:45	117	0	148	265	68	213	0	281	0	0	0	0	51	129	0	180	726
Total	466	0	687	1153	286	824	0	1110	0	0	0	0	231	569	0	800	3063
Grand Total	1130	0	2142	3272	718	2356	0	3074	0	0	0	0	829	2804	0	3633	9979
Apprch %	34.5	0	65.5		23.4	76.6	0		0	0	0		22.8	77.2	0		
Total %	11.3	0	21.5	32.8	7.2	23.6	0	30.8	0	0	0	0	8.3	28.1	0	36.4	

	I-5 SOUTHBOUND RAMPS Southbound				POCKET RD. Westbound				I-5 SOUTHBOUND RAMPS Northbound				POCKET RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	35	0	112	147	**30**	106	0	136	0	0	0	0	49	**262**	0	**311**	594
07:45	25	0	**115**	140	24	142	0	166	0	0	0	0	**64**	239	0	303	609
08:00	43	0	105	**148**	21	**148**	0	**169**	0	0	0	0	57	238	0	295	**612**
08:15	**44**	0	95	139	22	124	0	146	0	0	0	0	38	215	0	253	538
Total Volume	147	0	427	574	97	520	0	617	0	0	0	0	208	954	0	1162	2353
% App. Total	25.6	0	74.4		15.7	84.3	0		0	0	0		17.9	82.1	0		
PHF	.835	.000	.928	.970	.808	.878	.000	.913	.000	.000	.000	.000	.812	.910	.000	.934	.961

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File Name : POCKET-I-5 SB RAMPS
Site Code : 00000000
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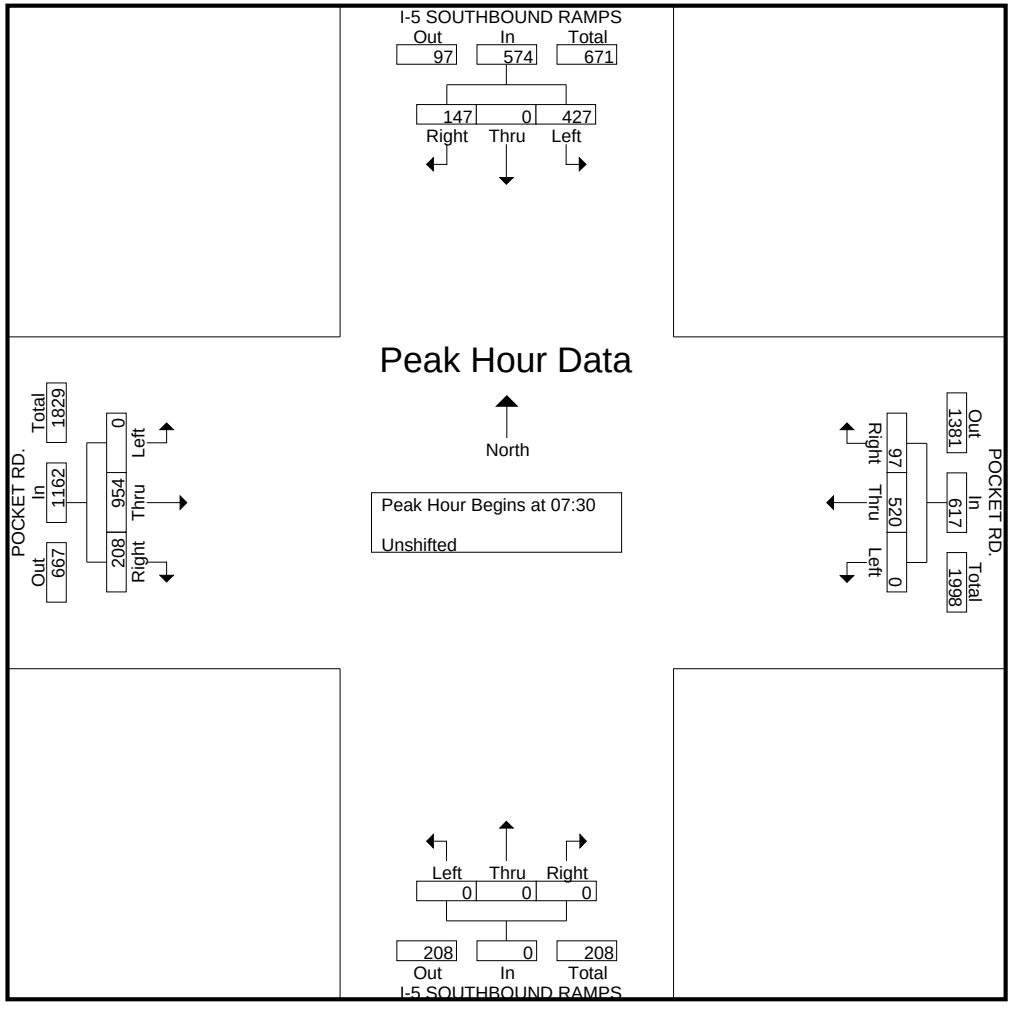

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	100	0	182	282	73	195	0	268	0	0	0	0	**61**	**165**	0	**226**	776
17:15	117	0	**193**	**310**	**89**	212	0	**301**	0	0	0	0	59	134	0	193	**804**
17:30	**132**	0	164	296	56	204	0	260	0	0	0	0	60	141	0	201	757
17:45	117	0	148	265	68	**213**	0	281	0	0	0	0	51	129	0	180	726
Total Volume	466	0	687	1153	286	824	0	1110	0	0	0	0	231	569	0	800	3063
% App. Total	40.4	0	59.6		25.8	74.2	0		0	0	0		28.9	71.1	0		
PHF	.883	.000	.890	.930	.803	.967	.000	.922	.000	.000	.000	.000	.947	.862	.000	.885	.952

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File Name : POCKET-I-5 SB RAMPS
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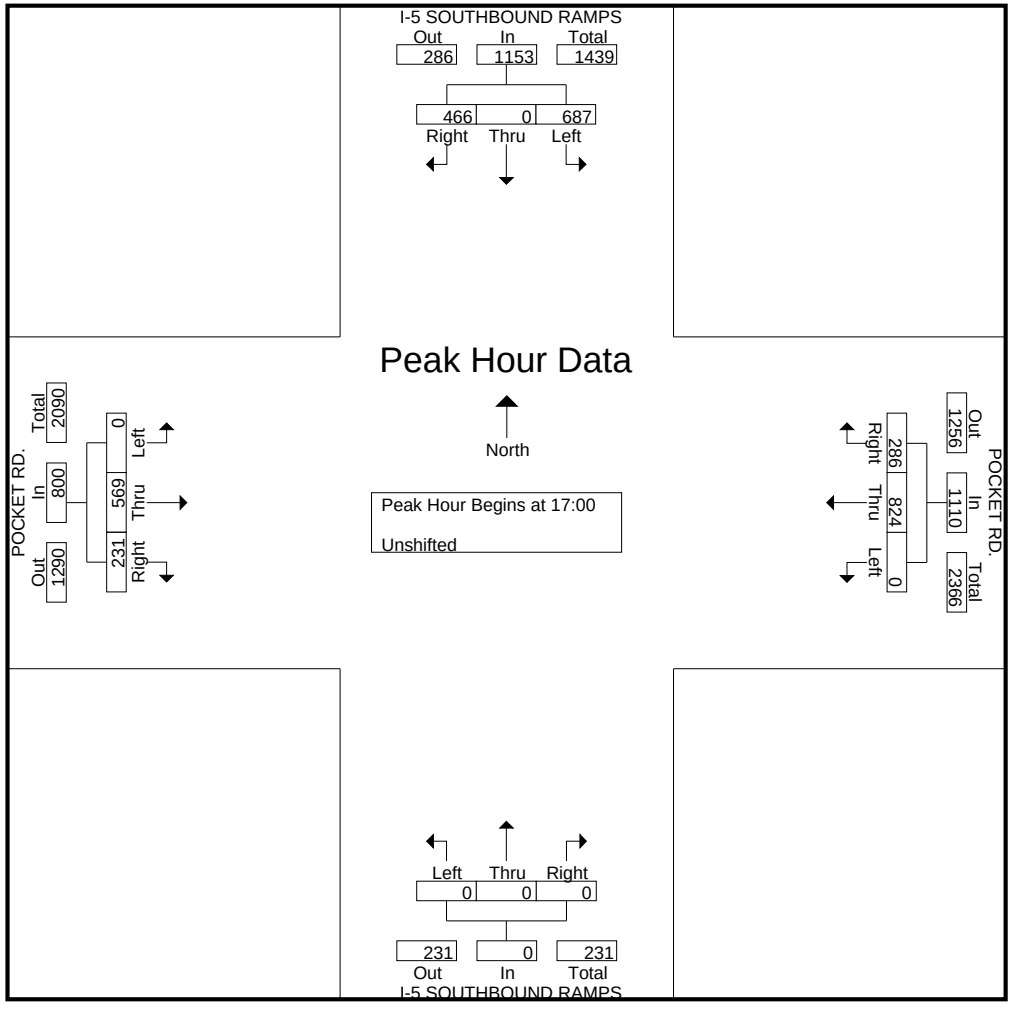

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File Name : STONECREST-FREEPORT-F
Site Code : 00000000
Start Date : 2/7/2007
Page No : 1

Groups Printed- Unshifted

	FREEPORT BLVD. Southbound				STONECREST AVE. Westbound				FREEPORT BLVD. Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	0	36	0	36	1	0	0	1	0	70	0	70	0	0	0	0	107
07:15	0	41	1	42	0	0	0	0	1	85	0	86	0	0	0	0	128
07:30	0	51	1	52	0	0	0	0	0	84	0	84	0	0	0	0	136
07:45	0	40	0	40	0	0	0	0	1	73	0	74	0	0	0	0	114
Total	0	168	2	170	1	0	0	1	2	312	0	314	0	0	0	0	485
08:00	0	42	0	42	2	0	1	3	0	40	0	40	0	0	0	0	85
08:15	0	54	2	56	0	0	0	0	0	52	0	52	0	0	0	0	108
08:30	0	25	1	26	0	0	0	0	0	42	0	42	0	0	0	0	68
08:45	0	29	0	29	0	0	0	0	0	39	0	39	0	0	0	0	68
Total	0	150	3	153	2	0	1	3	0	173	0	173	0	0	0	0	329
*** BREAK ***																	
16:00	0	48	1	49	0	0	0	0	0	60	0	60	0	0	0	0	109
16:15	0	65	0	65	0	0	0	0	0	58	0	58	0	0	0	0	123
16:30	0	58	0	58	1	0	0	1	0	55	0	55	0	0	0	0	114
16:45	0	65	1	66	1	0	0	1	0	78	0	78	0	0	0	0	145
Total	0	236	2	238	2	0	0	2	0	251	0	251	0	0	0	0	491
17:00	0	61	1	62	2	0	0	2	0	59	0	59	0	0	0	0	123
17:15	0	52	0	52	1	0	0	1	1	81	0	82	0	0	0	0	135
17:30	0	45	0	45	1	0	0	1	0	86	0	86	0	0	0	0	132
17:45	0	47	1	48	2	0	0	2	0	60	0	60	0	0	0	0	110
Total	0	205	2	207	6	0	0	6	1	286	0	287	0	0	0	0	500
Grand Total	0	759	9	768	11	0	1	12	3	1022	0	1025	0	0	0	0	1805
Apprch %	0	98.8	1.2		91.7	0	8.3		0.3	99.7	0		0	0	0		
Total %	0	42	0.5	42.5	0.6	0	0.1	0.7	0.2	56.6	0	56.8	0	0	0	0	

	FREEPORT BLVD. Southbound				STONECREST AVE. Westbound				FREEPORT BLVD. Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00																	
07:00	0	36	0	36	**1**	0	0	**1**	0	70	0	70	0	0	0	0	107
07:15	0	41	**1**	42	0	0	0	0	**1**	**85**	0	**86**	0	0	0	0	128
07:30	0	**51**	1	**52**	0	0	0	0	0	84	0	84	0	0	0	0	**136**
07:45	0	40	0	40	0	0	0	0	1	73	0	74	0	0	0	0	114
Total Volume	0	168	2	170	1	0	0	1	2	312	0	314	0	0	0	0	485
% App. Total	0	98.8	1.2		100	0	0		0.6	99.4	0		0	0	0		
PHF	.000	.824	.500	.817	.250	.000	.000	.250	.500	.918	.000	.913	.000	.000	.000	.000	.892

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File Name : STONECREST-FREEPORT-F
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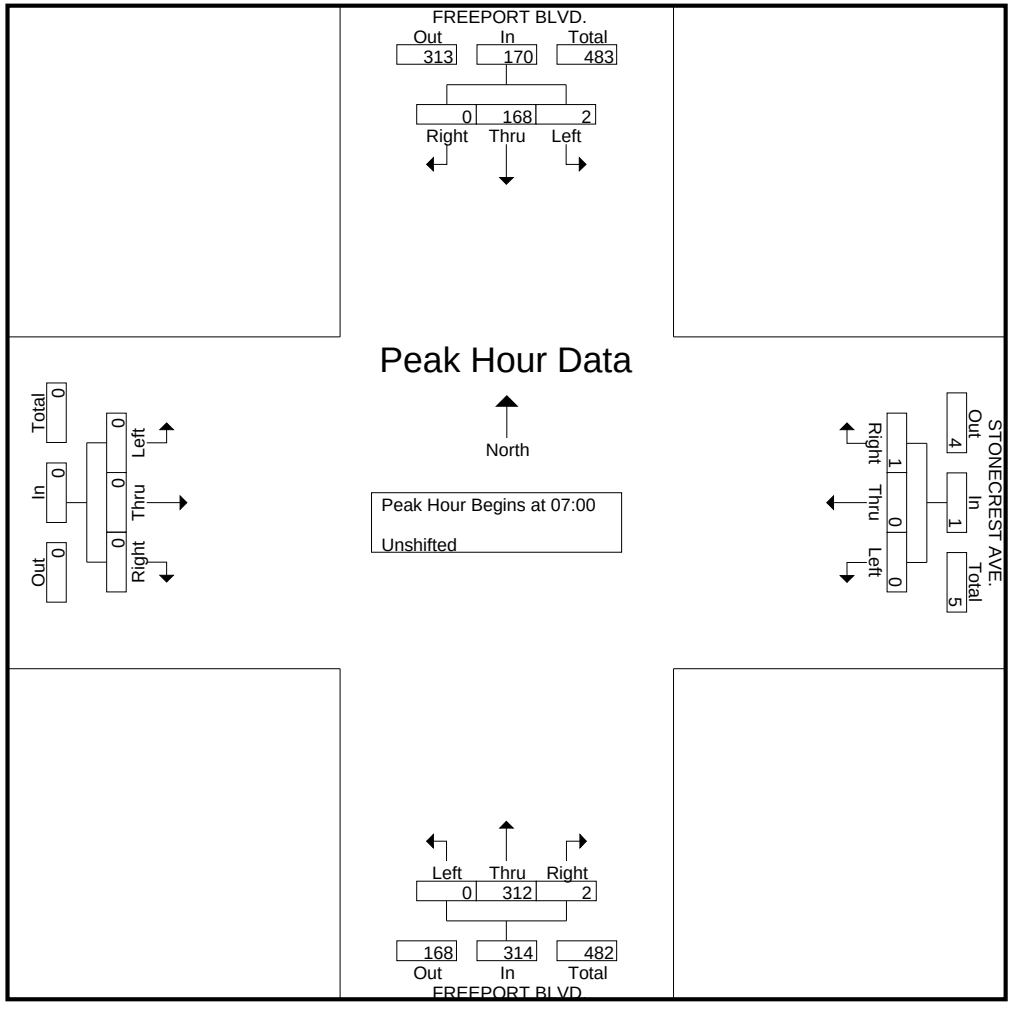

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 16:45

16:45	0	**65**	**1**	**66**	1	0	0	1	0	78	0	78	0	0	0	0	**145**
17:00	0	61	1	62	**2**	0	0	**2**	0	59	0	59	0	0	0	0	123
17:15	0	52	0	52	1	0	0	1	**1**	81	0	82	0	0	0	0	135
17:30	0	45	0	45	1	0	0	1	0	**86**	0	**86**	0	0	0	0	132
Total Volume	0	223	2	225	5	0	0	5	1	304	0	305	0	0	0	0	535
% App. Total	0	99.1	0.9		100	0	0		0.3	99.7	0		0	0	0		
PHF	.000	.858	.500	.852	.625	.000	.000	.625	.250	.884	.000	.887	.000	.000	.000	.000	.922

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File Name : STONECREST-FREEPORT-F
Site Code : 00000000
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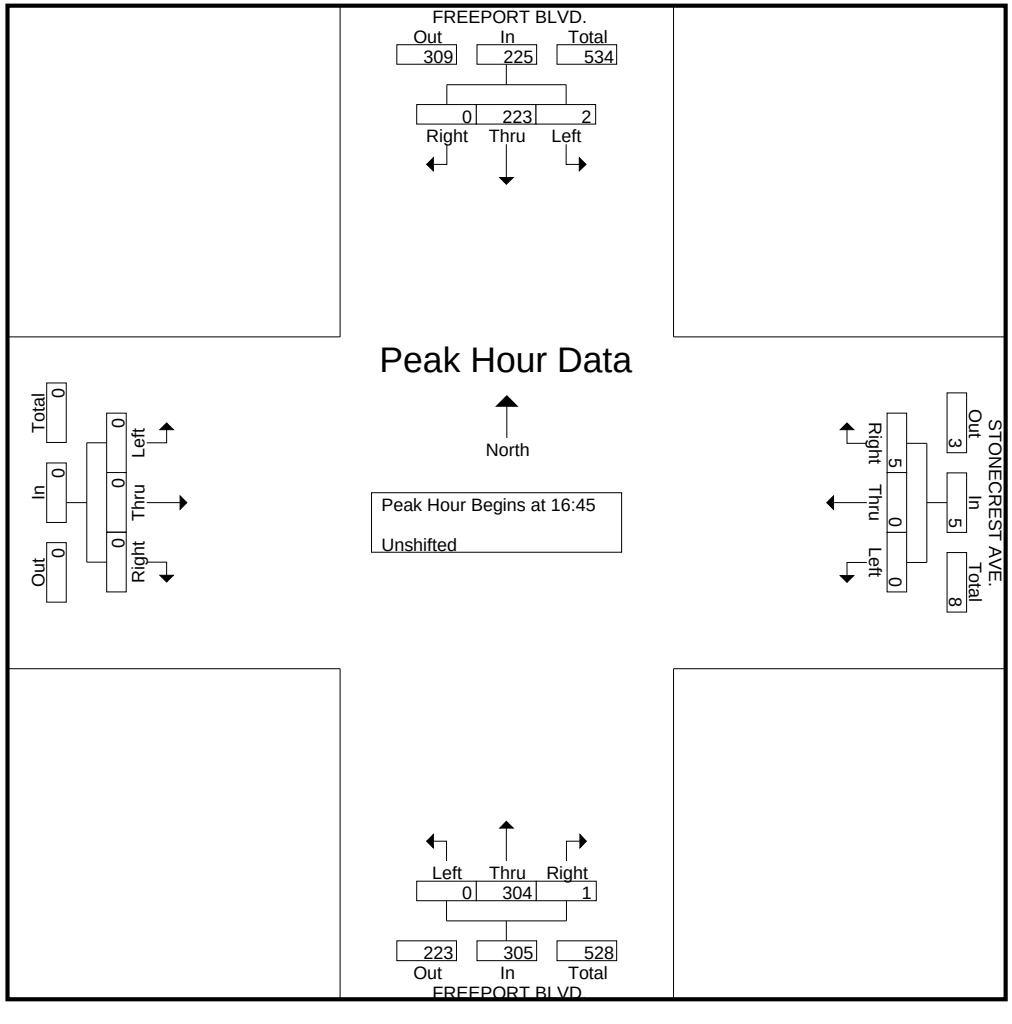

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File Name : COSUMNES-FRANKLIN-F
Site Code : 00000000
Start Date : 2/7/2007
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Groups Printed- Unshifted

	FRANKLIN BLVD. Southbound				COSUMNES RIVER BLVD. Westbound				FRANKLIN BLVD. Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	0	70	34	104	80	0	41	121	84	296	0	380	0	0	0	0	605
07:15	0	140	59	199	105	0	42	147	59	353	0	412	0	0	0	0	758
07:30	0	224	103	327	104	0	60	164	72	353	0	425	0	0	0	0	916
07:45	0	224	117	341	89	0	57	146	70	406	0	476	0	0	0	0	963
Total	0	658	313	971	378	0	200	578	285	1408	0	1693	0	0	0	0	3242
08:00	0	103	64	167	94	0	55	149	51	313	0	364	0	0	0	0	680
08:15	0	106	41	147	96	0	58	154	121	383	0	504	0	0	0	0	805
08:30	0	79	48	127	67	0	49	116	86	223	0	309	0	0	0	0	552
08:45	0	79	50	129	71	0	49	120	74	183	0	257	0	0	0	0	506
Total	0	367	203	570	328	0	211	539	332	1102	0	1434	0	0	0	0	2543
*** BREAK ***																	
16:00	0	244	73	317	108	0	95	203	63	172	0	235	0	0	0	0	755
16:15	0	228	84	312	75	0	82	157	65	147	0	212	0	0	0	0	681
16:30	0	237	104	341	73	0	100	173	73	149	0	222	0	0	0	0	736
16:45	0	297	73	370	82	0	80	162	48	191	0	239	0	0	0	0	771
Total	0	1006	334	1340	338	0	357	695	249	659	0	908	0	0	0	0	2943
17:00	0	278	101	379	90	0	106	196	56	179	0	235	0	0	0	0	810
17:15	0	323	97	420	69	0	93	162	67	164	0	231	0	0	0	0	813
17:30	0	270	90	360	66	0	148	214	70	186	0	256	0	0	0	0	830
17:45	0	317	95	412	83	0	120	203	88	167	0	255	0	0	0	0	870
Total	0	1188	383	1571	308	0	467	775	281	696	0	977	0	0	0	0	3323
Grand Total	0	3219	1233	4452	1352	0	1235	2587	1147	3865	0	5012	0	0	0	0	12051
Apprch %	0	72.3	27.7		52.3	0	47.7		22.9	77.1	0		0	0	0		
Total %	0	26.7	10.2	36.9	11.2	0	10.2	21.5	9.5	32.1	0	41.6	0	0	0	0	

	FRANKLIN BLVD. Southbound				COSUMNES RIVER BLVD. Westbound				FRANKLIN BLVD. Northbound				Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	**224**	103	327	**104**	0	**60**	**164**	72	353	0	425	0	0	0	0	916
07:45	0	224	**117**	**341**	89	0	57	146	70	**406**	0	476	0	0	0	0	**963**
08:00	0	103	64	167	94	0	55	149	51	313	0	364	0	0	0	0	680
08:15	0	106	41	147	96	0	58	154	**121**	383	0	**504**	0	0	0	0	805
Total Volume	0	657	325	982	383	0	230	613	314	1455	0	1769	0	0	0	0	3364
% App. Total	0	66.9	33.1		62.5	0	37.5		17.8	82.2	0		0	0	0		
PHF	.000	.733	.694	.720	.921	.000	.958	.934	.649	.896	.000	.877	.000	.000	.000	.000	.873

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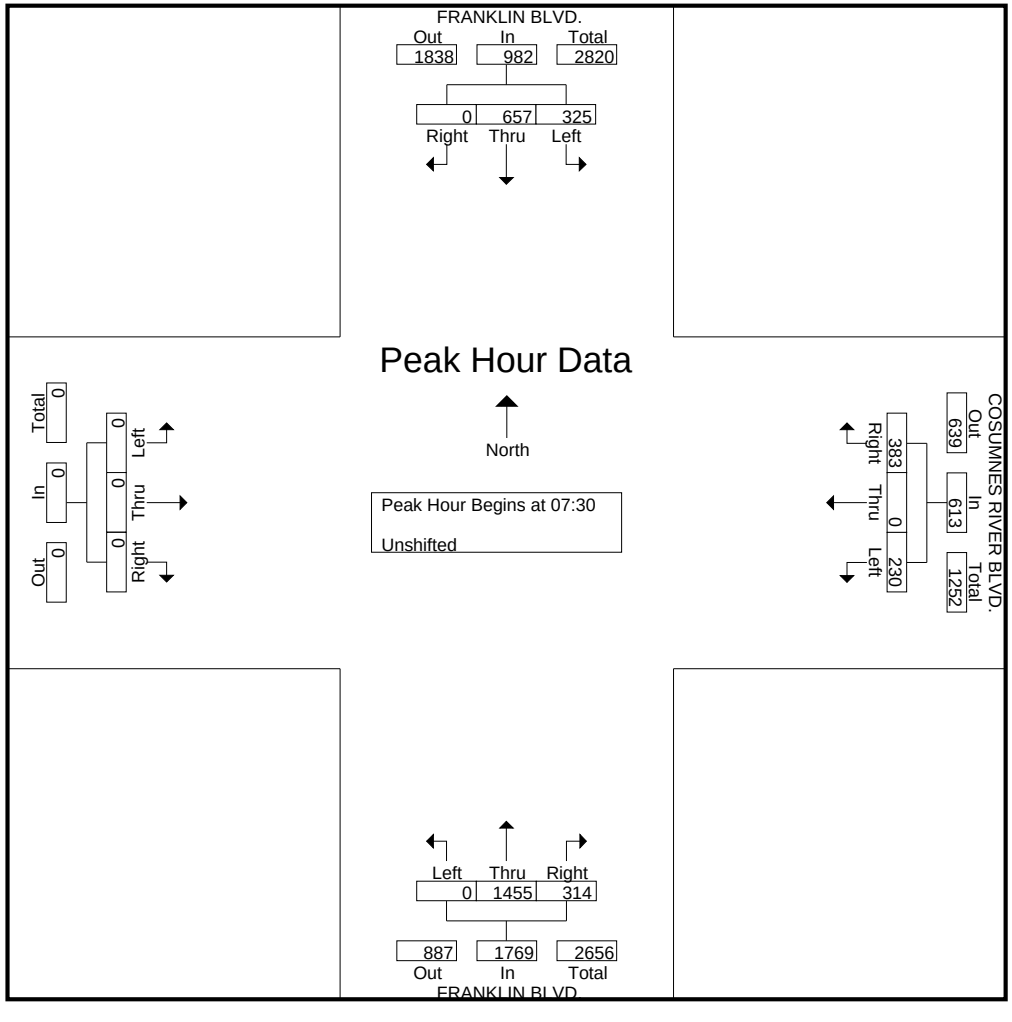

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	0	278	**101**	379	**90**	0	106	196	56	179	0	235	0	0	0	0	810
17:15	0	**323**	97	**420**	69	0	93	162	67	164	0	231	0	0	0	0	813
17:30	0	270	90	360	66	0	**148**	**214**	70	**186**	0	**256**	0	0	0	0	830
17:45	0	317	95	412	83	0	120	203	**88**	167	0	255	0	0	0	0	**870**
Total Volume	0	1188	383	1571	308	0	467	775	281	696	0	977	0	0	0	0	3323
% App. Total	0	75.6	24.4		39.7	0	60.3		28.8	71.2	0		0	0	0		
PHF	.000	.920	.948	.935	.856	.000	.789	.905	.798	.935	.000	.954	.000	.000	.000	.000	.955

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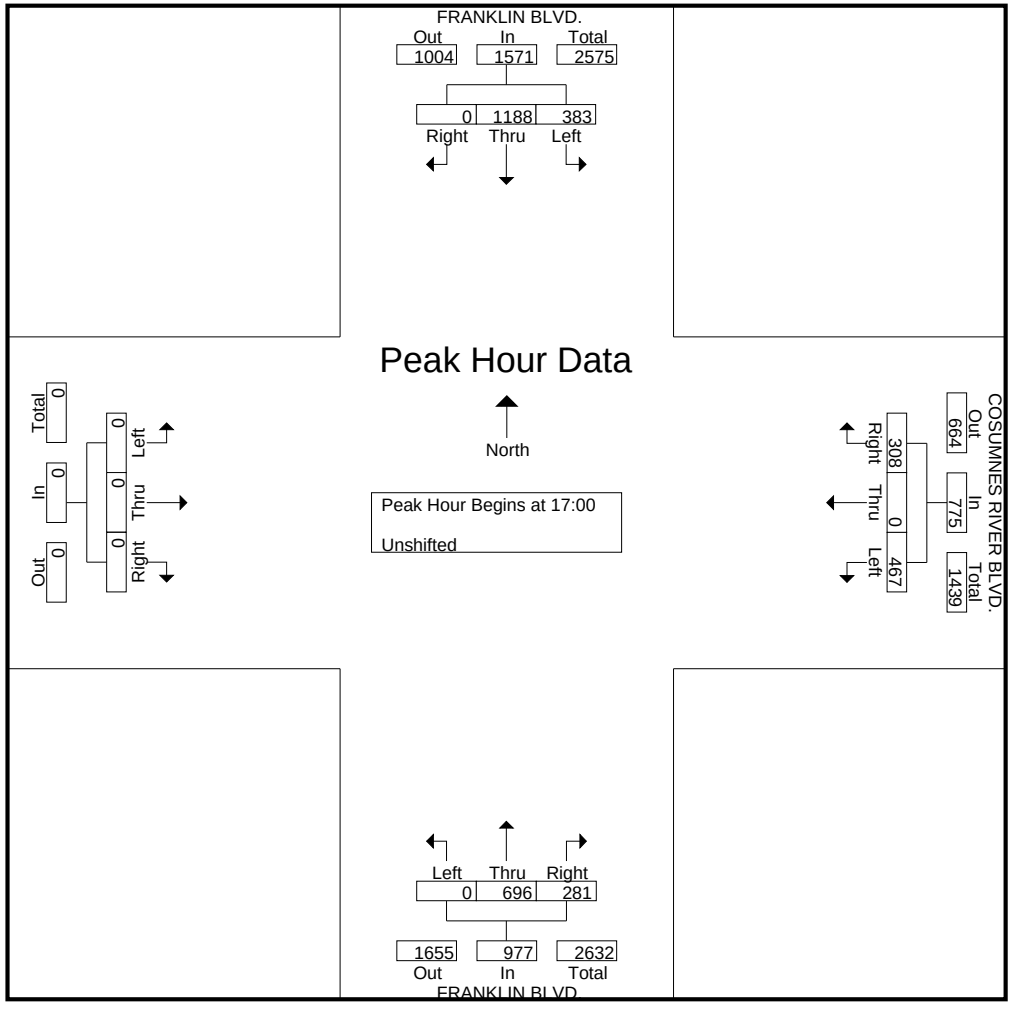

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File Name : MACK-FRANKLIN-F
Site Code : 00000000
Start Date : 2/8/2007
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Groups Printed- Unshifted

	FRANKLIN BLVD. Southbound				MACK RD. Westbound				FRANKLIN BLVD. Northbound				MACK RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	10	75	21	106	40	132	20	192	38	251	135	424	9	60	20	89	811
07:15 AM	12	81	27	120	48	185	25	258	41	255	144	440	12	65	27	104	922
07:30 AM	15	90	26	131	50	211	28	289	44	249	154	447	19	91	31	141	1008
07:45 AM	20	76	33	129	50	197	40	287	49	244	159	452	28	71	36	135	1003
Total	57	322	107	486	188	725	113	1026	172	999	592	1763	68	287	114	469	3744
08:00 AM	13	48	35	96	48	158	19	225	46	256	155	457	11	59	42	112	890
08:15 AM	8	58	23	89	40	133	19	192	59	227	144	430	10	61	30	101	812
08:30 AM	4	76	28	108	40	124	32	196	33	204	130	367	8	73	27	108	779
08:45 AM	10	76	35	121	44	104	28	176	22	170	114	306	15	78	41	134	737
Total	35	258	121	414	172	519	98	789	160	857	543	1560	44	271	140	455	3218
*** BREAK ***																	
04:00 PM	24	178	91	293	45	199	54	298	35	136	99	270	116	174	28	318	1179
04:15 PM	13	167	76	256	65	179	64	308	41	124	112	277	122	221	32	375	1216
04:30 PM	26	194	88	308	57	180	50	287	27	118	109	254	166	191	26	383	1232
04:45 PM	31	166	75	272	66	195	72	333	32	109	110	251	168	246	31	445	1301
Total	94	705	330	1129	233	753	240	1226	135	487	430	1052	572	832	117	1521	4928
05:00 PM	25	211	93	329	49	205	65	319	39	135	113	287	184	205	25	414	1349
05:15 PM	32	231	73	336	40	208	74	322	42	116	106	264	170	173	23	366	1288
05:30 PM	26	215	85	326	54	167	72	293	39	121	109	269	155	162	21	338	1226
05:45 PM	39	166	64	269	63	194	64	321	41	108	102	251	158	224	29	411	1252
Total	122	823	315	1260	206	774	275	1255	161	480	430	1071	667	764	98	1529	5115
Grand Total	308	2108	873	3289	799	2771	726	4296	628	2823	1995	5446	1351	2154	469	3974	17005
Apprch %	9.4	64.1	26.5		18.6	64.5	16.9		11.5	51.8	36.6		34	54.2	11.8		
Total %	1.8	12.4	5.1	19.3	4.7	16.3	4.3	25.3	3.7	16.6	11.7	32	7.9	12.7	2.8	23.4	

	FRANKLIN BLVD. Southbound				MACK RD. Westbound				FRANKLIN BLVD. Northbound				MACK RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	12	81	27	120	48	185	25	258	41	255	144	440	12	65	27	104	922
07:30 AM	15	**90**	26	**131**	**50**	**211**	28	**289**	44	249	154	447	19	**91**	31	**141**	**1008**
07:45 AM	**20**	76	33	129	50	197	**40**	287	**49**	244	**159**	452	**28**	71	36	135	1003
08:00 AM	13	48	**35**	96	48	158	19	225	46	**256**	155	**457**	11	59	**42**	112	890
Total Volume	60	295	121	476	196	751	112	1059	180	1004	612	1796	70	286	136	492	3823
% App. Total	12.6	62	25.4		18.5	70.9	10.6		10	55.9	34.1		14.2	58.1	27.6		
PHF	.750	.819	.864	.908	.980	.890	.700	.916	.918	.980	.962	.982	.625	.786	.810	.872	.948

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File Name : MACK-FRANKLIN-F
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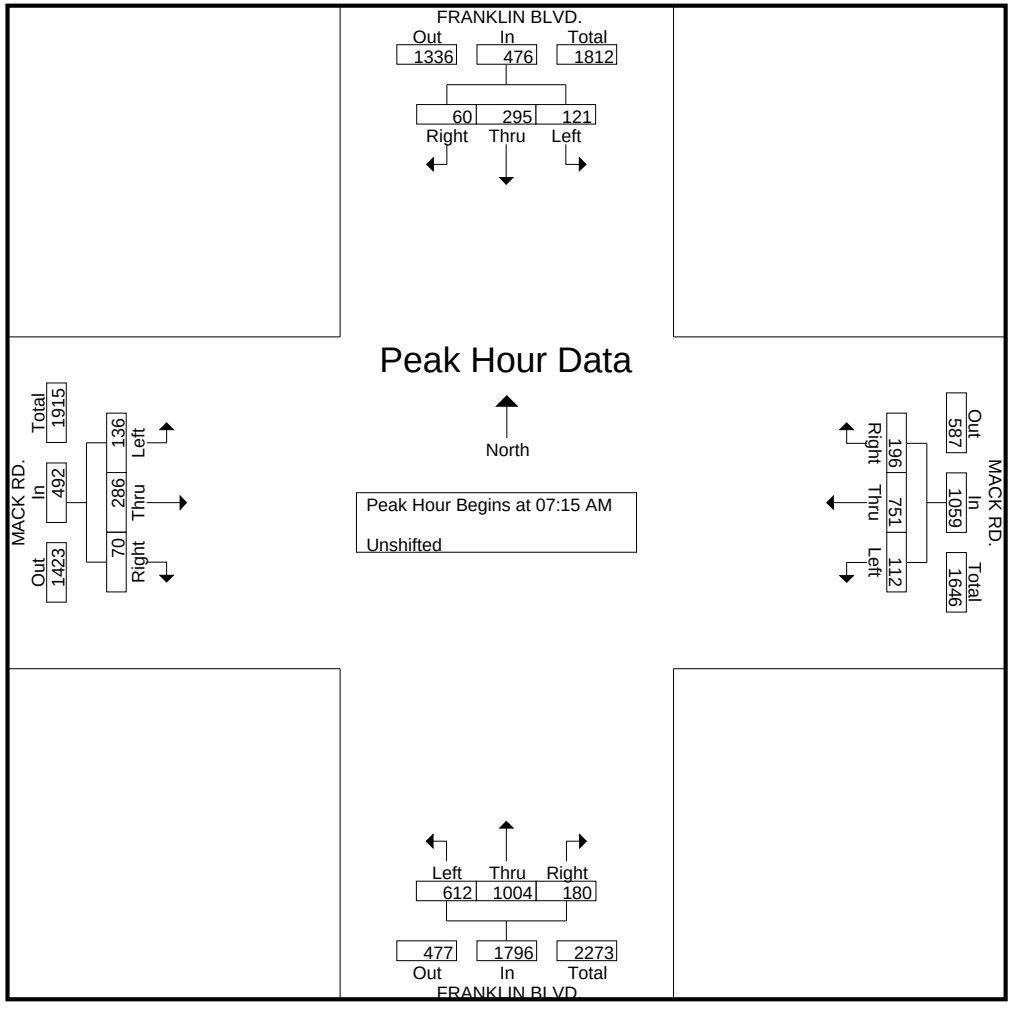

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:30 PM

04:30 PM	26	194	88	308	57	180	50	287	27	118	109	254	166	191	26	383	1232
04:45 PM	31	166	75	272	**66**	195	72	**333**	32	109	110	251	168	**246**	**31**	**445**	1301
05:00 PM	25	211	**93**	329	49	205	65	319	39	**135**	**113**	**287**	**184**	205	25	414	**1349**
05:15 PM	**32**	**231**	73	**336**	40	**208**	**74**	322	**42**	116	106	264	170	173	23	366	1288
Total Volume	114	802	329	1245	212	788	261	1261	140	478	438	1056	688	815	105	1608	5170
% App. Total	9.2	64.4	26.4		16.8	62.5	20.7		13.3	45.3	41.5		42.8	50.7	6.5		
PHF	.891	.868	.884	.926	.803	.947	.882	.947	.833	.885	.969	.920	.935	.828	.847	.903	.958

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File Name : MACK-FRANKLIN-F
Site Code : 00000000
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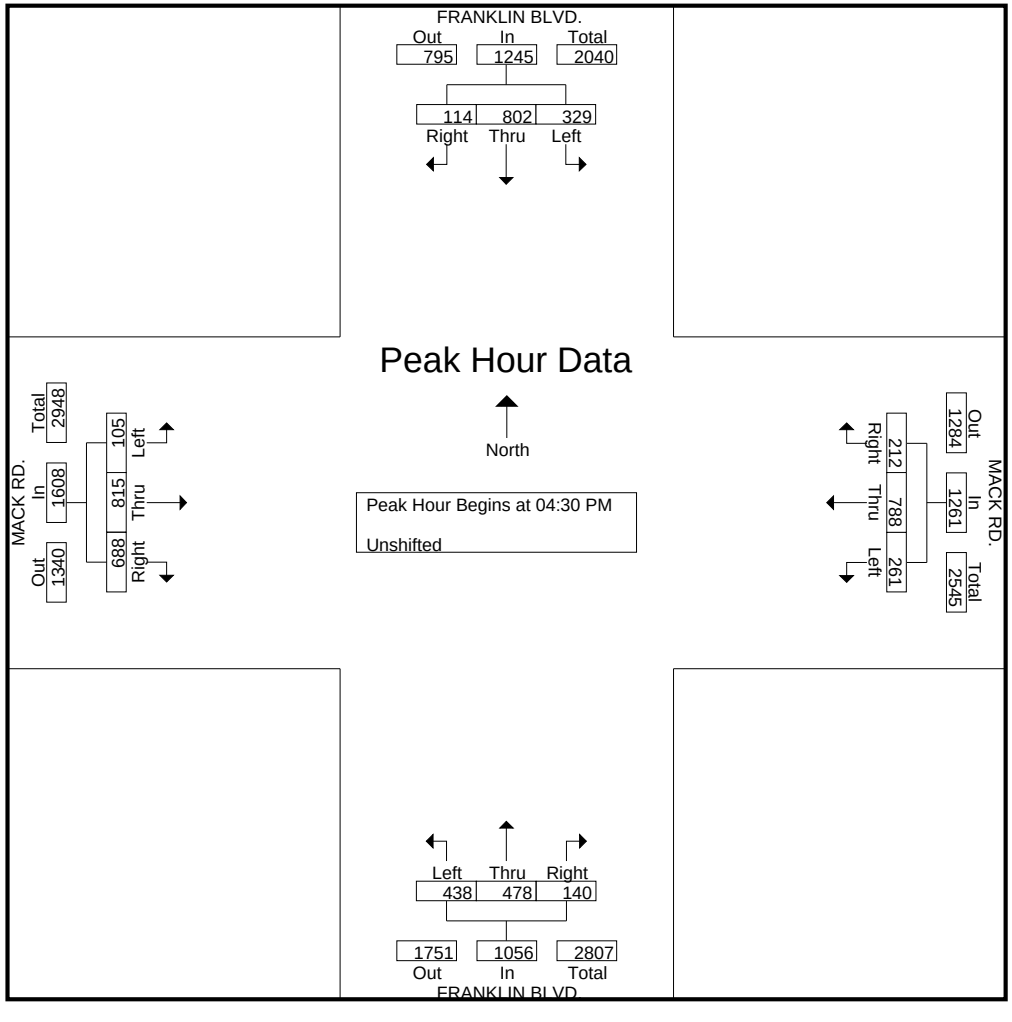

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File Name : MEADOWVIEW-24TH-F
Site Code : 00000000
Start Date : 2/7/2007
Page No : 1

Groups Printed- Unshifted

	24TH ST. Southbound				MEADOWVIEW RD. Westbound				24TH ST. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	17	20	32	69	52	188	17	257	15	32	13	60	9	145	41	195	581
07:15	19	21	35	75	60	206	27	293	15	40	21	76	11	138	48	197	641
07:30	16	39	38	93	103	245	36	384	35	59	13	107	7	202	42	251	835
07:45	24	40	50	114	116	242	55	413	36	85	20	141	18	164	61	243	911
Total	76	120	155	351	331	881	135	1347	101	216	67	384	45	649	192	886	2968
08:00	31	25	44	100	116	202	21	339	23	42	13	78	17	156	46	219	736
08:15	29	14	47	90	81	186	19	286	17	40	7	64	17	150	32	199	639
08:30	24	20	38	82	75	185	16	276	15	30	8	53	5	128	29	162	573
08:45	18	11	34	63	51	158	11	220	19	35	7	61	10	128	43	181	525
Total	102	70	163	335	323	731	67	1121	74	147	35	256	49	562	150	761	2473
*** BREAK ***																	
16:00	51	42	101	194	71	167	17	255	34	32	6	72	9	231	40	280	801
16:15	44	54	106	204	59	191	31	281	17	28	9	54	10	235	38	283	822
16:30	45	44	127	216	52	187	32	271	21	34	18	73	14	209	48	271	831
16:45	39	43	107	189	55	194	31	280	25	39	14	78	16	263	45	324	871
Total	179	183	441	803	237	739	111	1087	97	133	47	277	49	938	171	1158	3325
17:00	61	53	133	247	58	166	37	261	17	28	16	61	18	220	34	272	841
17:15	48	74	120	242	55	227	23	305	28	44	5	77	13	256	31	300	924
17:30	66	47	150	263	54	174	34	262	21	30	8	59	10	224	43	277	861
17:45	56	50	160	266	56	194	27	277	24	31	14	69	18	206	52	276	888
Total	231	224	563	1018	223	761	121	1105	90	133	43	266	59	906	160	1125	3514
Grand Total	588	597	1322	2507	1114	3112	434	4660	362	629	192	1183	202	3055	673	3930	12280
Apprch %	23.5	23.8	52.7		23.9	66.8	9.3		30.6	53.2	16.2		5.1	77.7	17.1		
Total %	4.8	4.9	10.8	20.4	9.1	25.3	3.5	37.9	2.9	5.1	1.6	9.6	1.6	24.9	5.5	32	

	24TH ST. Southbound				MEADOWVIEW RD. Westbound				24TH ST. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	19	21	35	75	60	206	27	293	15	40	**21**	76	11	138	48	197	641
07:30	16	39	38	93	103	**245**	36	384	35	59	13	107	7	**202**	42	**251**	835
07:45	24	**40**	**50**	**114**	**116**	242	**55**	**413**	**36**	**85**	20	**141**	**18**	164	**61**	243	**911**
08:00	**31**	25	44	100	116	202	21	339	23	42	13	78	17	156	46	219	736
Total Volume	90	125	167	382	395	895	139	1429	109	226	67	402	53	660	197	910	3123
% App. Total	23.6	32.7	43.7		27.6	62.6	9.7		27.1	56.2	16.7		5.8	72.5	21.6		
PHF	.726	.781	.835	.838	.851	.913	.632	.865	.757	.665	.798	.713	.736	.817	.807	.906	.857

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File Name : MEADOWVIEW-24TH-F
Site Code : 00000000
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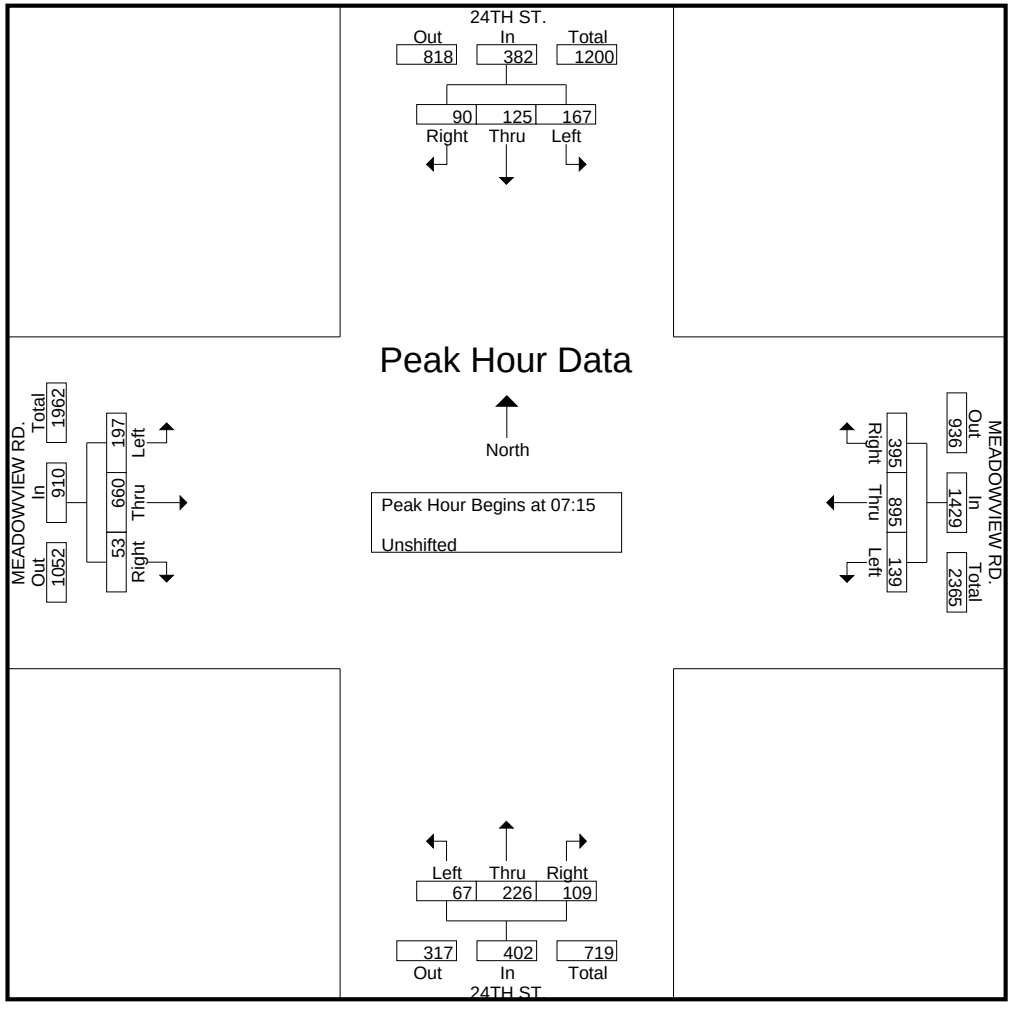

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	61	53	133	247	**58**	166	**37**	261	17	28	**16**	61	**18**	220	34	272	841
17:15	48	**74**	120	242	55	**227**	23	**305**	**28**	**44**	5	**77**	13	**256**	31	**300**	**924**
17:30	**66**	47	150	263	54	174	34	262	21	30	8	59	10	224	43	277	861
17:45	56	50	**160**	**266**	56	194	27	277	24	31	14	69	18	206	**52**	276	888
Total Volume	231	224	563	1018	223	761	121	1105	90	133	43	266	59	906	160	1125	3514
% App. Total	22.7	22	55.3		20.2	68.9	11		33.8	50	16.2		5.2	80.5	14.2		
PHF	.875	.757	.880	.957	.961	.838	.818	.906	.804	.756	.672	.864	.819	.885	.769	.938	.951

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File Name : MEADOWVIEW-24TH-F
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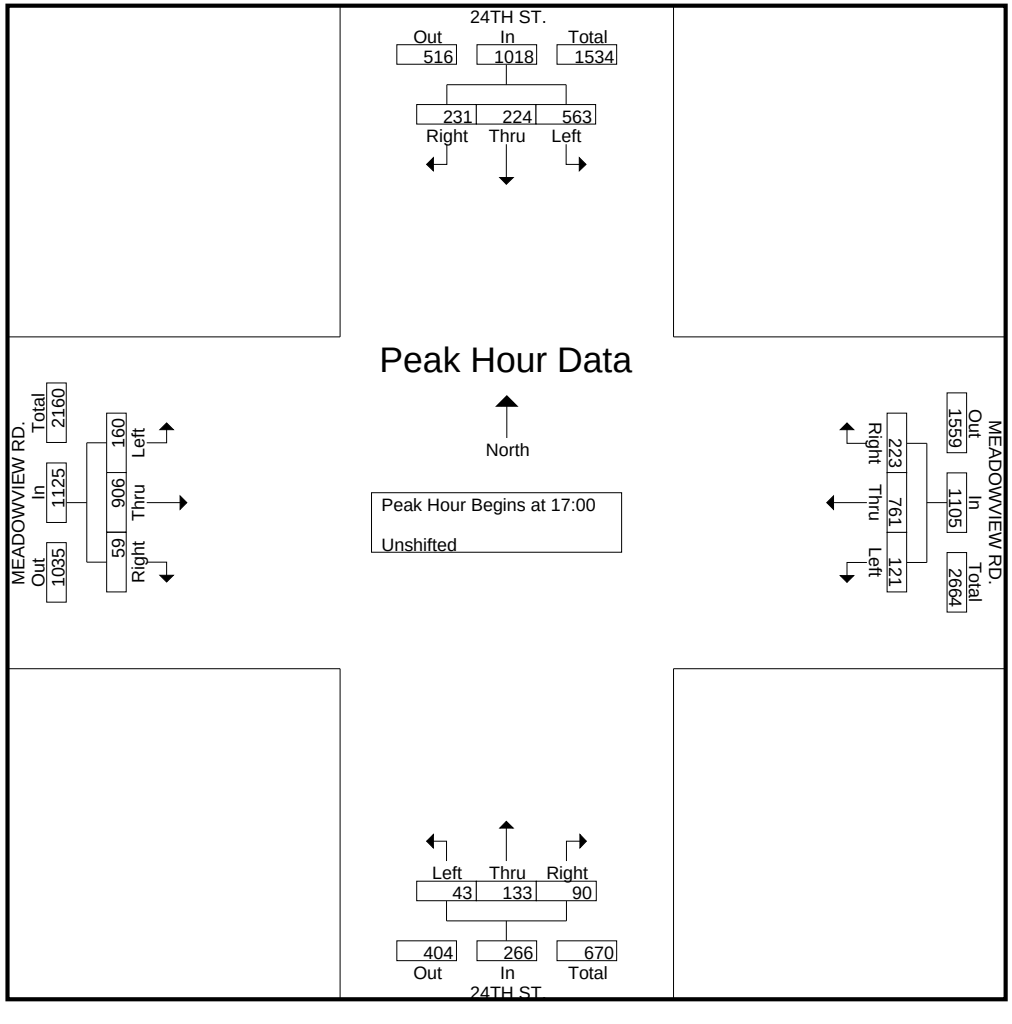
Page No : 3



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File Name : MEADOWVIEW-DETROIT-F
Site Code : 00000000
Start Date : 2/7/2007
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Groups Printed- Unshifted

	DETROIT BLVD. Southbound				MEADOWVIEW RD. Westbound				DETROIT BLVD. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	6	0	8	14	35	292	11	338	26	1	15	42	9	195	10	214	608
07:15	10	2	12	24	76	339	14	429	35	1	18	54	11	180	16	207	714
07:30	4	1	16	21	65	369	33	467	49	1	45	95	25	268	11	304	887
07:45	12	0	10	22	42	380	27	449	50	1	43	94	34	223	6	263	828
Total	32	3	46	81	218	1380	85	1683	160	4	121	285	79	866	43	988	3037
08:00	6	0	13	19	46	347	29	422	31	0	25	56	18	228	13	259	756
08:15	6	0	9	15	21	255	18	294	31	2	21	54	9	198	3	210	573
08:30	5	1	9	15	35	282	13	330	30	1	11	42	5	207	3	215	602
08:45	3	0	7	10	19	234	12	265	24	1	11	36	7	198	6	211	522
Total	20	1	38	59	121	1118	72	1311	116	4	68	188	39	831	25	895	2453
*** BREAK ***																	
16:00	18	29	45	92	19	252	33	304	36	10	17	63	21	346	15	382	841
16:15	14	1	56	71	16	253	42	311	34	0	16	50	26	361	4	391	823
16:30	13	1	52	66	11	258	36	305	38	0	19	57	23	332	7	362	790
16:45	12	0	57	69	17	266	52	335	36	1	25	62	26	304	6	336	802
Total	57	31	210	298	63	1029	163	1255	144	11	77	232	96	1343	32	1471	3256
17:00	11	3	80	94	18	287	44	349	30	1	17	48	15	360	6	381	872
17:15	14	1	61	76	27	308	36	371	39	0	17	56	20	427	4	451	954
17:30	16	1	70	87	13	260	38	311	34	0	16	50	16	361	4	381	829
17:45	14	0	78	92	15	284	39	338	32	1	14	47	20	338	7	365	842
Total	55	5	289	349	73	1139	157	1369	135	2	64	201	71	1486	21	1578	3497
Grand Total	164	40	583	787	475	4666	477	5618	555	21	330	906	285	4526	121	4932	12243
Apprch %	20.8	5.1	74.1		8.5	83.1	8.5		61.3	2.3	36.4		5.8	91.8	2.5		
Total %	1.3	0.3	4.8	6.4	3.9	38.1	3.9	45.9	4.5	0.2	2.7	7.4	2.3	37	1	40.3	

	DETROIT BLVD. Southbound				MEADOWVIEW RD. Westbound				DETROIT BLVD. Northbound				MEADOWVIEW RD. Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15																	
07:15	10	**2**	12	**24**	**76**	339	14	429	35	**1**	18	54	11	180	**16**	207	714
07:30	4	1	**16**	21	65	369	**33**	**467**	49	1	**45**	**95**	25	**268**	11	**304**	**887**
07:45	**12**	0	10	22	42	**380**	27	449	**50**	1	43	94	**34**	223	6	263	828
08:00	6	0	13	19	46	347	29	422	31	0	25	56	18	228	13	259	756
Total Volume	32	3	51	86	229	1435	103	1767	165	3	131	299	88	899	46	1033	3185
% App. Total	37.2	3.5	59.3		13	81.2	5.8		55.2	1	43.8		8.5	87	4.5		
PHF	.667	.375	.797	.896	.753	.944	.780	.946	.825	.750	.728	.787	.647	.839	.719	.850	.898

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File Name : MEADOWVIEW-DETROIT-F
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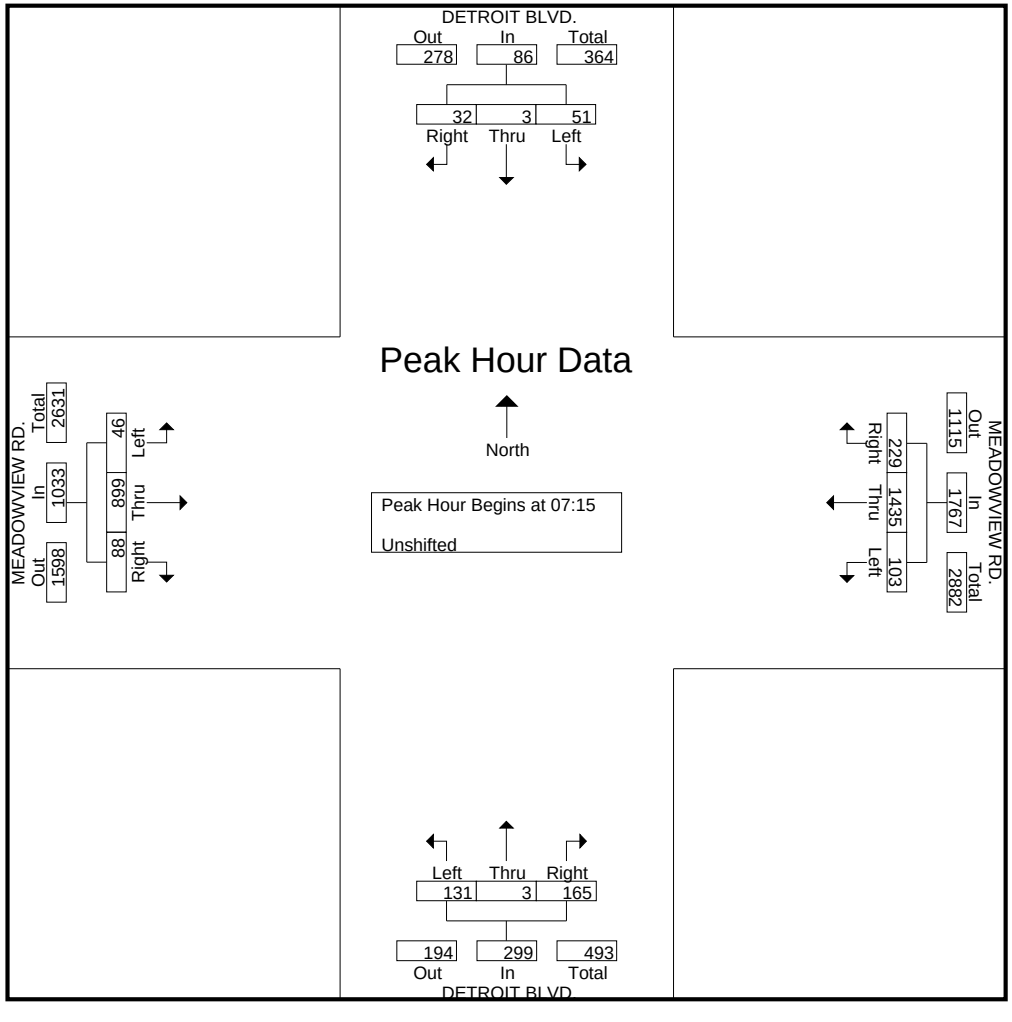

Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	11	**3**	**80**	**94**	18	287	**44**	349	30	**1**	**17**	48	15	360	6	381	872
17:15	14	1	61	76	**27**	**308**	36	**371**	**39**	0	17	**56**	**20**	**427**	4	**451**	**954**
17:30	**16**	1	70	87	13	260	38	311	34	0	16	50	16	361	4	381	829
17:45	14	0	78	92	15	284	39	338	32	1	14	47	20	338	**7**	365	842
Total Volume	55	5	289	349	73	1139	157	1369	135	2	64	201	71	1486	21	1578	3497
% App. Total	15.8	1.4	82.8		5.3	83.2	11.5		67.2	1	31.8		4.5	94.2	1.3		
PHF	.859	.417	.903	.928	.676	.925	.892	.923	.865	.500	.941	.897	.888	.870	.750	.875	.916

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File Name : MEADOWVIEW-DETROIT-F
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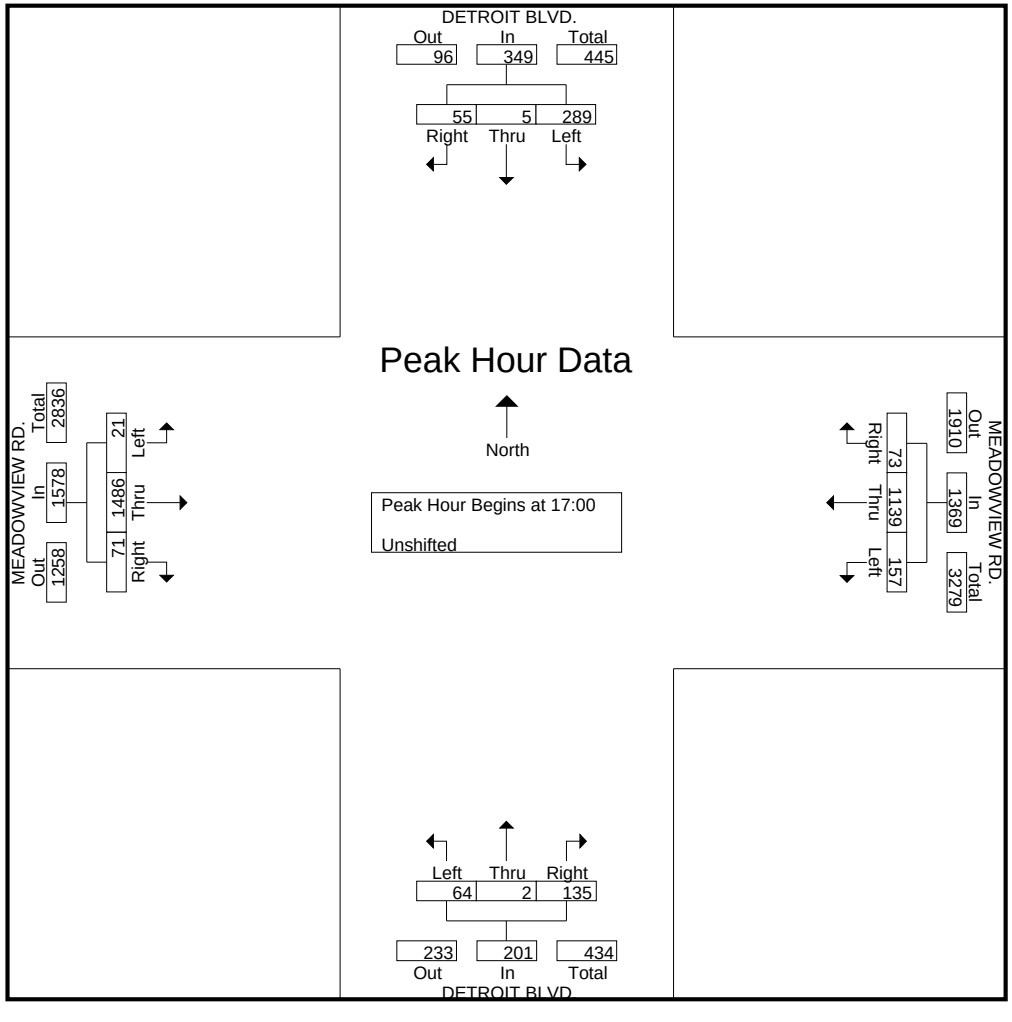
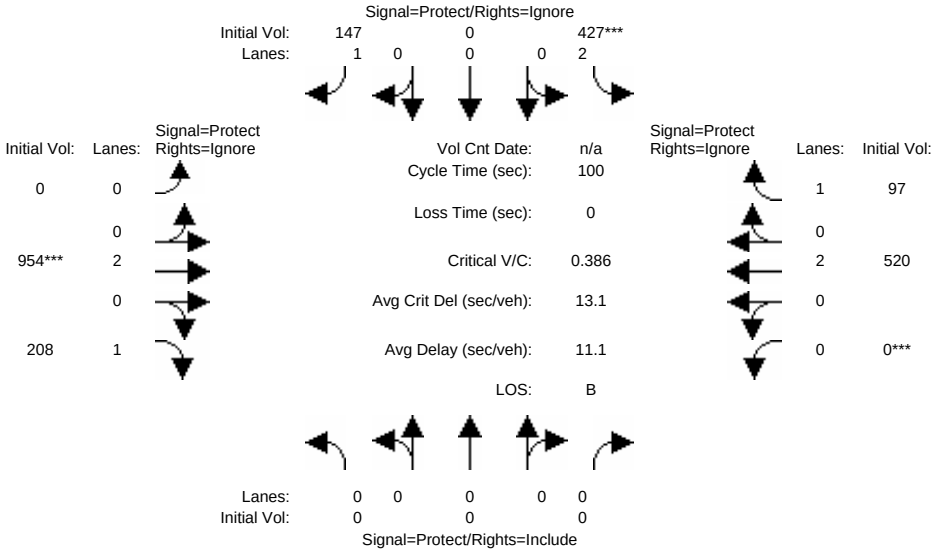


Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #1: Pocket Road/I-5 SB Ramps




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   427     0   147     0   954   208     0   520    97
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   427     0   147     0   954   208     0   520    97
User Adj:    1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Volume:     0     0     0   427     0     0     0   954     0     0   520     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0   427     0     0     0   954     0     0   520     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
Final Vol.:     0     0     0   427     0     0     0   954     0     0   520     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.92  1.00  1.00  1.00  0.95  1.00  1.00  0.95  1.00
Lanes:       0.00  0.00  0.00  2.00  0.00  1.00  0.00  2.00  1.00  0.00  2.00  1.00
Final Sat.:     0     0     0  3502     0  1900     0  3610  1900     0  3610  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.12  0.00  0.00  0.00  0.26  0.00  0.00  0.14  0.00
Crit Moves:                     ****                      ****                      ****
Green/Cycle: 0.00  0.00  0.00  0.32  0.00  0.00  0.00  0.68  0.00  0.00  0.68  0.00
Volume/Cap:  0.00  0.00  0.00  0.39  0.00  0.00  0.00  0.39  0.00  0.00  0.21  0.00
Delay/Veh:    0.0   0.0   0.0  26.9   0.0   0.0   0.0   6.9   0.0   0.0   5.9   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0  26.9   0.0   0.0   0.0   6.9   0.0   0.0   5.9   0.0
LOS by Move:    A     A     A     C     A     A     A     A     A     A     A     A
HCM2kAvgQ:      0     0     0     5     0     0     0     7     0     0     3     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  0  0  0    2  0  0  0  1    0  0  2  0  1    0  0  2  0  1
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R   xxxx   T     R   xxxx   T     R
#LnsInGrps:     0     0     2     0     1     0     2     1     0     2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            0                 0                 0                 0
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 1.00  1.00  1.00  0.95  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  0.97  1.00  1.00  1.00  0.95  1.00  1.00  0.95  1.00
Fnl Sat Adj: 1.00  1.00  1.00  0.92  1.00  1.00  1.00  0.95  1.00  1.00  0.95  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                           2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
********************************************************************************
```


Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Green/Cycle:	0.00	0.00	0.00		0.32	0.00	0.00		0.00	0.68	0.00		0.00	0.68	0.00	
ArrivalType:		3				3				3				3		
ProgFactor:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Q1:	0.0	0.0	0.0		4.8	0.0	0.0		0.0	6.0	0.0		0.0	2.8	0.0	
UpstreamVC:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
UpstreamAdj:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
EarlyArrAdj:	0.00	0.00	0.00		1.00	0.00	0.00		0.00	1.00	0.00		0.00	1.00	0.00	
Q2:	0.0	0.0	0.0		0.6	0.0	0.0		0.0	0.6	0.0		0.0	0.3	0.0	
HCM2KQueue:	0.0	0.0	0.0		5.4	0.0	0.0		0.0	6.6	0.0		0.0	3.1	0.0	
70th%Factor:	1.20	1.20	1.20		1.19	1.20	1.20		1.20	1.18	1.20		1.20	1.19	1.20	
70th%HCM2kQ:	0.0	0.0	0.0		6.4	0.0	0.0		0.0	7.8	0.0		0.0	3.7	0.0	
85th%Factor:	1.60	1.60	1.60		1.55	1.60	1.60		1.60	1.54	1.60		1.60	1.57	1.60	
85th%HCM2kQ:	0.0	0.0	0.0		8.4	0.0	0.0		0.0	10.2	0.0		0.0	4.8	0.0	
90th%Factor:	1.80	1.80	1.80		1.71	1.80	1.80		1.80	1.69	1.80		1.80	1.74	1.80	
90th%HCM2kQ:	0.0	0.0	0.0		9.2	0.0	0.0		0.0	11.2	0.0		0.0	5.4	0.0	
95th%Factor:	2.10	2.10	2.10		1.94	2.10	2.10		2.10	1.92	2.10		2.10	2.01	2.10	
95th%HCM2kQ:	0.0	0.0	0.0		10.5	0.0	0.0		0.0	12.7	0.0		0.0	6.2	0.0	
98th%Factor:	2.70	2.70	2.70		2.36	2.70	2.70		2.70	2.30	2.70		2.70	2.49	2.70	
98th%HCM2kQ:	0.0	0.0	0.0		12.7	0.0	0.0		0.0	15.2	0.0		0.0	7.6	0.0	

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #1 Pocket Road/I-5 SB Ramps

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Run Speed:	30 MPH				30 MPH				30 MPH				30 MPH			
NumOfStops:	0.0	0.0	0.0		83.2	0.0	0.0		0.0	102	0.0		0.0	48.0	0.0	

Name: year 1995 composite fleet
Fuel Consumption: 36.662 pounds
5.939 gallons
Carbon Dioxide: 114.386 pounds
Carbon Monoxide: 8.270 pounds
Hydrocarbons: 1.306 pounds
Nitrogen Oxides: 0.357 pounds

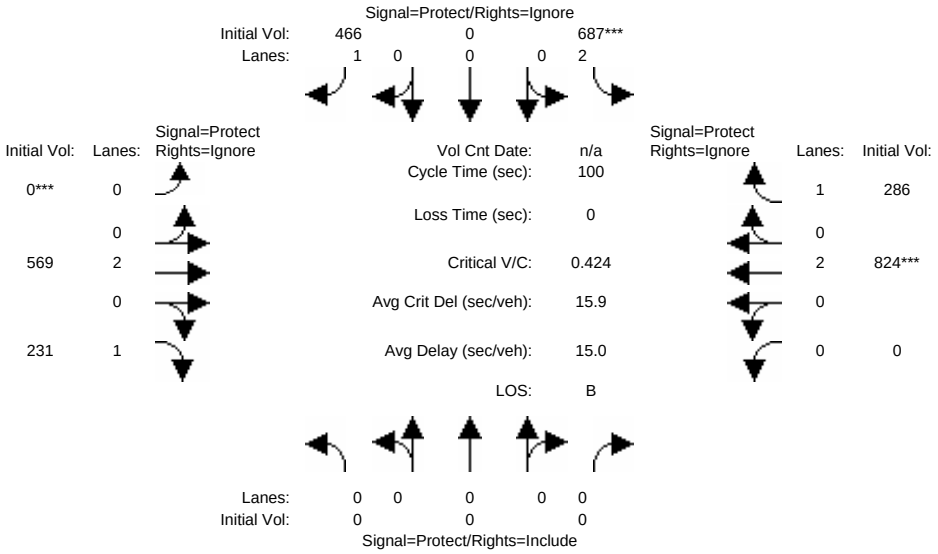
Name: year 2000 composite fleet
Fuel Consumption: 33.462 pounds
5.421 gallons
Carbon Dioxide: 104.400 pounds
Carbon Monoxide: 8.025 pounds
Hydrocarbons: 1.254 pounds
Nitrogen Oxides: 0.313 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Base Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #1: Pocket Road/I-5 SB Ramps




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   687     0   466     0   569   231     0   824   286
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   687     0   466     0   569   231     0   824   286
User Adj:    1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Volume:     0     0     0   687     0     0     0   569     0     0   824     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0   687     0     0     0   569     0     0   824     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
Final Vol.:     0     0     0   687     0     0     0   569     0     0   824     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.92  1.00  1.00  1.00  0.95  1.00  1.00  0.95  1.00
Lanes:       0.00  0.00  0.00  2.00  0.00  1.00  0.00  2.00  1.00  0.00  2.00  1.00
Final Sat.:     0     0     0  3502     0  1900     0  3610  1900     0  3610  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.20  0.00  0.00  0.00  0.16  0.00  0.00  0.23  0.00
Crit Moves:                     ****                  ****                  ****
Green/Cycle: 0.00  0.00  0.00  0.46  0.00  0.00  0.00  0.54  0.00  0.00  0.54  0.00
Volume/Cap:  0.00  0.00  0.00  0.42  0.00  0.00  0.00  0.29  0.00  0.00  0.42  0.00
Delay/Veh:    0.0   0.0   0.0  18.2   0.0   0.0   0.0  12.8   0.0   0.0  14.0   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0  18.2   0.0   0.0   0.0  12.8   0.0   0.0  14.0   0.0
LOS by Move:    A     A     A     B     A     A     A     B     A     A     B     A
HCM2kAvgQ:      0     0     0     7     0     0     0     5     0     0     8     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  0  0  0    2  0  0  0  1    0  0  2  0  1    0  0  2  0  1
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R   xxxx   T     R   xxxx   T     R
#LnsInGrps:     0     0     0     2     0     1     0     2     1     0     2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid         8                 8                 8                 8
% Hev Veh:           0                 0                 0                 0
Grade:              0%                0%                0%                0%
Parking/Hr:         No                No                No                No
Bus Stp/Hr:          0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:          0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 1.00  1.00  1.00  0.95  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  0.97  1.00  1.00  1.00  0.95  1.00  1.00  0.95  1.00
Fnl Sat Adj: 1.00  1.00  1.00  0.92  1.00  1.00  1.00  0.95  1.00  1.00  0.95  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
```



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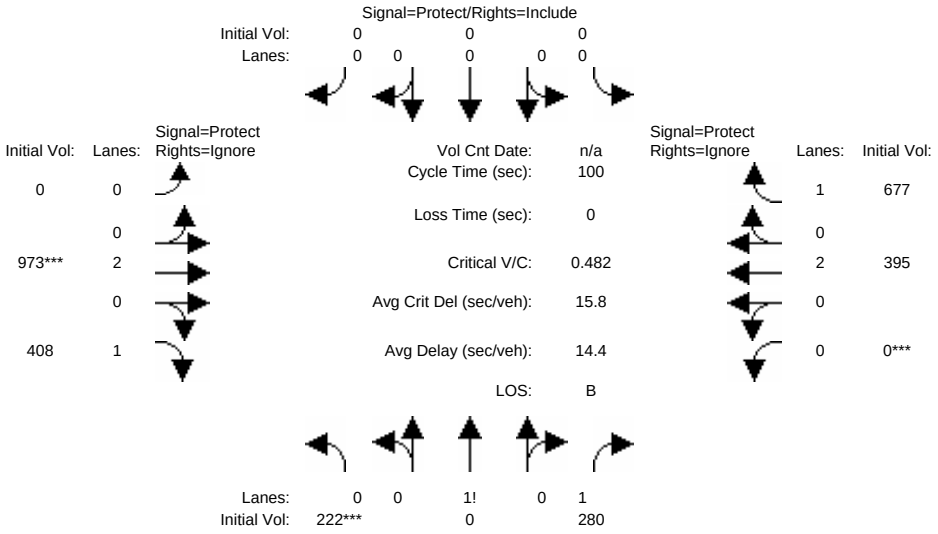
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.46 0.00  0.00  0.00 0.54  0.00  0.00 0.54  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   6.6  0.0   0.0   0.0  4.6   0.0   0.0  7.2   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.7  0.0   0.0   0.0  0.4   0.0   0.0  0.7   0.0
HCM2KQueue:   0.0  0.0   0.0   7.3  0.0   0.0   0.0  5.0   0.0   0.0  7.9   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.20  1.20 1.19  1.20  1.20 1.18  1.20
70th%HCM2kQ:  0.0  0.0   0.0   8.6  0.0   0.0   0.0  5.9   0.0   0.0  9.4   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.54 1.60  1.60  1.60 1.55  1.60  1.60 1.53  1.60
85th%HCM2kQ:  0.0  0.0   0.0  11.2  0.0   0.0   0.0  7.7   0.0   0.0 12.2   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.68 1.80  1.80  1.80 1.71  1.80  1.80 1.67  1.80
90th%HCM2kQ:  0.0  0.0   0.0  12.3  0.0   0.0   0.0  8.5   0.0   0.0 13.3   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.90 2.10  2.10  2.10 1.96  2.10  2.10 1.89  2.10
95th%HCM2kQ:  0.0  0.0   0.0  13.9  0.0   0.0   0.0  9.7   0.0   0.0 15.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.27 2.70  2.70  2.70 2.38  2.70  2.70 2.24  2.70
98th%HCM2kQ:  0.0  0.0   0.0  16.6  0.0   0.0   0.0 11.9   0.0   0.0 17.8   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 114.9  0.0   0.0   0.0 78.1   0.0   0.0  123   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     46.538 pounds
                       7.539 gallons
Carbon Dioxide:      145.197 pounds
Carbon Monoxide:      10.839 pounds
Hydrocarbons:          1.810 pounds
Nitrogen Oxides:       0.445 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     42.921 pounds
                       6.953 gallons
Carbon Dioxide:      133.915 pounds
Carbon Monoxide:      10.559 pounds
Hydrocarbons:          1.753 pounds
Nitrogen Oxides:       0.392 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #2: Meadowview Road/I-5 NB Ramps




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     222     0   280     0     0     0     0   973   408     0   395   677
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:  222     0   280     0     0     0     0   973   408     0   395   677
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   222     0   280     0     0     0     0   973     0     0   395     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  222     0   280     0     0     0     0   973     0     0   395     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   222     0   280     0     0     0     0   973     0     0   395     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.90 1.00  0.90  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Lanes:       0.61 0.00  1.39  0.00 0.00  0.00  0.00 2.00  1.00  0.00 2.00  1.00
Final Sat.:  1044    0  2360     0     0     0     0 3610  1900     0 3610  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.21 0.00  0.12  0.00 0.00  0.00  0.00 0.27  0.00  0.00 0.11  0.00
Crit Moves:  ****                                  ****        ****
Green/Cycle: 0.44 0.00  0.44  0.00 0.00  0.00  0.00 0.56  0.00  0.00 0.56  0.00
Volume/Cap:  0.48 0.00  0.27  0.00 0.00  0.00  0.00 0.48  0.00  0.00 0.20  0.00
Delay/Veh:   20.2  0.0  17.8   0.0  0.0   0.0   0.0 13.5   0.0   0.0 11.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  20.2  0.0  17.8   0.0  0.0   0.0   0.0 13.5   0.0   0.0 11.0   0.0
LOS by Move:   C    A     B     A    A     A     A    B     A     A    B     A
HCM2kAvgQ:     8    0     4     0    0     0     0   10     0     0    3     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  1    0  0  0  0  0    0  0  2  0  1    0  0  2  0  1
Lane Group:   LTR  LTR   LTR  xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:     1    1     2     0    0     0     0    2     1     0    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     4 xxxx     4  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      0.92 xxxx  0.92  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.90 1.00  0.90  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 0.90 1.00  0.90  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
```

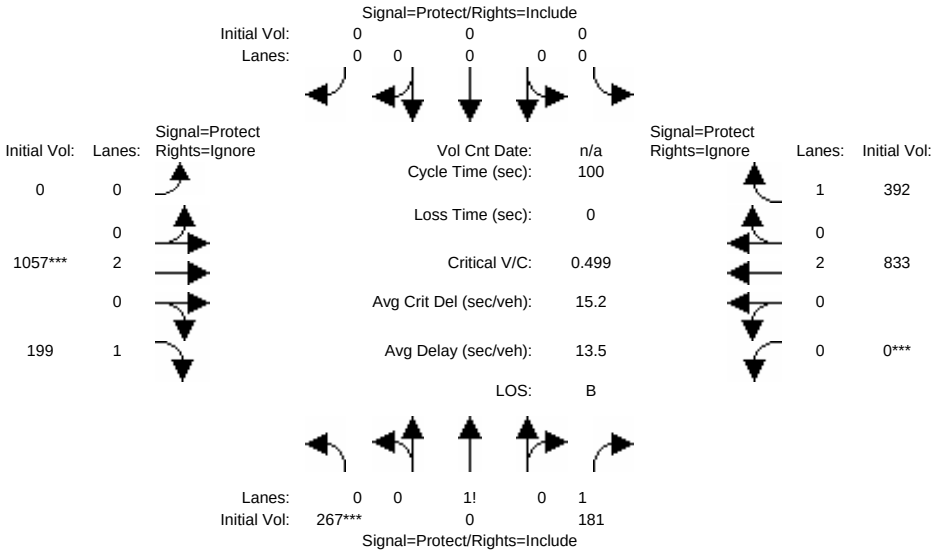


```
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.44 0.00  0.44  0.00 0.00  0.00  0.00 0.56  0.00  0.00 0.56  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           7.1  0.0   3.6   0.0  0.0   0.0   0.0  8.6   0.0   0.0  2.9   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.9  0.0   0.4   0.0  0.0   0.0   0.0  0.9   0.0   0.0  0.2   0.0
HCM2KQueue:   8.1  0.0   3.9   0.0  0.0   0.0   0.0  9.5   0.0   0.0  3.1   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.19  1.20 1.20  1.20  1.20 1.18  1.20  1.20 1.19  1.20
70th%HCM2kQ:  9.5  0.0   4.7   0.0  0.0   0.0   0.0 11.2   0.0   0.0  3.7   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.60  1.56  1.60 1.60  1.60  1.60 1.52  1.60  1.60 1.57  1.60
85th%HCM2kQ: 12.3  0.0   6.1   0.0  0.0   0.0   0.0 14.4   0.0   0.0  4.9   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.67 1.80  1.73  1.80 1.80  1.80  1.80 1.65  1.80  1.80 1.74  1.80
90th%HCM2kQ: 13.4  0.0   6.8   0.0  0.0   0.0   0.0 15.7   0.0   0.0  5.4   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.88 2.10  1.98  2.10 2.10  2.10  2.10 1.85  2.10  2.10 2.00  2.10
95th%HCM2kQ: 15.2  0.0   7.8   0.0  0.0   0.0   0.0 17.6   0.0   0.0  6.2   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.24 2.70  2.44  2.70 2.70  2.70  2.70 2.18  2.70  2.70 2.49  2.70
98th%HCM2kQ: 18.0  0.0   9.6   0.0  0.0   0.0   0.0 20.7   0.0   0.0  7.7   0.0
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  39.4  0.0  44.4   0.0  0.0   0.0   0.0  147   0.0   0.0 48.9   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     40.962 pounds
                       6.636 gallons
Carbon Dioxide:      127.801 pounds
Carbon Monoxide:       9.498 pounds
Hydrocarbons:          1.573 pounds
Nitrogen Oxides:       0.394 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     37.720 pounds
                       6.111 gallons
Carbon Dioxide:      117.686 pounds
Carbon Monoxide:       9.248 pounds
Hydrocarbons:          1.522 pounds
Nitrogen Oxides:       0.347 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Existing PM

Intersection #2: Meadowview Road/I-5 NB Ramps




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     267     0   181     0     0     0     0 1057   199     0   833   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:  267     0   181     0     0     0     0 1057   199     0   833   392
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   267     0   181     0     0     0     0 1057     0     0   833     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0     0     0
Reduced Vol:  267     0   181     0     0     0     0 1057     0     0   833     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   267     0   181     0     0     0     0 1057     0     0   833     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.91 1.00  0.91  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Lanes:       0.75 0.00  1.25  0.00 0.00  0.00  0.00 2.00  1.00  0.00 2.00  1.00
Final Sat.:  1294    0  2171     0    0     0     0 3610  1900     0 3610  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.21 0.00  0.08  0.00 0.00  0.00  0.00 0.29  0.00  0.00 0.23  0.00
Crit Moves:  ****                                  ****        ****
Green/Cycle: 0.41 0.00  0.41  0.00 0.00  0.00  0.00 0.59  0.00  0.00 0.59  0.00
Volume/Cap:  0.50 0.00  0.20  0.00 0.00  0.00  0.00 0.50  0.00  0.00 0.39  0.00
Delay/Veh:   22.1  0.0  18.8   0.0  0.0   0.0   0.0 12.3   0.0   0.0 11.2   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  22.1  0.0  18.8   0.0  0.0   0.0   0.0 12.3   0.0   0.0 11.2   0.0
LOS by Move:   C    A     B     A    A     A     A    B     A     A    B     A
HCM2kAvgQ:     8    0     3     0    0     0     0   10     0     0    7     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  1    0  0  0  0  0    0  0  2  0  1    0  0  2  0  1
Lane Group:   LTR  LTR   LTR  xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:     1    1     2     0    0     0     0    2     1     0    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     4 xxxx     4  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      0.94 xxxx  0.94  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.97 xxxx  0.97  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.91 1.00  0.91  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 0.91 1.00  0.91  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
```

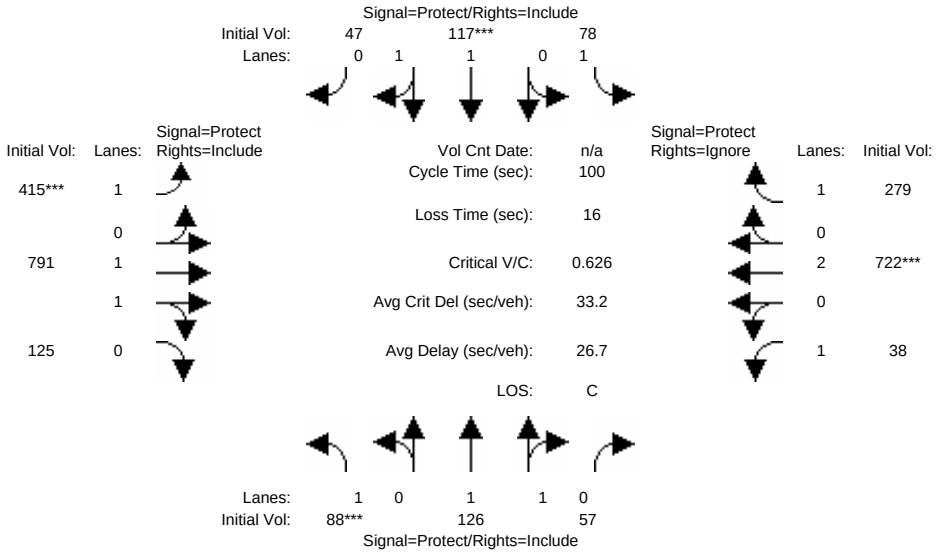


```
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.41 0.00  0.41  0.00 0.00  0.00  0.00 0.59  0.00  0.00 0.59  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           7.3  0.0   2.6   0.0  0.0   0.0   0.0  9.0   0.0   0.0  6.5   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           1.0  0.0   0.3   0.0  0.0   0.0   0.0  1.0   0.0   0.0  0.6   0.0
HCM2KQueue:   8.3  0.0   2.8   0.0  0.0   0.0   0.0 10.0   0.0   0.0  7.2   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.19  1.20 1.20  1.20  1.20 1.18  1.20  1.20 1.18  1.20
70th%HCM2kQ:  9.8  0.0   3.4   0.0  0.0   0.0   0.0 11.8   0.0   0.0  8.5   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.60  1.57  1.60 1.60  1.60  1.60 1.51  1.60  1.60 1.54  1.60
85th%HCM2kQ: 12.7  0.0   4.4   0.0  0.0   0.0   0.0 15.2   0.0   0.0 11.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.66 1.80  1.75  1.80 1.80  1.80  1.80 1.64  1.80  1.80 1.68  1.80
90th%HCM2kQ: 13.8  0.0   4.9   0.0  0.0   0.0   0.0 16.5   0.0   0.0 12.1   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.88 2.10  2.01  2.10 2.10  2.10  2.10 1.84  2.10  2.10 1.90  2.10
95th%HCM2kQ: 15.6  0.0   5.7   0.0  0.0   0.0   0.0 18.5   0.0   0.0 13.7   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.23 2.70  2.51  2.70 2.70  2.70  2.70 2.16  2.70  2.70 2.28  2.70
98th%HCM2kQ: 18.5  0.0   7.1   0.0  0.0   0.0   0.0 21.7   0.0   0.0 16.4   0.0
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  49.3  0.0  29.0   0.0  0.0   0.0   0.0  154   0.0   0.0  112   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     49.748 pounds
                       8.059 gallons
Carbon Dioxide:      155.215 pounds
Carbon Monoxide:      11.461 pounds
Hydrocarbons:          1.874 pounds
Nitrogen Oxides:       0.484 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     45.704 pounds
                       7.404 gallons
Carbon Dioxide:      142.596 pounds
Carbon Monoxide:      11.149 pounds
Hydrocarbons:          1.809 pounds
Nitrogen Oxides:       0.425 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Existing AM

Intersection #3: Meadowview Road/Freeport Boulevard




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      88  126    57    78  117    47   415  791   125    38  722   279
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:   88  126    57    78  117    47   415  791   125    38  722   279
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Volume:    88  126    57    78  117    47   415  791   125    38  722     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   88  126    57    78  117    47   415  791   125    38  722     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  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Final Vol.:    88  126    57    78  117    47   415  791   125    38  722     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.91  0.91  0.95 0.91  0.91  0.95 0.93  0.93  0.95 0.95  1.00
Lanes:       1.00 1.38  0.62  1.00 1.43  0.57  1.00 1.73  0.27  1.00 2.00  1.00
Final Sat.:  1805 2369  1072  1805 2465   990  1805 3055   483  1805 3610  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.05  0.05  0.04 0.05  0.05  0.23 0.26  0.26  0.02 0.20  0.00
Crit Moves:  ****                ****        ****                ****
Green/Cycle: 0.08 0.08  0.08  0.07 0.08  0.08  0.37 0.63  0.63  0.05 0.32  0.00
Volume/Cap:  0.63 0.63  0.63  0.63 0.63  0.63  0.63 0.41  0.41  0.41 0.63  0.00
Delay/Veh:   53.3 48.5  48.5  55.1 49.6  49.6  27.9  9.1   9.1  48.8 30.1   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  53.3 48.5  48.5  55.1 49.6  49.6  27.9  9.1   9.1  48.8 30.1   0.0
LOS by Move:   D    D     D     E    D     D     C    A     A     D    C     A
HCM2kAvgQ:     4    4     4     3    4     4    11    7     7     2   11     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       1  0  1  1  0    1  0  1  1  0    1  0  1  1  0    1  0  2  0  1
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L    T     R
#LnsInGrps:    1    2     2     1    2     2     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Hev Veh Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx xxxx xxxxx
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx xxxx xxxxx
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
RT Adj:      xxxx 0.95  0.95  xxxx 0.96  0.96  xxxx 0.98  0.98  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.95 0.95  0.95  0.95 0.96  0.96  0.95 0.98  0.98  0.95 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.95 0.91  0.91  0.95 0.91  0.91  0.95 0.93  0.93  0.95 0.95  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
```

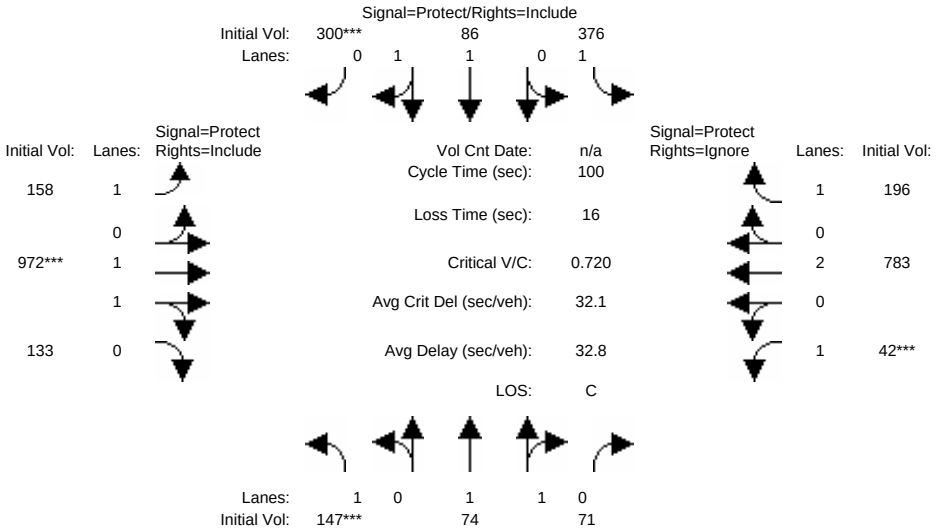


```
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.08 0.08  0.08  0.07 0.08  0.08  0.37 0.63  0.63  0.05 0.32  0.00
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.4  2.6   2.6   2.1  2.3   2.3   9.5  6.6   6.6   1.0  9.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Q2:           1.4  1.4   1.4   1.4  1.4   1.4   1.6  0.7   0.7   0.6  1.6   0.0
HCM2KQueue:   3.8  4.0   4.0   3.5  3.7   3.7  11.1  7.3   7.3   1.7 10.6   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.19 1.19  1.19  1.18 1.18  1.18  1.20 1.18  1.20
70th%HCM2kQ:  4.5  4.8   4.8   4.1  4.4   4.4  13.0  8.6   8.6   2.0 12.4   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.56 1.56  1.56  1.57 1.57  1.57  1.51 1.54  1.54  1.58 1.51  1.60
85th%HCM2kQ:  5.9  6.2   6.2   5.4  5.8   5.8  16.7 11.2  11.2   2.6 16.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.73 1.73  1.73  1.74 1.73  1.73  1.63 1.68  1.68  1.77 1.64  1.80
90th%HCM2kQ:  6.5  6.9   6.9   6.0  6.4   6.4  18.0 12.2  12.2   2.9 17.3   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.99 1.98  1.98  1.99 1.99  1.99  1.82 1.90  1.90  2.05 1.83  2.10
95th%HCM2kQ:  7.5  7.9   7.9   6.9  7.4   7.4  20.2 13.8  13.8   3.4 19.4   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.45 2.44  2.44  2.47 2.45  2.45  2.13 2.27  2.27  2.58 2.14  2.70
98th%HCM2kQ:  9.2  9.7   9.7   8.6  9.1   9.1  23.5 16.5  16.5   4.3 22.7   0.0
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
********************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  21.3 30.4  13.8  19.0 28.4  11.4  85.3 97.5  15.4   9.2  154   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     80.279 pounds
                      13.005 gallons
Carbon Dioxide:      250.470 pounds
Carbon Monoxide:      19.780 pounds
Hydrocarbons:          3.655 pounds
Nitrogen Oxides:       0.698 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     75.584 pounds
                      12.245 gallons
Carbon Dioxide:      235.822 pounds
Carbon Monoxide:      19.413 pounds
Hydrocarbons:          3.580 pounds
Nitrogen Oxides:       0.625 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Existing PM

Intersection #3: Meadowview Road/Freeport Boulevard




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     147   74    71   376   86   300   158  972   133    42  783   196
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:  147   74    71   376   86   300   158  972   133    42  783   196
User Adj:    1.00 1.00  0.60  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Volume:   147   74    43   376   86   300   158  972   133    42  783     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  147   74    43   376   86   300   158  972   133    42  783     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  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Final Vol.:   147   74    43   376   86   300   158  972   133    42  783     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.90  0.90  0.95 0.84  0.84  0.95 0.93  0.93  0.95 0.95  1.00
Lanes:       1.00 1.27  0.73  1.00 1.00  1.00  1.00 1.76  0.24  1.00 2.00  1.00
Final Sat.:  1805 2165  1246  1805 1594  1594  1805 3118   427  1805 3610  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.03  0.03  0.21 0.05  0.19  0.09 0.31  0.31  0.02 0.22  0.00
Crit Moves:  ****                      ****        ****        ****
Green/Cycle: 0.11 0.05  0.05  0.32 0.26  0.26  0.13 0.43  0.43  0.03 0.33  0.00
Volume/Cap:  0.72 0.65  0.65  0.65 0.21  0.72  0.65 0.72  0.72  0.72 0.65  0.00
Delay/Veh:   54.6 54.4  54.4  31.6 28.9  38.3  47.4 25.0  25.0  83.1 29.8   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  54.6 54.4  54.4  31.6 28.9  38.3  47.4 25.0  25.0  83.1 29.8   0.0
LOS by Move:   D    D     D     C    C     D     D    C     C     F    C     A
HCM2kAvgQ:     6    3     3    11    2    10     6   16    16     3   12     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  1  1  0    1  0  2  0  1
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L    T     R
#LnsInGrps:    1    2     2     1    2     2     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Hev Veh Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx xxxx xxxxx
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx xxxx xxxxx
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
RT Adj:      xxxx 0.95  0.95  xxxx 0.88  0.88  xxxx 0.98  0.98  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.95 0.95  0.95  0.95 0.88  0.88  0.95 0.98  0.98  0.95 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.95 0.90  0.90  0.95 0.84  0.84  0.95 0.93  0.93  0.95 0.95  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
```

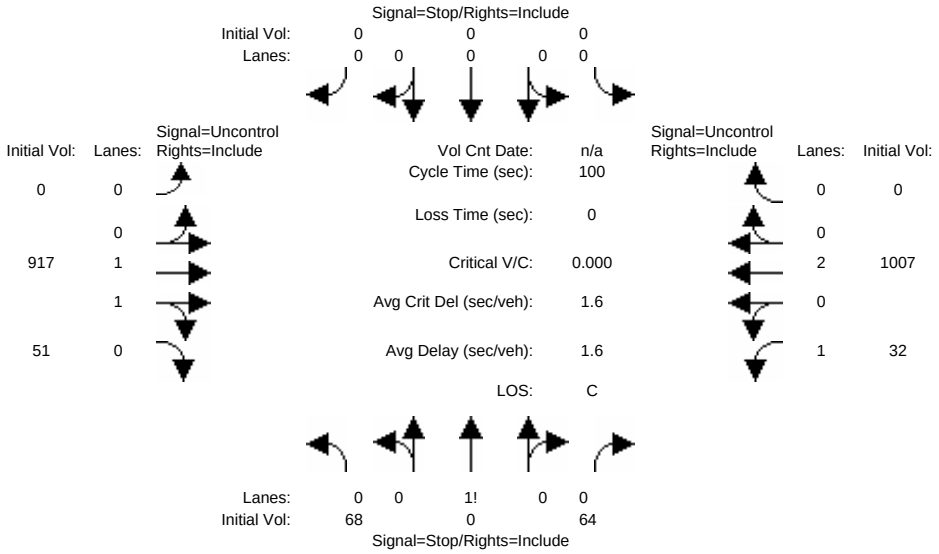


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.11 0.05  0.05  0.32 0.26  0.26  0.13 0.43  0.43  0.03 0.33  0.00
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.9  1.7   1.7   8.9  2.0   8.0   4.2 13.3  13.3   1.2  9.8   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Q2:           2.0  1.4   1.4   1.7  0.3   2.2   1.6  2.4   2.4   1.5  1.8   0.0
HCM2KQueue:   5.9  3.1   3.1  10.7  2.2  10.2   5.8 15.7  15.7   2.6 11.5   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.18 1.19  1.18  1.19 1.17  1.17  1.19 1.17  1.20
70th%HCM2kQ:  7.1  3.6   3.6  12.5  2.7  12.0   6.9 18.3  18.3   3.2 13.6   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.57  1.57  1.51 1.58  1.51  1.55 1.48  1.48  1.57 1.50  1.60
85th%HCM2kQ:  9.2  4.8   4.8  16.1  3.5  15.5   9.0 23.2  23.2   4.2 17.4   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.70 1.74  1.74  1.63 1.76  1.64  1.70 1.58  1.58  1.75 1.62  1.80
90th%HCM2kQ: 10.1  5.3   5.3  17.4  3.9  16.8   9.9 24.8  24.8   4.6 18.8   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.93 2.01  2.01  1.83 2.03  1.84  1.93 1.75  1.75  2.02 1.82  2.10
95th%HCM2kQ: 11.5  6.1   6.1  19.5  4.5  18.8  11.2 27.5  27.5   5.3 21.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.33 2.49  2.49  2.14 2.54  2.16  2.34 2.00  2.00  2.52 2.11  2.70
98th%HCM2kQ: 13.9  7.6   7.6  22.8  5.6  22.0  13.6 31.3  31.3   6.6 24.4   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  35.5 18.1  10.4  80.5 16.8  68.2  37.5  200  27.4  10.4  167   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    110.343 pounds
                      17.876 gallons
Carbon Dioxide:      344.271 pounds
Carbon Monoxide:      27.679 pounds
Hydrocarbons:          5.252 pounds
Nitrogen Oxides:       0.939 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    104.558 pounds
                      16.938 gallons
Carbon Dioxide:      326.220 pounds
Carbon Monoxide:      27.223 pounds
Hydrocarbons:          5.161 pounds
Nitrogen Oxides:       0.846 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Existing AM

Intersection #4: Meadowview Road/Manorside Drive




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      68    0    64     0    0     0     0  917    51    32 1007     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:   68    0    64     0    0     0     0  917    51    32 1007     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:    68    0    64     0    0     0     0  917    51    32 1007     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    68    0    64     0    0     0     0  917    51    32 1007     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8 xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1510 xxxx   484  xxxx xxxx xxxxx  xxxx xxxx xxxxx   968 xxxx xxxxx
Potent Cap.:  113 xxxx   534  xxxx xxxx xxxxx  xxxx xxxx xxxxx   720 xxxx xxxxx
Move Cap.:    109 xxxx   534  xxxx xxxx xxxxx  xxxx xxxx xxxxx   720 xxxx xxxxx
Total Cap:    235    0 xxxxx     0    0 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  0.29 xxxx  0.12  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.04 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  10.2 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     B    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  323 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  1.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 23.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    C     *     *    *     *     *    *     *     *    *     *
ApproachDel:      23.7           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       C              *                *                *
-----------|---------------|---------------|---------------|---------------|
HevVeh:            0%              0%              0%              0%
Grade:             0%              0%              0%              0%
Peds/Hour:         0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance [Median Type: TWLTL][Median Storage: 1 car]
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage One Module:
Cnflict Vol: 943     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 344   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   344   900 xxxxx  860   860 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage Two Module:
Cnflict Vol: 568     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 536   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   513   860 xxxxx  792   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:   68    0    64     0    0     0     0  917    51    32 1007     0
ApproachDel:      23.7           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.9]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=132]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2139]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Meadowview Road/Manorside Drive

****

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	1 0	1	0 2	0 0
Initial Vol:	68	0	64	0	0	0	0	917	51	32	1007	0

Major Street Volume: 2007
Minor Approach Volume: 132
Minor Approach Volume Threshold: 45 [less than minimum of 100]

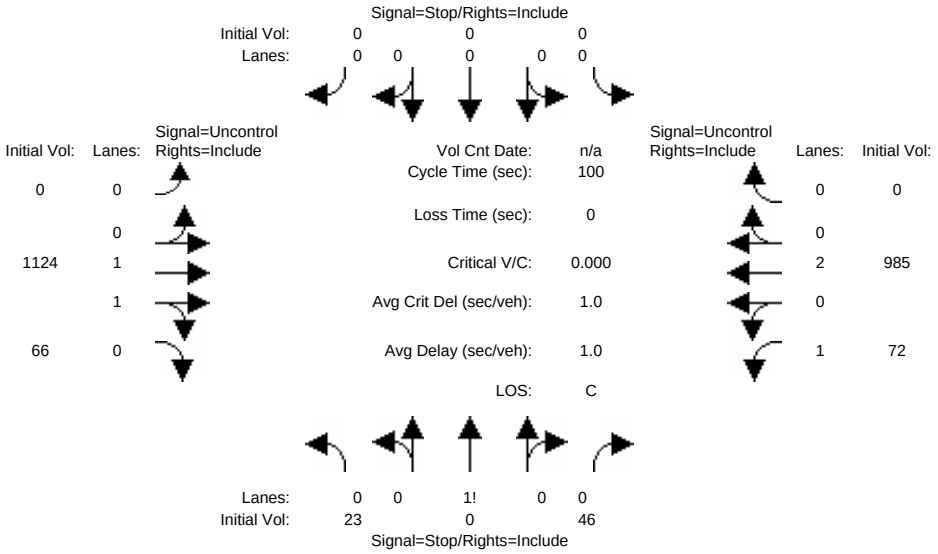
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Existing PM

Intersection #4: Meadowview Road/Manorside Drive




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      23    0    46     0    0     0     0 1124    66    72  985     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:   23    0    46     0    0     0     0 1124    66    72  985     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:    23    0    46     0    0     0     0 1124    66    72  985     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    23    0    46     0    0     0     0 1124    66    72  985     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8 xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1794 xxxx   595  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1190 xxxx xxxxx
Potent Cap.:   73 xxxx   452  xxxx xxxx xxxxx  xxxx xxxx xxxxx   594 xxxx xxxxx
Move Cap.:     67 xxxx   452  xxxx xxxx xxxxx  xxxx xxxx xxxxx   594 xxxx xxxxx
Total Cap:    179    0 xxxxx   672    0 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  0.13 xxxx  0.10  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.12 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.4 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  11.9 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     B    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  300 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 20.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    C     *     *    *     *     *    *     *     *    *     *
ApproachDel:      20.6           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       C              *                *                *
-----------|---------------|---------------|---------------|---------------|
HevVeh:             0%              0%              0%              0%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance [Median Type: TWLTL][Median Storage: 1 car]
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage One Module:
Cnflict Vol:1157     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 266   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   266   900 xxxxx  791   791 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage Two Module:
Cnflict Vol: 637     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 495   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   435   791 xxxxx  808   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:   23    0    46     0    0     0     0 1124    66    72  985     0
ApproachDel:      20.6           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=69]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2316]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Meadowview Road/Manorside Drive

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	1 0	1	0 2	0 0
Initial Vol:	23	0	46	0	0	0	0	1124	66	72	985	0

Major Street Volume: 2247
Minor Approach Volume: 69
Minor Approach Volume Threshold: 6 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER

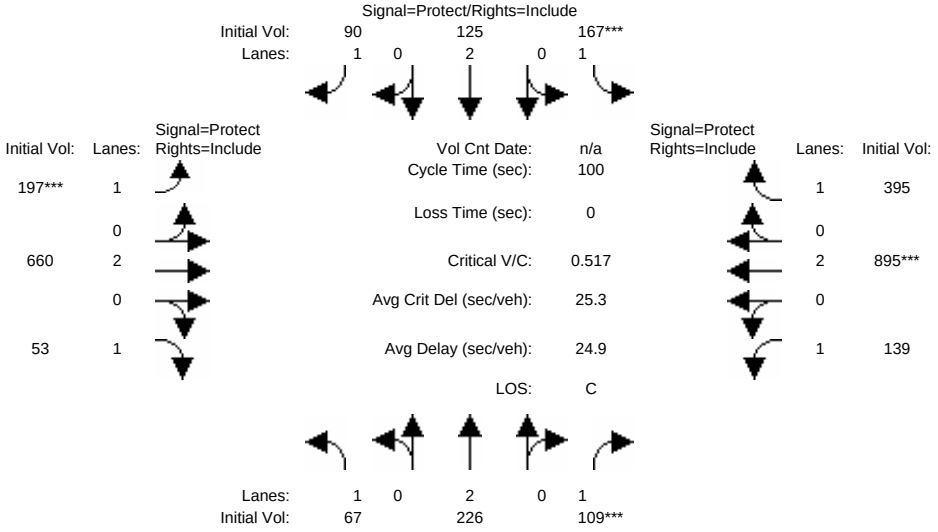
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #5: Meadowview Road/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	67	226	109	167	125	90	197	660	53	139	895	395
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	226	109	167	125	90	197	660	53	139	895	395
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	226	109	167	125	90	197	660	53	139	895	395
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	226	109	167	125	90	197	660	53	139	895	395
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
Final Vol.:	67	226	109	167	125	90	197	660	53	139	895	395
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1805	3610	1615	1805	3610	1615	1805	3610	1615	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.06	0.07	0.09	0.03	0.06	0.11	0.18	0.03	0.08	0.25	0.24
Crit Moves:			****	****			****				****	
Green/Cycle:	0.12	0.13	0.13	0.18	0.19	0.19	0.21	0.49	0.49	0.20	0.48	0.48
Volume/Cap:	0.30	0.48	0.52	0.52	0.19	0.30	0.52	0.38	0.07	0.38	0.52	0.51
Delay/Veh:	40.6	41.1	42.8	38.6	34.5	35.7	36.2	16.3	13.7	34.9	18.3	18.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.6	41.1	42.8	38.6	34.5	35.7	36.2	16.3	13.7	34.9	18.3	18.5
LOS by Move:	D	D	D	D	C	D	D	B	B	C	B	B
HCM2kAvgQ:	2	4	4	5	2	3	6	7	1	4	10	9
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	2	0	1	1	0	2	0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	0			0			0			0		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < < < < < < Other >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.95	0.85	0.95	0.95	0.85
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No						> > > > > > > > > > > > > > > > > > >					
Signal Type:	< < < < < < < < < < < < < < < Actuated						> > > > > > > > > > > > > > > > > > >					
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

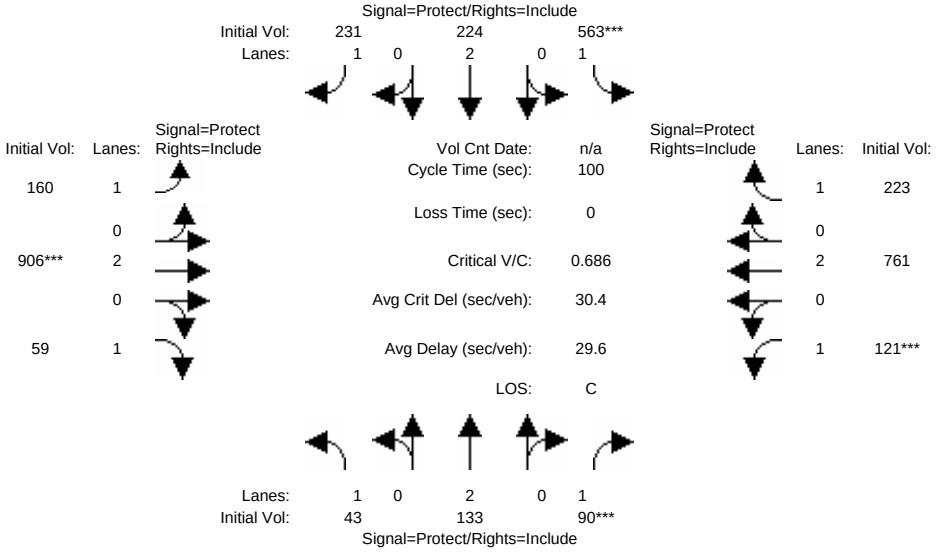
Intersection #5 Meadowview Road/24th Street


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.12 0.13  0.13  0.18 0.19  0.19  0.21 0.49  0.49  0.20 0.48  0.48
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.7  3.1   2.8   4.2  1.5   2.2   4.8  6.1   0.8   3.3  9.1   7.6
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.4  0.9   1.0   1.0  0.2   0.4   1.0  0.6   0.1   0.6  1.1   1.0
HCM2KQueue:   2.1  3.9   3.8   5.2  1.8   2.6   5.9  6.7   0.9   3.9 10.1   8.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.19 1.20  1.19  1.19 1.18  1.20  1.19 1.18  1.18
70th%HCM2kQ:  2.5  4.7   4.5   6.2  2.1   3.1   7.0  7.9   1.0   4.7 11.9  10.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.58 1.56  1.56  1.55 1.58  1.58  1.55 1.54  1.59  1.56 1.51  1.53
85th%HCM2kQ:  3.3  6.2   6.0   8.1  2.8   4.1   9.1 10.3   1.4   6.1 15.3  13.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.76 1.73  1.73  1.71 1.77  1.75  1.70 1.69  1.78  1.73 1.64  1.66
90th%HCM2kQ:  3.7  6.8   6.6   8.9  3.1   4.5  10.0 11.2   1.5   6.8 16.6  14.2
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.03 1.98  1.99  1.95 2.04  2.02  1.93 1.91  2.07  1.98 1.84  1.87
95th%HCM2kQ:  4.3  7.8   7.6  10.2  3.6   5.2  11.3 12.8   1.8   7.8 18.6  16.1
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.55 2.44  2.45  2.37 2.57  2.52  2.34 2.30  2.64  2.44 2.16  2.22
98th%HCM2kQ:  5.4  9.6   9.3  12.4  4.6   6.5  13.7 15.3   2.3   9.6 21.8  19.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #5 Meadowview Road/24th Street
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  15.2 52.4  25.4  37.8 26.4  19.4  43.6  104   7.0  29.9  155  68.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     92.480 pounds
                      14.982 gallons
Carbon Dioxide:      288.537 pounds
Carbon Monoxide:      22.640 pounds
Hydrocarbons:          4.132 pounds
Nitrogen Oxides:       0.819 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     86.846 pounds
                      14.069 gallons
Carbon Dioxide:      270.959 pounds
Carbon Monoxide:      22.200 pounds
Hydrocarbons:          4.043 pounds
Nitrogen Oxides:       0.732 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #5: Meadowview Road/24th Street




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      43  133    90   563  224   231   160  906    59   121  761   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:   43  133    90   563  224   231   160  906    59   121  761   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:    43  133    90   563  224   231   160  906    59   121  761   223
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   43  133    90   563  224   231   160  906    59   121  761   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
Final Vol.:    43  133    90   563  224   231   160  906    59   121  761   223
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85  0.95 0.95  0.85  0.95 0.95  0.85  0.95 0.95  0.85
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  1805 3610  1615  1805 3610  1615  1805 3610  1615  1805 3610  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.04  0.06  0.31 0.06  0.14  0.09 0.25  0.04  0.07 0.21  0.14
Crit Moves:             ****  ****             ****        ****
Green/Cycle: 0.08 0.08  0.08  0.45 0.46  0.46  0.14 0.37  0.37  0.10 0.33  0.33
Volume/Cap:  0.31 0.45  0.69  0.69 0.13  0.31  0.65 0.69  0.10  0.69 0.65  0.42
Delay/Veh:   45.0 44.9  58.8  24.0 15.6  17.3  46.6 28.3  20.9  54.3 30.0  26.9
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  45.0 44.9  58.8  24.0 15.6  17.3  46.6 28.3  20.9  54.3 30.0  26.9
LOS by Move:    D     D     E     C     B     B     D     C     C     D     C     C
HCM2kAvgQ:      2     3     4    14     2     4     6    13     1     5    11     6
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  2  0  1    1  0  2  0  1    1  0  2  0  1    1  0  2  0  1
Lane Group:     L     T     R     L     T     R     L     T     R     L     T     R
#LnsInGrps:     1     2     1     1     2     1     1     2     1     1     2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            0                 0                 0                 0
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:      Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:       1 xxxx  xxxx      1 xxxx  xxxx      1 xxxx  xxxx      1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.95 1.00  0.85  0.95 1.00  0.85  0.95 1.00  0.85  0.95 1.00  0.85
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  1.00  1.00 0.95  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 0.95 0.95  0.85  0.95 0.95  0.85  0.95 0.95  0.85  0.95 0.95  0.85
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #5 Meadowview Road/24th Street
```

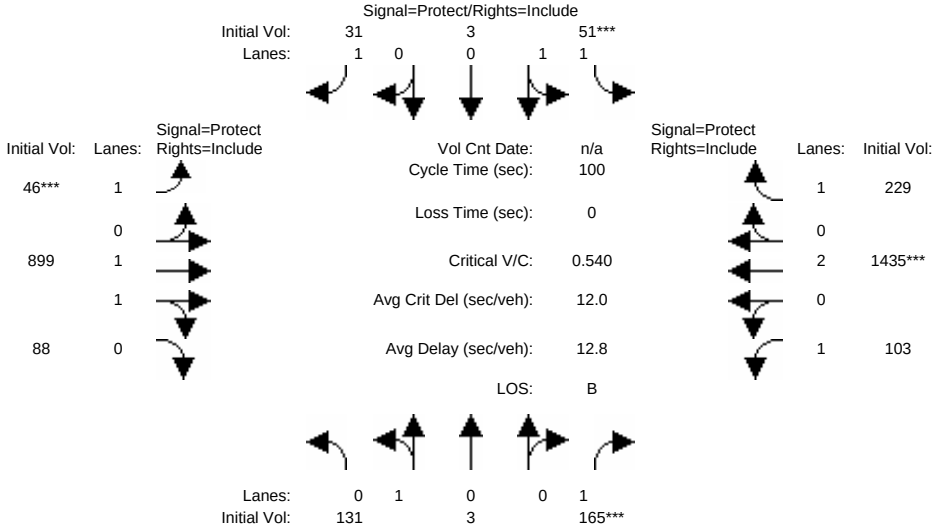


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.08 0.08  0.08  0.45 0.46  0.46  0.14 0.37  0.37  0.10 0.33  0.33
ArrivalType:         3              3              3                    3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.1  1.9   2.4  12.4  1.9   4.0   4.2 11.2   1.1   3.3  9.5   4.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.4  0.8   1.7   2.1  0.2   0.4   1.6  2.0   0.1   1.7  1.7   0.7
HCM2KQueue:   1.6  2.6   4.1  14.4  2.0   4.5   5.8 13.2   1.2   5.0 11.2   5.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.19  1.17 1.20  1.19  1.19 1.17  1.20  1.19 1.18  1.19
70th%HCM2kQ:  1.9  3.1   4.9  16.9  2.4   5.3   6.9 15.5   1.4   5.9 13.2   6.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.58 1.57  1.56  1.49 1.58  1.56  1.55 1.49  1.59  1.55 1.51  1.55
85th%HCM2kQ:  2.5  4.1   6.4  21.4  3.2   7.0   9.0 19.8   1.9   7.8 16.9   8.6
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.77 1.75  1.73  1.59 1.76  1.72  1.70 1.61  1.78  1.71 1.63  1.70
90th%HCM2kQ:  2.8  4.6   7.1  23.0  3.6   7.7   9.9 21.3   2.1   8.5 18.3   9.5
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.05 2.02  1.98  1.77 2.04  1.97  1.93 1.79  2.06  1.95 1.82  1.94
95th%HCM2kQ:  3.2  5.3   8.1  25.5  4.2   8.8  11.2 23.7   2.5   9.8 20.4  10.8
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.59 2.52  2.43  2.03 2.55  2.41  2.34 2.06  2.61  2.38 2.12  2.35
98th%HCM2kQ:  4.0  6.6   9.9  29.3  5.2  10.8  13.6 27.3   3.1  11.9 23.8  13.1
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #5 Meadowview Road/24th Street
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  10.2 31.7  21.9 111.5 32.3  36.4  37.9  192   9.7  29.3  162  43.6
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    116.158 pounds
                      18.818 gallons
Carbon Dioxide:      362.413 pounds
Carbon Monoxide:      28.880 pounds
Hydrocarbons:          5.404 pounds
Nitrogen Oxides:       1.004 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    109.703 pounds
                      17.772 gallons
Carbon Dioxide:      342.275 pounds
Carbon Monoxide:      28.373 pounds
Hydrocarbons:          5.302 pounds
Nitrogen Oxides:       0.902 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Existing AM

Intersection #6: Meadowview Road/Detroit Boulevard




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     131    3   165    51    3    31    46  899    88   103 1435   229
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:  131    3   165    51    3    31    46  899    88   103 1435   229
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:   131    3   165    51    3    31    46  899    88   103 1435   229
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  131    3   165    51    3    31    46  899    88   103 1435   229
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
Final Vol.:   131    3   165    51    3    31    46  899    88   103 1435   229
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85  0.96 0.96  0.85  0.95 0.94  0.94  0.95 0.95  0.85
Lanes:       0.98 0.02  1.00  1.89 0.11  1.00  1.00 1.82  0.18  1.00 2.00  1.00
Final Sat.:  1770   41  1615  3427  202  1615  1805 3245   318  1805 3610  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.07  0.10  0.01 0.01  0.02  0.03 0.28  0.28  0.06 0.40  0.14
Crit Moves:             ****  ****             ****             ****
Green/Cycle: 0.17 0.19  0.19  0.03 0.04  0.04  0.05 0.65  0.65  0.13 0.74  0.74
Volume/Cap:  0.43 0.39  0.54  0.54 0.33  0.43  0.54 0.43  0.43  0.43 0.54  0.19
Delay/Veh:   38.0 36.2  38.6  53.8 47.5  50.6  53.4  8.6   8.6  41.0  6.0   4.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  38.0 36.2  38.6  53.8 47.5  50.6  53.4  8.6   8.6  41.0  6.0   4.1
LOS by Move:   D    D     D     D    D     D     D    A     A     D    A     A
HCM2kAvgQ:     4    4     5     2    1     2     2    8     8     3   10     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  1  0  0  1    1  1  0  0  1    1  0  1  1  0    1  0  2  0  1
Lane Group:   LT   LT     R    LT   LT     R     L   RT     RT    L    T     R
#LnsInGrps:    1    1     1     2    2     1     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8               8               8               8
% Hev Veh:           0               0               0               0
Grade:              0%              0%              0%              0%
Parking/Hr:         No              No              No              No
Bus Stp/Hr:          0               0               0               0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0               0               0               0
ExclusiveRT:     Include         Include         Include         Include
% RT Prtct:          0               0               0               0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     4    4  xxxx     4    4  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx 0.99  0.99  xxxx xxxx  0.85
LT Adj:      0.95 0.95 xxxxx  0.96 0.96 xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.95 0.95  0.85  0.96 0.96  0.85  0.95 0.99  0.99  0.95 1.00  0.85
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.95 0.95  0.85  0.96 0.96  0.85  0.95 0.94  0.94  0.95 0.95  0.85
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
```



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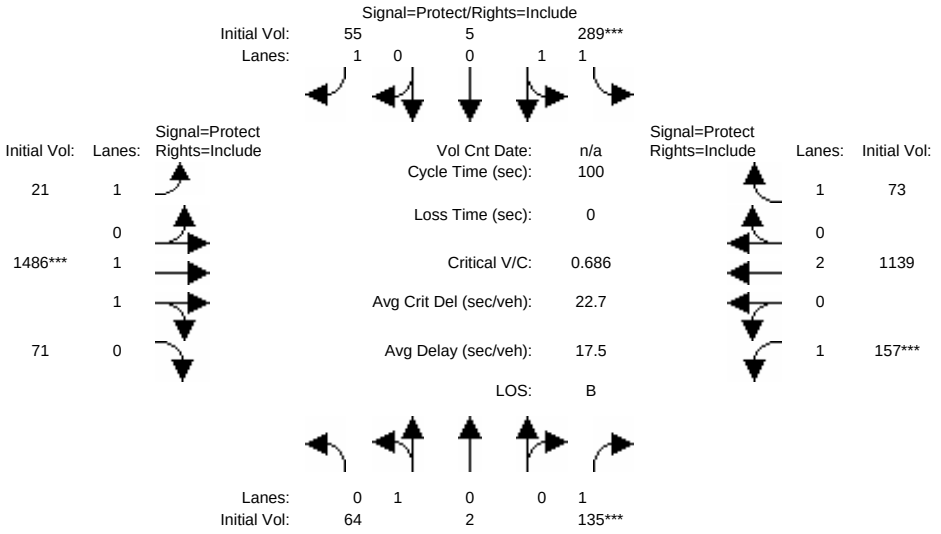
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.17 0.19  0.19  0.03 0.04  0.04  0.05 0.65  0.65  0.13 0.74  0.74
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.3  3.3   4.1   0.7  0.7   0.8   1.2  7.0   7.0   2.6  9.2   2.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.7  0.6   1.1   0.9  0.5   0.7   1.0  0.7   0.7   0.7  1.2   0.2
HCM2KQueue:   4.1  3.9   5.2   1.6  1.2   1.5   2.2  7.7   7.7   3.3 10.3   2.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.20 1.20  1.20  1.19 1.18  1.18  1.19 1.18  1.19
70th%HCM2kQ:  4.8  4.6   6.2   2.0  1.4   1.8   2.7  9.1   9.1   4.0 12.2   2.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.56 1.56  1.55  1.58 1.59  1.59  1.58 1.53  1.53  1.57 1.51  1.58
85th%HCM2kQ:  6.3  6.1   8.1   2.6  1.9   2.4   3.5 11.8  11.8   5.2 15.7   3.5
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.73 1.73  1.71  1.77 1.78  1.77  1.76 1.67  1.67  1.74 1.64  1.76
90th%HCM2kQ:  7.0  6.7   9.0   2.9  2.1   2.7   3.9 12.9  12.9   5.8 17.0   3.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.98 1.98  1.95  2.05 2.06  2.05  2.03 1.89  1.89  2.00 1.84  2.03
95th%HCM2kQ:  8.0  7.7  10.2   3.3  2.5   3.1   4.5 14.6  14.6   6.7 19.0   4.5
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.43 2.44  2.37  2.58 2.61  2.59  2.54 2.25  2.25  2.47 2.15  2.54
98th%HCM2kQ:  9.9  9.5  12.4   4.2  3.1   3.9   5.7 17.4  17.4   8.3 22.3   5.6
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  29.3  0.7  37.3  12.6  0.7   7.5  11.2  109  10.7  23.7  157  17.6
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     65.414 pounds
                      10.597 gallons
Carbon Dioxide:      204.091 pounds
Carbon Monoxide:      14.976 pounds
Hydrocarbons:          2.433 pounds
Nitrogen Oxides:       0.627 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     60.004 pounds
                       9.721 gallons
Carbon Dioxide:      187.211 pounds
Carbon Monoxide:      14.561 pounds
Hydrocarbons:          2.346 pounds
Nitrogen Oxides:       0.552 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Existing PM

Intersection #6: Meadowview Road/Detroit Boulevard




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      64    2   135   289    5    55    21 1486    71   157 1139    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:   64    2   135   289    5    55    21 1486    71   157 1139    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:    64    2   135   289    5    55    21 1486    71   157 1139    73
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   64    2   135   289    5    55    21 1486    71   157 1139    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
Final Vol.:    64    2   135   289    5    55    21 1486    71   157 1139    73
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.95 0.95  0.85  0.95 0.95  0.85  0.95 0.94  0.94  0.95 0.95  0.85
Lanes:       0.97 0.03  1.00  1.97 0.03  1.00  1.00 1.91  0.09  1.00 2.00  1.00
Final Sat.:  1758   55  1615  3560   62  1615  1805 3421   163  1805 3610  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.04  0.08  0.08 0.08  0.03  0.01 0.43  0.43  0.09 0.32  0.05
Crit Moves:              ****  ****               ****        ****
Green/Cycle: 0.07 0.12  0.12  0.12 0.17  0.17  0.03 0.63  0.63  0.13 0.73  0.73
Volume/Cap:  0.49 0.30  0.69  0.69 0.49  0.21  0.43 0.69  0.69  0.69 0.43  0.06
Delay/Veh:   47.2 40.8  51.8  46.9 38.5  36.4  53.9 12.8  12.8  50.2  5.3   3.8
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  47.2 40.8  51.8  46.9 38.5  36.4  53.9 12.8  12.8  50.2  5.3   3.8
LOS by Move:    D    D     D     D    D     D     D    B     B     D    A     A
HCM2kAvgQ:      3    2     5     6    5     2     1   17    17     6    7     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  1  0  0  1    1  1  0  0  1    1  0  1  1  0    1  0  2  0  1
Lane Group:   LT   LT     R    LT   LT     R     L   RT     RT    L    T     R
#LnsInGrps:    1    1     1     2    2     1     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      4    4  xxxx     4    4  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx 0.99  0.99  xxxx xxxx  0.85
LT Adj:      0.95 0.95 xxxxx  0.95 0.95 xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.95 0.95  0.85  0.95 0.95  0.85  0.95 0.99  0.99  0.95 1.00  0.85
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.95 0.95  0.85  0.95 0.95  0.85  0.95 0.94  0.94  0.95 0.95  0.85
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
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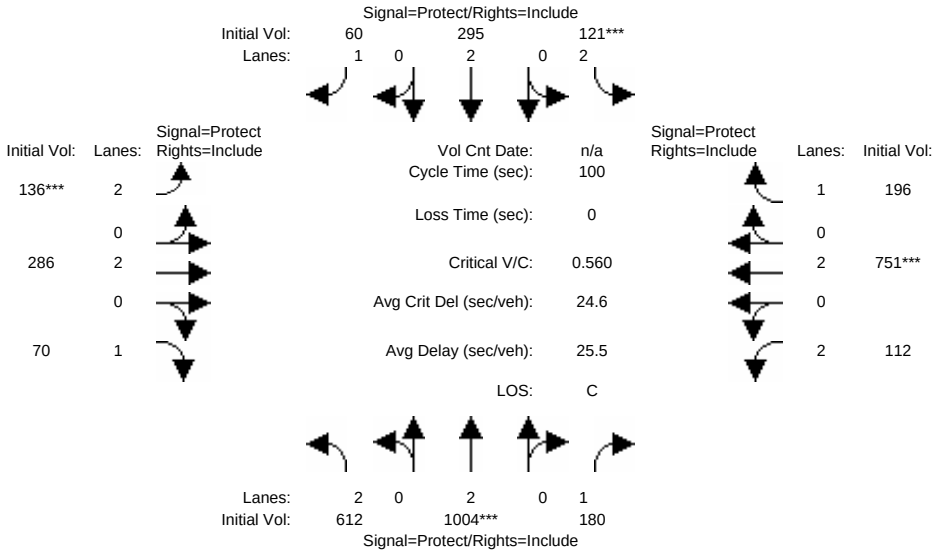
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.07 0.12  0.12  0.12 0.17  0.17  0.03 0.63  0.63  0.13 0.73  0.73
ArrivalType:         3              3              3                    3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.8  1.7   3.6   3.9  3.7   1.3   0.6 14.8  14.8   4.2  6.5   0.6
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.9  0.4   1.8   1.8  0.9   0.3   0.6  2.1   2.1   1.8  0.8   0.1
HCM2KQueue:   2.6  2.1   5.4   5.7  4.6   1.6   1.2 16.9  16.9   6.0  7.3   0.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.19 1.19  1.20  1.20 1.17  1.17  1.19 1.18  1.20
70th%HCM2kQ:  3.1  2.5   6.4   6.8  5.5   1.9   1.5 19.7  19.7   7.1  8.6   0.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.57 1.58  1.55  1.55 1.56  1.58  1.59 1.47  1.47  1.55 1.54  1.59
85th%HCM2kQ:  4.1  3.3   8.3   8.9  7.2   2.5   1.9 24.8  24.8   9.3 11.1   1.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.75 1.76  1.71  1.70 1.72  1.77  1.78 1.57  1.57  1.70 1.68  1.79
90th%HCM2kQ:  4.6  3.7   9.2   9.7  7.9   2.8   2.2 26.5  26.5  10.2 12.2   1.1
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.02 2.03  1.95  1.94 1.96  2.05  2.06 1.74  1.74  1.93 1.90  2.08
95th%HCM2kQ:  5.3  4.2  10.4  11.1  9.1   3.2   2.5 29.3  29.3  11.6 13.8   1.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.52 2.55  2.36  2.34 2.40  2.59  2.61 1.97  1.97  2.33 2.27  2.65
98th%HCM2kQ:  6.6  5.3  12.7  13.4 11.1   4.1   3.2 33.3  33.3  14.0 16.5   1.7
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  15.4  0.5  32.3  69.3  1.1  11.9   5.2  241  11.5  37.5  111   5.1
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     84.239 pounds
                      13.647 gallons
Carbon Dioxide:      262.825 pounds
Carbon Monoxide:      19.924 pounds
Hydrocarbons:          3.431 pounds
Nitrogen Oxides:       0.781 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     78.140 pounds
                      12.659 gallons
Carbon Dioxide:      243.796 pounds
Carbon Monoxide:      19.452 pounds
Hydrocarbons:          3.334 pounds
Nitrogen Oxides:       0.692 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #7: Mack Road/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	612	1004	180	121	295	60	136	286	70	112	751	196
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:	612	1004	180	121	295	60	136	286	70	112	751	196
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:	612	1004	180	121	295	60	136	286	70	112	751	196
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	612	1004	180	121	295	60	136	286	70	112	751	196
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
Final Vol.:	612	1004	180	121	295	60	136	286	70	112	751	196
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.95	0.85	0.92	0.95	0.85	0.92	0.95	0.85
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3502	3610	1615	3502	3610	1615	3502	3610	1615	3502	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.17	0.28	0.11	0.03	0.08	0.04	0.04	0.08	0.04	0.03	0.21	0.12
Crit Moves:		****		****			****				****	
Green/Cycle:	0.38	0.50	0.50	0.06	0.18	0.18	0.07	0.31	0.31	0.13	0.37	0.37
Volume/Cap:	0.46	0.56	0.22	0.56	0.46	0.21	0.56	0.25	0.14	0.25	0.56	0.33
Delay/Veh:	23.5	17.9	14.4	48.9	37.3	35.4	48.0	25.6	24.7	39.7	25.5	22.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.5	17.9	14.4	48.9	37.3	35.4	48.0	25.6	24.7	39.7	25.5	22.8
LOS by Move:	C	B	B	D	D	D	D	C	C	D	C	C
HCM2kAvgQ:	7	11	3	3	5	2	3	3	2	2	10	4
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	0			0			0			0		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Usr Sat Adj:	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 Sat Adj:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.92	0.95	0.85	0.92	0.95	0.85	0.92	0.95	0.85	0.92	0.95	0.85
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #7 Mack Road/Franklin Boulevard


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*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.38 0.50  0.50  0.06 0.18  0.18  0.07 0.31  0.31  0.13 0.37  0.37
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.6 10.2   2.8   1.7  3.9   1.4   1.9  3.1   1.4   1.4  8.7   3.9
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.8  1.2   0.3   1.1  0.8   0.3   1.1  0.3   0.2   0.3  1.2   0.5
HCM2KQueue:   7.4 11.5   3.1   2.8  4.7   1.7   3.0  3.4   1.6   1.8  9.9   4.4
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.18  1.19  1.19 1.19  1.20  1.19 1.19  1.20  1.20 1.18  1.19
70th%HCM2kQ:  8.8 13.5   3.7   3.3  5.6   2.0   3.6  4.1   1.9   2.1 11.7   5.2
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.50  1.57  1.57 1.56  1.58  1.57 1.57  1.58  1.58 1.52  1.56
85th%HCM2kQ: 11.4 17.3   4.9   4.3  7.3   2.7   4.7  5.4   2.5   2.8 15.1   6.8
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.68 1.63  1.74  1.75 1.72  1.77  1.74 1.74  1.77  1.77 1.64  1.72
90th%HCM2kQ: 12.4 18.6   5.4   4.8  8.0   3.0   5.2  6.0   2.7   3.1 16.3   7.5
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.90 1.82  2.00  2.01 1.96  2.05  2.01 2.00  2.05  2.04 1.85  1.97
95th%HCM2kQ: 14.1 20.8   6.3   5.6  9.2   3.4   6.0  6.9   3.2   3.6 18.3   8.6
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.27 2.11  2.49  2.51 2.40  2.58  2.50 2.47  2.59  2.57 2.17  2.41
98th%HCM2kQ: 16.8 24.2   7.8   6.9 11.2   4.3   7.4  8.5   4.0   4.6 21.5  10.6
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 114.8  175  25.5  29.4 66.0  12.8  32.9 53.2  12.5  25.3  149  35.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    115.064 pounds
                      18.640 gallons
Carbon Dioxide:      359.000 pounds
Carbon Monoxide:      28.233 pounds
Hydrocarbons:          5.169 pounds
Nitrogen Oxides:       1.018 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    108.136 pounds
                      17.518 gallons
Carbon Dioxide:      337.386 pounds
Carbon Monoxide:      27.690 pounds
Hydrocarbons:          5.059 pounds
Nitrogen Oxides:       0.911 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #7: Mack Road/Franklin Boulevard

Signal=Protect/Rights=Include

Initial Vol: 114 802*** 329
Lanes: 1 0 2 0 2

Initial Vol:	Lanes:	Signal=Protect Rights=Include			Signal=Protect Rights=Include	Lanes:	Initial Vol:
			Vol Cnt Date:	n/a			
105	2		Cycle Time (sec):	100		1	212
	0		Loss Time (sec):	0		0	
815	2		Critical V/C:	0.848		2	788
	0		Avg Crit Del (sec/veh):	43.3		0	
688***	1		Avg Delay (sec/veh):	31.8		2	261***
			LOS:	C			

Lanes: 2 0 2 0 1
Initial Vol: 438*** 478 140
Signal=Protect/Rights=Include

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	438	478	140	329	802	114	105	815	688	261	788	212
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:	438	478	140	329	802	114	105	815	688	261	788	212
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:	438	478	140	329	802	114	105	815	688	261	788	212
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	438	478	140	329	802	114	105	815	688	261	788	212
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
Final Vol.:	438	478	140	329	802	114	105	815	688	261	788	212
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.85	0.92	0.95	0.85	0.92	0.95	0.85	0.92	0.95	0.85
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3502	3610	1615	3502	3610	1615	3502	3610	1615	3502	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.09	0.09	0.22	0.07	0.03	0.23	0.43	0.07	0.22	0.13
Crit Moves:	****				****				****	****		
Green/Cycle:	0.15	0.24	0.24	0.17	0.26	0.26	0.07	0.50	0.50	0.09	0.52	0.52
Volume/Cap:	0.85	0.55	0.36	0.55	0.85	0.27	0.42	0.45	0.85	0.85	0.42	0.25
Delay/Veh:	54.0	34.1	32.2	39.1	42.3	29.6	45.6	16.2	29.9	64.2	14.9	13.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.0	34.1	32.2	39.1	42.3	29.6	45.6	16.2	29.9	64.2	14.9	13.5
LOS by Move:	D	C	C	D	D	C	D	B	C	E	B	B
HCM2kAvgQ:	9	7	4	5	15	3	2	8	21	7	8	4
HCM Ops Adjusted Lane Utilization Module:												
Lanes:		2 0 2 0 1			2 0 2 0 1			2 0 2 0 1			2 0 2 0 1	
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	2	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid		8			8			8			8	
% Hev Veh:		0			0			0			0	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < Other > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Usr Sat Adj:	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 Sat Adj:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.92	0.95	0.85	0.92	0.95	0.85	0.92	0.95	0.85	0.92	0.95	0.85
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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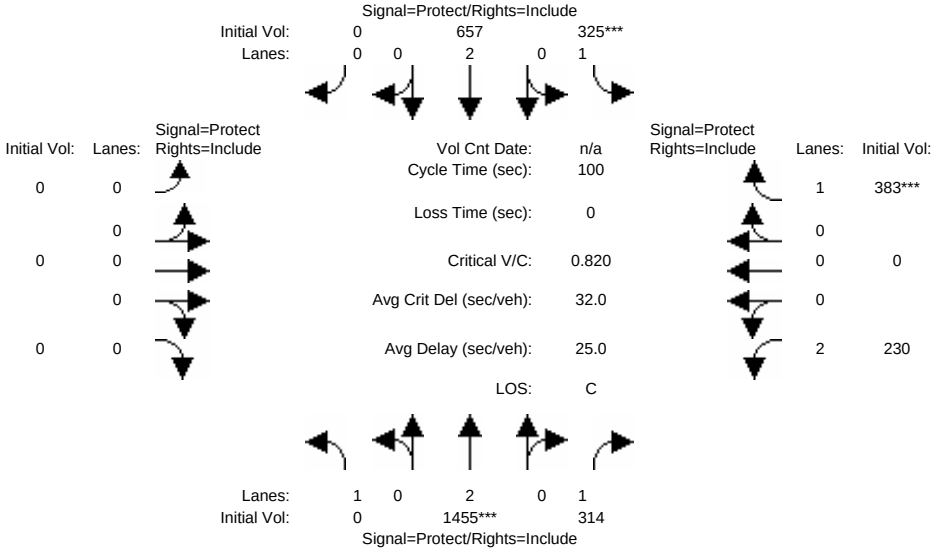
Intersection #7 Mack Road/Franklin Boulevard

```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.15 0.24  0.24  0.17 0.26  0.26  0.07 0.50  0.50  0.09 0.52  0.52
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.1  6.1   3.2   4.3 11.1   2.5   1.4  7.7  16.6   3.7  7.1   3.3
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           3.4  1.2   0.6   1.2  3.9   0.4   0.7  0.8   4.3   2.9  0.7   0.3
HCM2KQueue:   9.5  7.3   3.8   5.5 15.1   2.9   2.1  8.5  20.9   6.5  7.8   3.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.18  1.19  1.19 1.17  1.19  1.19 1.18  1.16  1.18 1.18  1.19
70th%HCM2kQ: 11.2  8.6   4.5   6.5 17.6   3.4   2.5 10.0  24.2   7.8  9.2   4.3
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.54  1.56  1.55 1.48  1.57  1.58 1.53  1.45  1.54 1.53  1.57
85th%HCM2kQ: 14.4 11.2   5.9   8.5 22.3   4.5   3.3 12.9  30.3  10.1 12.0   5.6
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.65 1.68  1.73  1.70 1.59  1.75  1.76 1.66  1.54  1.69 1.67  1.73
90th%HCM2kQ: 15.6 12.3   6.6   9.3 23.9   5.0   3.7 14.1  32.2  11.0 13.0   6.2
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.85 1.90  1.99  1.94 1.76  2.01  2.03 1.87  1.69  1.92 1.89  1.99
95th%HCM2kQ: 17.6 13.9   7.5  10.6 26.5   5.8   4.3 15.9  35.3  12.5 14.7   7.2
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.18 2.27  2.45  2.36 2.01  2.50  2.55 2.22  1.90  2.30 2.25  2.46
98th%HCM2kQ: 20.7 16.6   9.3  12.9 30.3   7.2   5.4 18.8  39.7  15.1 17.6   8.8
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 106.7  105  29.1  75.3  190  22.6  25.1  131 149.1  64.3  121  29.3
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    178.729 pounds
                      28.954 gallons
Carbon Dioxide:      557.633 pounds
Carbon Monoxide:      44.724 pounds
Hydrocarbons:          8.470 pounds
Nitrogen Oxides:       1.511 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    169.248 pounds
                      27.418 gallons
Carbon Dioxide:      528.053 pounds
Carbon Monoxide:      43.979 pounds
Hydrocarbons:          8.320 pounds
Nitrogen Oxides:       1.361 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #8: Cosumnes River Boulevard/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	1455	314	325	657	0	0	0	0	230	0	383
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	1455	314	325	657	0	0	0	0	230	0	383
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	1455	314	325	657	0	0	0	0	230	0	383
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1455	314	325	657	0	0	0	0	230	0	383
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
Final Vol.:	0	1455	314	325	657	0	0	0	0	230	0	383
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.95	0.95	1.00	1.00	1.00	1.00	0.92	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	1900	3610	1615	1805	3610	0	0	0	0	3502	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.40	0.19	0.18	0.18	0.00	0.00	0.00	0.00	0.07	0.00	0.24
Crit Moves:		****		****								****
Green/Cycle:	0.00	0.49	0.49	0.22	0.71	0.00	0.00	0.00	0.00	0.29	0.00	0.29
Volume/Cap:	0.00	0.82	0.40	0.82	0.26	0.00	0.00	0.00	0.00	0.23	0.00	0.82
Delay/Veh:	0.0	24.8	16.4	49.9	5.2	0.0	0.0	0.0	0.0	27.2	0.0	44.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	24.8	16.4	49.9	5.2	0.0	0.0	0.0	0.0	27.2	0.0	44.2
LOS by Move:	A	C	B	D	A	A	A	A	A	C	A	D
HCM2kAvgQ:	0	22	6	12	4	0	0	0	0	3	0	13
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0 2	0 1	1	0 2	0 0	0	0 0	0 0	2	0 0	0 1
Lane Group:	L	T	R	L	T	xxxx	xxxx	xxxx	xxxx	L	xxxx	R
#LnsInGrps:	1	2	1	1	2	0	0	0	0	2	0	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	0			0			0			0		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Hev Veh Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Grade Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00
Area Adj:	xxxx	1.00	1.00	1.00	1.00	xxxxx	xxxx	xxxx	xxxxx	1.00	xxxx	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	0.85	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Fnl Sat Adj:	1.00	0.95	0.85	0.95	0.95	1.00	1.00	1.00	1.00	0.92	1.00	0.85
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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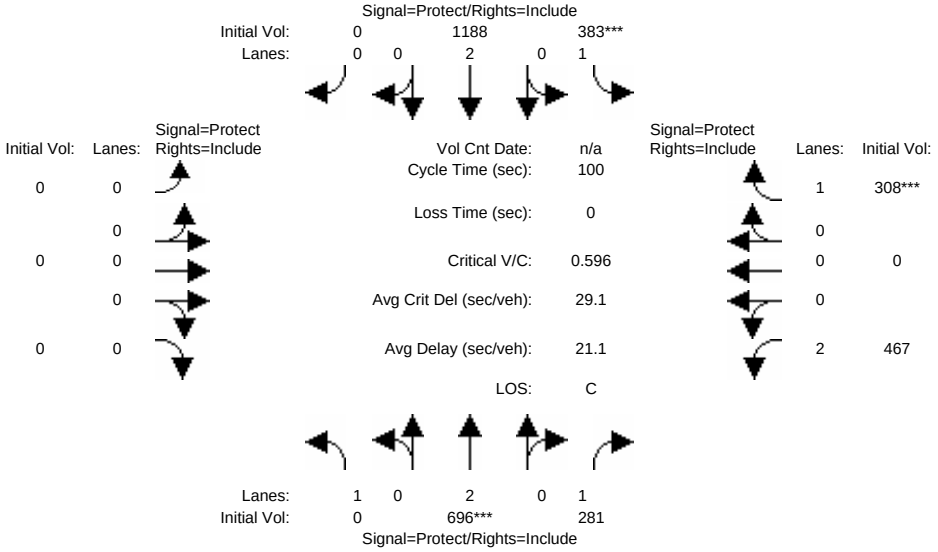
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.49  0.49  0.22 0.71  0.00  0.00 0.00  0.00  0.29 0.00  0.29
ArrivalType:          3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0 18.1   5.5   8.6  3.4   0.0   0.0  0.0   0.0   2.5  0.0   9.9
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Q2:           0.0  3.9   0.6   3.3  0.3   0.0   0.0  0.0   0.0   0.3  0.0   3.4
HCM2KQueue:   0.0 22.0   6.2  11.9  3.7   0.0   0.0  0.0   0.0   2.8  0.0  13.4
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.16  1.19  1.17 1.19  1.20  1.20 1.20  1.20  1.19 1.20  1.17
70th%HCM2kQ:  0.0 25.4   7.3  14.0  4.5   0.0   0.0  0.0   0.0   3.3  0.0  15.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.44  1.54  1.50 1.56  1.60  1.60 1.60  1.60  1.57 1.60  1.49
85th%HCM2kQ:  0.0 31.7   9.5  17.9  5.8   0.0   0.0  0.0   0.0   4.4  0.0  19.9
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.53  1.69  1.62 1.73  1.80  1.80 1.80  1.80  1.75 1.80  1.61
90th%HCM2kQ:  0.0 33.7  10.4  19.3  6.5   0.0   0.0  0.0   0.0   4.9  0.0  21.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 1.68  1.93  1.81 1.99  2.10  2.10 2.10  2.10  2.01 2.10  1.79
95th%HCM2kQ:  0.0 36.9  11.9  21.6  7.4   0.0   0.0  0.0   0.0   5.6  0.0  23.8
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 1.88  2.32  2.10 2.45  2.70  2.70 2.70  2.70  2.51 2.70  2.06
98th%HCM2kQ:  0.0 41.4  14.3  25.0  9.2   0.0   0.0  0.0   0.0   7.0  0.0  27.5
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  310  49.6  77.3 58.1   0.0   0.0  0.0   0.0  43.7  0.0  89.2
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     99.787 pounds
                      16.165 gallons
Carbon Dioxide:      311.335 pounds
Carbon Monoxide:      24.437 pounds
Hydrocarbons:          4.463 pounds
Nitrogen Oxides:       0.883 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     93.720 pounds
                      15.183 gallons
Carbon Dioxide:      292.407 pounds
Carbon Monoxide:      23.962 pounds
Hydrocarbons:          4.366 pounds
Nitrogen Oxides:       0.789 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Existing PM

Intersection #8: Cosumnes River Boulevard/Franklin Boulevard




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0   696   281   383  1188     0     0     0     0   467     0   308
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   696   281   383  1188     0     0     0     0   467     0   308
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   696   281   383  1188     0     0     0     0   467     0   308
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0   696   281   383  1188     0     0     0     0   467     0   308
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
Final Vol.:     0   696   281   383  1188     0     0     0     0   467     0   308
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  0.95  0.85  0.95  0.95  1.00  1.00  1.00  1.00  0.92  1.00  0.85
Lanes:       1.00  2.00  1.00  1.00  2.00  0.00  0.00  0.00  0.00  2.00  0.00  1.00
Final Sat.:  1900  3610  1615  1805  3610     0     0     0     0  3502     0  1615
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.19  0.17  0.21  0.33  0.00  0.00  0.00  0.00  0.13  0.00  0.19
Crit Moves:         ****        ****                                      ****
Green/Cycle: 0.00  0.32  0.32  0.36  0.68  0.00  0.00  0.00  0.00  0.32  0.00  0.32
Volume/Cap:  0.00  0.60  0.54  0.60  0.48  0.00  0.00  0.00  0.00  0.42  0.00  0.60
Delay/Veh:    0.0  29.2  28.8  27.8   7.8   0.0   0.0   0.0   0.0  26.9   0.0  30.4
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0  29.2  28.8  27.8   7.8   0.0   0.0   0.0   0.0  26.9   0.0  30.4
LOS by Move:    A     C     C     C     A     A     A     A     A     C     A     C
HCM2kAvgQ:      0    10     8    10     9     0     0     0     0     6     0     9
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  2  0  1    1  0  2  0  0    0  0  0  0  0    2  0  0  0  1
Lane Group:     L     T     R     L     T   xxxx  xxxx xxxx  xxxx     L  xxxx     R
#LnsInGrps:     1     2     1     1     2     0     0     0     0     2     0     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            0                 0                 0                 0
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:      Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Hev Veh Adj: xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Grade Adj:   xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
Parking Adj: xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx xxxx xxxxx  xxxx xxxx  1.00
Area Adj:    xxxx 1.00  1.00  1.00 1.00 xxxxx  xxxx xxxx xxxxx  1.00 xxxx  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx  0.85
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00  1.00  0.85  0.95 1.00  1.00  1.00 1.00  1.00  0.95 1.00  0.85
Usr Sat Adj: 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 Sat Adj: 1.00  0.95  1.00  1.00 0.95  1.00  1.00 1.00  1.00  0.97 1.00  1.00
Fnl Sat Adj: 1.00  0.95  0.85  0.95 0.95  1.00  1.00 1.00  1.00  0.92 1.00  0.85
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
```

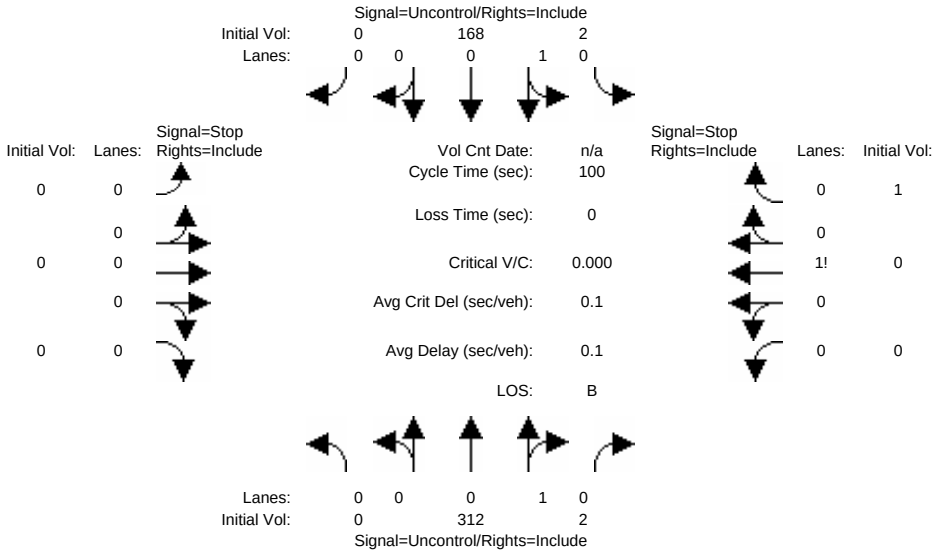


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.32  0.32  0.36 0.68  0.00  0.00 0.00  0.00  0.32 0.00  0.32
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  8.5   6.4   8.7  8.3   0.0   0.0  0.0   0.0   5.2  0.0   7.2
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Q2:           0.0  1.4   1.1   1.4  0.9   0.0   0.0  0.0   0.0   0.7  0.0   1.4
HCM2KQueue:   0.0  9.9   7.5  10.1  9.2   0.0   0.0  0.0   0.0   5.9  0.0   8.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.18  1.18  1.18 1.18  1.20  1.20 1.20  1.20  1.19 1.20  1.18
70th%HCM2kQ:  0.0 11.7   8.9  11.9 10.9   0.0   0.0  0.0   0.0   7.1  0.0  10.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.52  1.53  1.51 1.52  1.60  1.60 1.60  1.60  1.55 1.60  1.53
85th%HCM2kQ:  0.0 15.1  11.5  15.3 14.0   0.0   0.0  0.0   0.0   9.2  0.0  13.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.64  1.67  1.64 1.65  1.80  1.80 1.80  1.80  1.70 1.80  1.66
90th%HCM2kQ:  0.0 16.3  12.6  16.6 15.2   0.0   0.0  0.0   0.0  10.1  0.0  14.3
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 1.85  1.90  1.84 1.86  2.10  2.10 2.10  2.10  1.93 2.10  1.87
95th%HCM2kQ:  0.0 18.3  14.2  18.6 17.1   0.0   0.0  0.0   0.0  11.5  0.0  16.1
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.17  2.26  2.16 2.19  2.70  2.70 2.70  2.70  2.33 2.70  2.22
98th%HCM2kQ:  0.0 21.5  17.0  21.8 20.2   0.0   0.0  0.0   0.0  13.9  0.0  19.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  146  57.5  78.2  142   0.0   0.0  0.0   0.0  91.6  0.0  64.7
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     89.265 pounds
                      14.461 gallons
Carbon Dioxide:      278.508 pounds
Carbon Monoxide:      21.516 pounds
Hydrocarbons:          3.824 pounds
Nitrogen Oxides:       0.812 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     83.349 pounds
                      13.503 gallons
Carbon Dioxide:      260.048 pounds
Carbon Monoxide:      21.055 pounds
Hydrocarbons:          3.730 pounds
Nitrogen Oxides:       0.722 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Existing AM

Intersection #9: Stonecrest Avenue/Freeport Boulevard




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0  312     2     2  168     0     0    0     0     0    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:    0  312     2     2  168     0     0    0     0     0    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:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:     0  339     2     2  183     0     0    0     0     0    0     1
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:     0  339     2     2  183     0     0    0     0     0    0     1
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   341 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   340
Potent Cap.: xxxx xxxx xxxxx  1218 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   702
Move Cap.:   xxxx xxxx xxxxx  1218 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   702
Volume/Cap:  xxxx xxxx  xxxx  0.00 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   0.0
Control Del:xxxxx xxxx xxxxx   8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx  10.1
LOS by Move:   *    *     *     A    *     *     *    *     *     *    *     B
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx   0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx   8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    *     *     A    *     *     *    *     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             10.1
ApproachLOS:       *                *                *                 B
-----------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              0%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #9 Stonecrest Avenue/Freeport Boulevard
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  0  0  1  0    0  1  0  0  0    0  0  0  0  0    0  0  0  0  1
Initial Vol:    0  312     2     2  168     0     0    0     0     0    0     1
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             10.1
------------|---------------||---------------||---------------||---------------|
Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=1]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=485]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #9 Stonecrest Avenue/Freeport Boulevard
********************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	0	0	0	1 0	0	1	0	0 0	0	0	0	0 0	0	0	0	0 1
Initial Vol:	0	312		2	2	168		0	0		0	0	0		0	1

Major Street Volume: 484
Minor Approach Volume: 1
Minor Approach Volume Threshold: 413

SIGNAL WARRANT DISCLAIMER

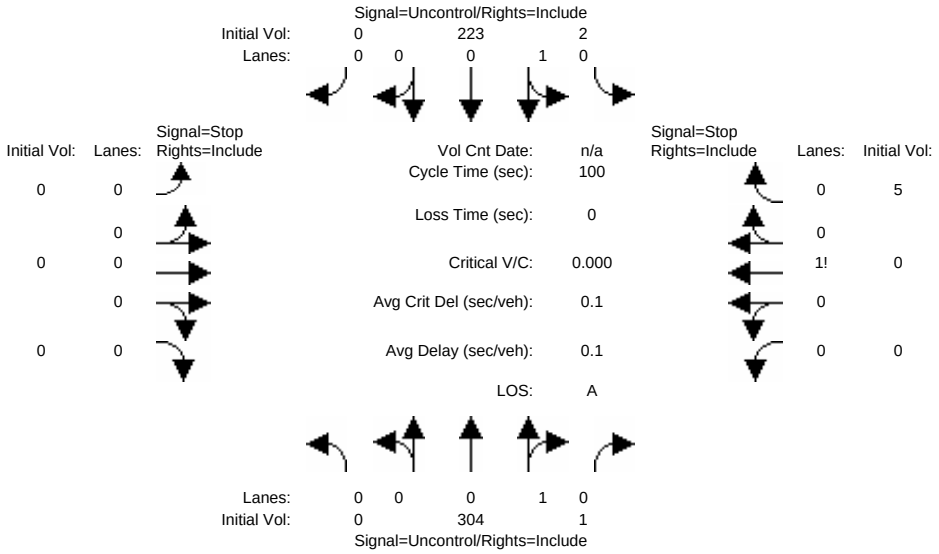
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Existing PM

Intersection #9: Stonecrest Avenue/Freeport Boulevard



Initial Vol:	Lanes:	Lanes:	Initial Vol:
0	0	0	5
	0	0	
0	0	1!	0
	0	0	
0	0	0	0

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Volume Module:																
Base Vol:	0	304	1		2	223	0		0	0	0		0	0	5	
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	304	1		2	223	0		0	0	0		0	0	5	
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	304	1		2	223	0		0	0	0		0	0	5	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Final Vol.:	0	304	1		2	223	0		0	0	0		0	0	5	
Critical Gap Module:																
Critical Gp:	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx		6.2		
FollowUpTim:	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx		3.3		
Capacity Module:																
Cnflict Vol:	xxxx	xxxx	xxxxx		305	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx		305		
Potent Cap.:	xxxx	xxxx	xxxxx		1256	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx		735		
Move Cap.:	xxxx	xxxx	xxxxx		1256	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx		735		
Volume/Cap:	xxxx	xxxx	xxxx		0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx		0.01		
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx		0.0		
Control Del:	xxxxx	xxxx	xxxxx		7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx		9.9		
LOS by Move:	*	*	*		A	*	*	*	*	*	*	*		A		
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx		7.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxx	xxxxx		
Shared LOS:	*	*	*		A	*	*	*	*	*	*	*	*	*		
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				9.9			
ApproachLOS:	*				*				*				A			
HevVeh:	2%				2%				0%				2%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Peak Hour Delay Signal Warrant Report

Intersection #9 Stonecrest Avenue/Freeport Boulevard

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	0	0	0	1 0	0	1	0	0 0	0	0	0	0 0	0	0	0	0 1
Initial Vol:	0	304	1		2	223	0		0	0	0		0	0	5	
ApproachDel:	xxxxxx				xxxxxx				xxxxxx				9.9			

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=5]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=535]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #9 Stonecrest Avenue/Freeport Boulevard

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0	0	0 1	0	0	0 0	0	0	0 0	0	0	0 0 1
Initial Vol:	0	304	1	2	223	0	0	0	0	0	0	5

Major Street Volume: 530
Minor Approach Volume: 5
Minor Approach Volume Threshold: 389

SIGNAL WARRANT DISCLAIMER

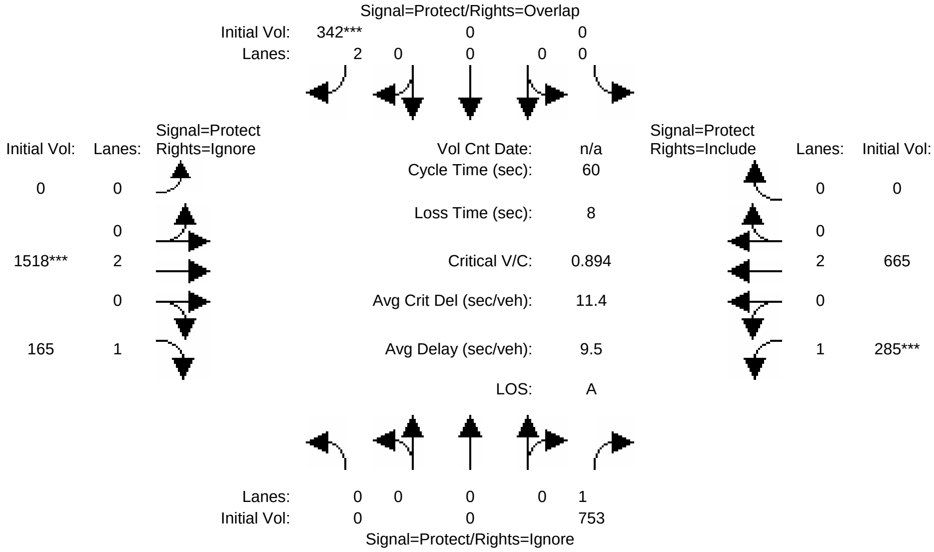
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #32:




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0    0     0     0    0     4     0   25     0     4   25     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0   753     0    0   342     0 1518   165   285  665     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   753     0    0   342     0 1518   165   285  665     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Adj:     0.92 0.92  0.00  0.92 0.92  0.92  0.92 0.92  0.00  0.92 0.92  0.92
PHF Volume:     0    0     0     0    0   372     0 1650     0   310  723     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0     0    0   372     0 1650     0   310  723     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
Final Vol.:     0    0     0     0    0   372     0 1650     0   310  723     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  1.00 1.00  0.73  1.00 0.93  1.00  0.93 0.93  1.00
Lanes:       0.00 0.00  1.00  0.00 0.00  2.00  0.00 2.00  1.00  1.00 2.00  0.00
Final Sat.:     0    0  1900     0    0  2786     0 3538  1900  1769 3538     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.13  0.00 0.47  0.00  0.18 0.20  0.00
Crit Moves:                               ****       ****        ****
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.79  0.00 0.61  0.00  0.73 0.29  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0  32.3   0.0  3.7   0.0  27.3  3.5   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0  32.3   0.0  3.7   0.0  27.3  3.5   0.0
LOS by Move:   A    A     A     A    A     C     A    A     A     C    A     A
HCM2kAvgQ:      0    0     0     0    0     6     0    8     0     7    3     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:         0  0  0  0  1    0  0  0  0  2    0  0  2  0  1    1  0  2  0  0
Lane Group:  xxxx xxxx     R  xxxx xxxx     R  xxxx    T     R     L    T  xxxx
#LnsInGrps:     0    0     1     0    0     2     0    2     1     1    2     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:     < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  xxxx xxxx  0.98  xxxx 0.98 xxxxx  0.98 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx
Area Adj:    xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.83  1.00 0.98  1.00  0.93 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.88  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.73  1.00 0.93  1.00  0.93 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #32
```

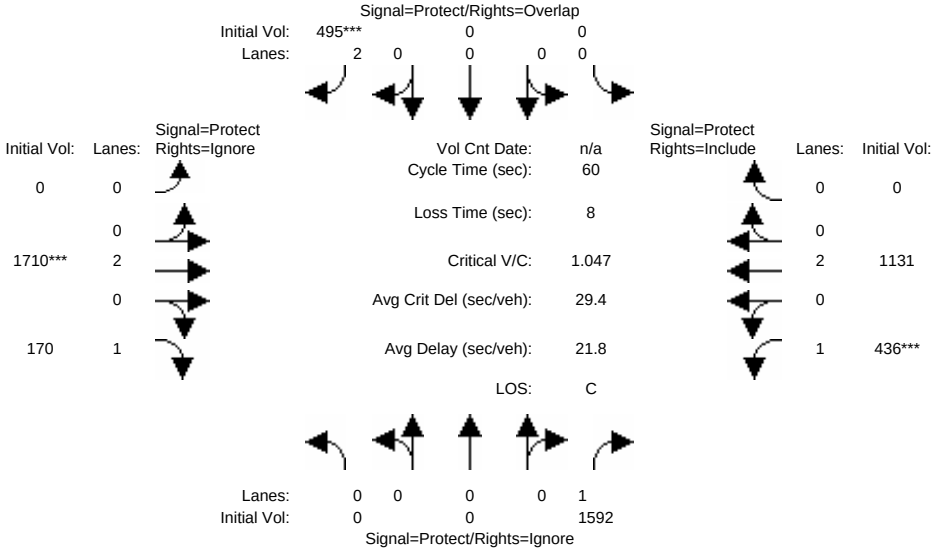


```
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.0  0.0   3.4   0.0  6.5   0.0   4.8  2.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   2.7   0.0  1.6   0.0   2.3  0.4   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   6.0   0.0  8.1   0.0   7.1  2.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.19  1.20 1.18  1.20  1.18 1.19  1.20
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   7.2   0.0  9.5   0.0   8.4  3.3   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.60 1.60  1.55  1.60 1.53  1.60  1.54 1.57  1.60
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   9.3   0.0 12.3   0.0  10.9  4.4   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.80 1.80  1.70  1.80 1.67  1.80  1.68 1.75  1.80
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  10.2   0.0 13.4   0.0  11.9  4.9   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.10 2.10  1.93  2.10 1.88  2.10  1.90 2.01  2.10
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  11.6   0.0 15.2   0.0  13.5  5.6   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.70 2.70  2.33  2.70 2.24  2.70  2.28 2.51  2.70
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  14.1   0.0 18.0   0.0  16.1  7.0   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #32
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0  89.0   0.0  186   0.0  71.4 68.1   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     56.051 pounds
                       9.080 gallons
Carbon Dioxide:      174.878 pounds
Carbon Monoxide:      12.451 pounds
Hydrocarbons:          1.884 pounds
Nitrogen Oxides:       0.575 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     50.835 pounds
                       8.235 gallons
Carbon Dioxide:      158.606 pounds
Carbon Monoxide:      12.050 pounds
Hydrocarbons:          1.801 pounds
Nitrogen Oxides:       0.501 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #32:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     4     0   25     0     4   25     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0  1592     0     0   495     0 1710   170   436 1131     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  1592     0     0   495     0 1710   170   436 1131     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Volume:     0     0     0     0     0   495     0 1710     0   436 1131     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:    0     0     0     0     0   495     0 1710     0   436 1131     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
Final Vol.:     0     0     0     0     0   495     0 1710     0   436 1131     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  1.00 1.00  0.73  1.00 0.93  1.00  0.93 0.93  1.00
Lanes:       0.00 0.00  1.00  0.00 0.00  2.00  0.00 2.00  1.00  1.00 2.00  0.00
Final Sat.:     0     0  1900     0     0  2786     0 3538  1900  1769 3538     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.18  0.00 0.48  0.00  0.25 0.32  0.00
Crit Moves:                                ****        ****        ****
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  1.05  0.00 0.64  0.00  1.03 0.46  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0  78.6   0.0  3.9   0.0  73.6  4.1   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0  78.6   0.0  3.9   0.0  73.6  4.1   0.0
LOS by Move:    A    A     A     A    A     E     A    A     A     E    A     A
HCM2kAvgQ:      0    0     0     0    0    11     0    9     0    15    5     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  1    0  0  0  0  2    0  0  2  0  1    1  0  2  0  0
Lane Group:  xxxx xxxx    R   xxxx xxxx    R   xxxx   T     R     L    T   xxxx
#LnsInGrps:     0    0     1     0    0     2     0    2     1     1    2     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  xxxx xxxx  0.98  xxxx 0.98 xxxxx  0.98 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx
Area Adj:    xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.83  1.00 0.98  1.00  0.93 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.88  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.73  1.00 0.93  1.00  0.93 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #32
```

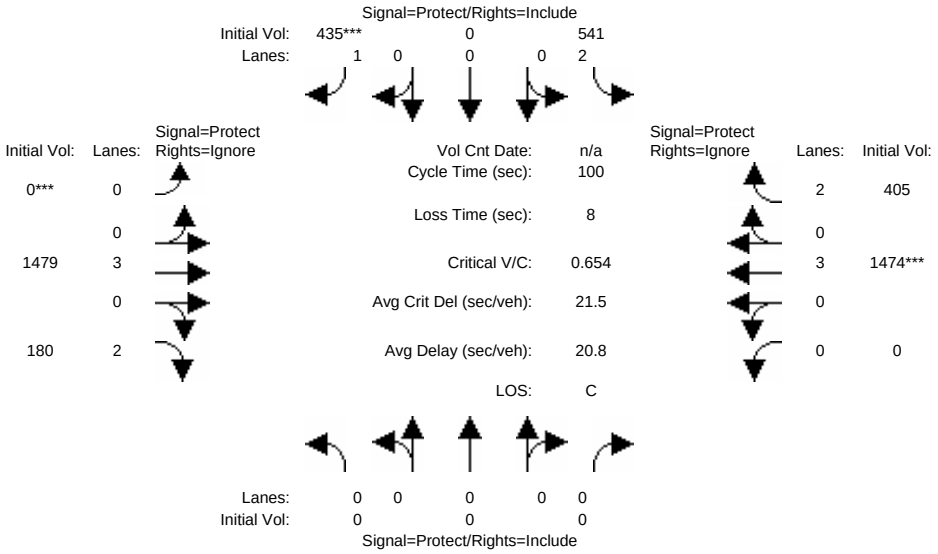


```
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.0  0.0   4.7   0.0  7.0   0.0   7.3  4.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   6.7   0.0  1.7   0.0   8.1  0.8   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0  11.4   0.0  8.7   0.0  15.4  5.2   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.18  1.20 1.18  1.20  1.17 1.19  1.20
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  13.4   0.0 10.2   0.0  18.0  6.2   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.60 1.60  1.50  1.60 1.52  1.60  1.48 1.55  1.60
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  17.2   0.0 13.2   0.0  22.8  8.1   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.80 1.80  1.63  1.80 1.66  1.80  1.59 1.71  1.80
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  18.6   0.0 14.4   0.0  24.4  8.9   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.10 2.10  1.82  2.10 1.87  2.10  1.76 1.95  2.10
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  20.8   0.0 16.2   0.0  27.0 10.2   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.70 2.70  2.12  2.70 2.21  2.70  2.01 2.37  2.70
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  24.2   0.0 19.2   0.0  30.9 12.3   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #32
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0 124.9   0.0  199   0.0 109.9  125   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    101.725 pounds
                      16.480 gallons
Carbon Dioxide:      317.383 pounds
Carbon Monoxide:      24.599 pounds
Hydrocarbons:          4.432 pounds
Nitrogen Oxides:       0.884 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     95.197 pounds
                      15.422 gallons
Carbon Dioxide:      297.014 pounds
Carbon Monoxide:      24.094 pounds
Hydrocarbons:          4.328 pounds
Nitrogen Oxides:       0.790 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #33:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	541	0	435	0	1479	180	0	1474	405
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	541	0	435	0	1479	180	0	1474	405
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.00	0.92	0.92	0.00
PHF Volume:	0	0	0	588	0	473	0	1608	0	0	1602	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	588	0	473	0	1608	0	0	1602	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	0	0	0	588	0	473	0	1608	0	0	1602	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91	0.88	1.00	0.91	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	2.00	0.00	3.00	2.00
Final Sat.:	0	0	0	3502	0	1615	0	5187	3344	0	5187	3344
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.17	0.00	0.29	0.00	0.31	0.00	0.00	0.31	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.45	0.00	0.45	0.00	0.47	0.00	0.00	0.47	0.00
Volume/Cap:	0.00	0.00	0.00	0.38	0.00	0.65	0.00	0.66	0.00	0.00	0.65	0.00
Delay/Veh:	0.0	0.0	0.0	18.5	0.0	23.7	0.0	20.8	0.0	0.0	20.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	18.5	0.0	23.7	0.0	20.8	0.0	0.0	20.8	0.0
LOS by Move:	A	A	A	B	A	C	A	C	A	A	C	A
HCM2kAvgQ:	0	0	0	6	0	12	0	14	0	0	14	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	2	0	0	0	1	0	0	3	0	2	0	0	3	0	2
Lane Group:	xxxx	xxxx	xxxx		L	xxxx		R	xxxx		T		R	xxxx		T		R		
#LnsInGrps:	0	0	0		2	0		1	0		3		2	0		3		2		
HCM Ops Input Saturation Adj Module:																				
Lane Width:	12	12	12		12	12		12	12		12		12	12		12		12		
CrosswalkWid	8				8			8			8			8						
% Hev Veh:	0				0			0			0			0						
Grade:	0%				0%			0%			0%			0%						
Parking/Hr:	No				No			No			No			No						
Bus Stp/Hr:	0				0			0			0			0						
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >																			
Cnft Ped/Hr:	0				0			0			0			0						
ExclusiveRT:	Include				Include			Include			Include									
% RT Prtct:	0				0			0			0			0						
HCM Ops f(lt) Adj Case Module:																				
f(lt) Case:	xxxx	xxxx	xxxx		1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:																				
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx								
Hev Veh Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx								
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx								
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx								
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
HCM Sat Adj:	1.00	1.00	1.00	0.95	1.00	0.85	1.00	1.00	1.00	1.00	1.00	1.00								
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.88	1.00	0.91	0.88								
Fnl Sat Adj:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91	0.88	1.00	0.91	0.88								
Delay Adjustment Factor Module:																				
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >																			
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >																			
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00								

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #33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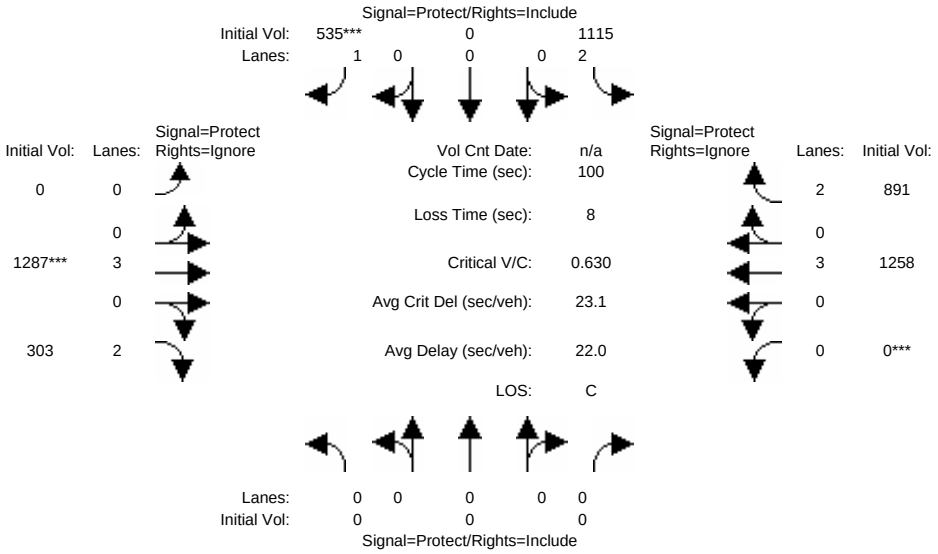
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.45 0.00  0.45  0.00 0.47  0.00  0.00 0.47  0.00
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   5.6  0.0  10.3   0.0 12.5   0.0   0.0 12.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.6  0.0   1.8   0.0  1.8   0.0   0.0  1.8   0.0
HCM2KQueue:   0.0  0.0   0.0   6.2  0.0  12.0   0.0 14.3   0.0   0.0 14.3   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.19 1.20  1.17  1.20 1.17  1.20  1.20 1.17  1.20
70th%HCM2kQ:  0.0  0.0   0.0   7.3  0.0  14.1   0.0 16.8   0.0   0.0 16.7   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.54 1.60  1.50  1.60 1.49  1.60  1.60 1.49  1.60
85th%HCM2kQ:  0.0  0.0   0.0   9.5  0.0  18.1   0.0 21.3   0.0   0.0 21.2   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.69 1.80  1.62  1.80 1.60  1.80  1.80 1.60  1.80
90th%HCM2kQ:  0.0  0.0   0.0  10.5  0.0  19.5   0.0 22.9   0.0   0.0 22.7   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.93 2.10  1.81  2.10 1.77  2.10  2.10 1.77  2.10
95th%HCM2kQ:  0.0  0.0   0.0  11.9  0.0  21.8   0.0 25.4   0.0   0.0 25.3   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.32 2.70  2.10  2.70 2.03  2.70  2.70 2.03  2.70
98th%HCM2kQ:  0.0  0.0   0.0  14.4  0.0  25.2   0.0 29.1   0.0   0.0 29.0   0.0
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #33
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  97.6  0.0  92.3   0.0  307   0.0   0.0  306   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    114.496 pounds
                      18.548 gallons
Carbon Dioxide:      357.228 pounds
Carbon Monoxide:      27.551 pounds
Hydrocarbons:          4.861 pounds
Nitrogen Oxides:       1.064 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    106.783 pounds
                      17.299 gallons
Carbon Dioxide:      333.163 pounds
Carbon Monoxide:      26.948 pounds
Hydrocarbons:          4.739 pounds
Nitrogen Oxides:       0.945 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Existing PM

Intersection #33:




```
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0  1115     0   535     0  1287   303     0  1258   891
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  1115     0   535     0  1287   303     0  1258   891
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Volume:     0     0     0  1115     0   535     0  1287     0     0  1258     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0  1115     0   535     0  1287     0     0  1258     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
Final Vol.:     0     0     0  1115     0   535     0  1287     0     0  1258     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.92  1.00  0.85  1.00  0.91  0.88  1.00  0.91  0.88
Lanes:       0.00  0.00  0.00  2.00  0.00  1.00  0.00  3.00  2.00  0.00  3.00  2.00
Final Sat.:     0     0     0  3502     0  1615     0  5187  3344     0  5187  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.32  0.00  0.33  0.00  0.25  0.00  0.00  0.24  0.00
Crit Moves:                                ****        ****        ****
Green/Cycle: 0.00  0.00  0.00  0.53  0.00  0.53  0.00  0.39  0.00  0.00  0.39  0.00
Volume/Cap:  0.00  0.00  0.00  0.61  0.00  0.63  0.00  0.63  0.00  0.00  0.62  0.00
Delay/Veh:    0.0   0.0   0.0  17.1   0.0  18.3   0.0  25.1   0.0   0.0  24.8   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0  17.1   0.0  18.3   0.0  25.1   0.0   0.0  24.8   0.0
LOS by Move:    A     A     A     B     A     B     A     C     A     A     C     A
HCM2kAvgQ:      0     0     0    13     0    12     0    12     0     0    12     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  0    2  0  0  0  1    0  0  3  0  2    0  0  3  0  2
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R   xxxx   T     R   xxxx   T     R
#LnsInGrps:     0     0     0     2     0     1     0     3     2     0     3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid         8                 8                 8                 8
% Hev Veh:           0                 0                 0                 0
Grade:              0%                0%                0%                0%
Parking/Hr:         No                No                No                No
Bus Stp/Hr:          0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:          0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 1.00  1.00  1.00  0.95  1.00  0.85  1.00  1.00  1.00  1.00  1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  0.97  1.00  1.00  1.00  0.91  0.88  1.00  0.91  0.88
Fnl Sat Adj: 1.00  1.00  1.00  0.92  1.00  0.85  1.00  0.91  0.88  1.00  0.91  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #33
```



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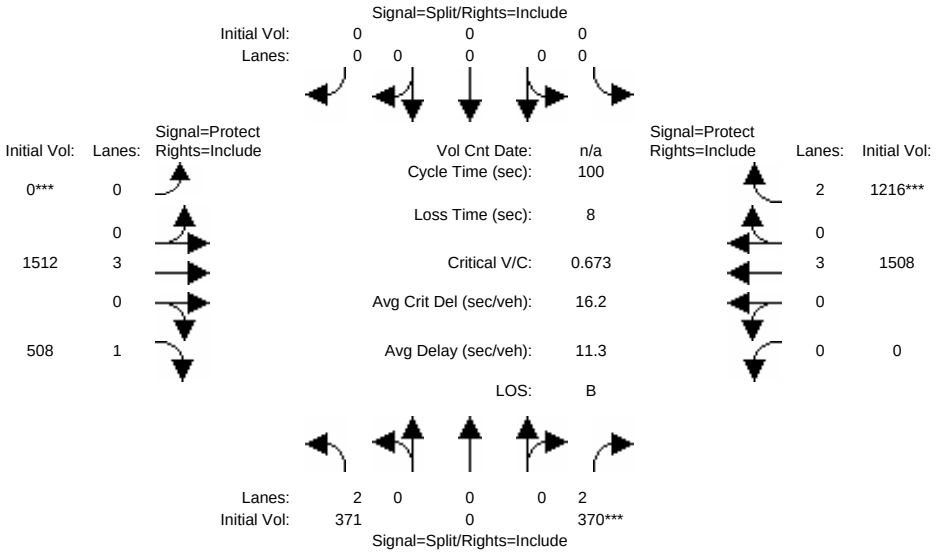
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.53 0.00  0.53  0.00 0.39  0.00  0.00 0.39  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0  11.1  0.0  10.5   0.0 10.6   0.0   0.0 10.2   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   1.5  0.0   1.6   0.0  1.6   0.0   0.0  1.5   0.0
HCM2KQueue:   0.0  0.0   0.0  12.6  0.0  12.2   0.0 12.2   0.0   0.0 11.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.17 1.20  1.17  1.20 1.17  1.20  1.20 1.17  1.20
70th%HCM2kQ:  0.0  0.0   0.0  14.8  0.0  14.3   0.0 14.3   0.0   0.0 13.8   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.50 1.60  1.50  1.60 1.50  1.60  1.60 1.50  1.60
85th%HCM2kQ:  0.0  0.0   0.0  18.8  0.0  18.2   0.0 18.3   0.0   0.0 17.7   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.61 1.80  1.62  1.80 1.62  1.80  1.80 1.62  1.80
90th%HCM2kQ:  0.0  0.0   0.0  20.3  0.0  19.7   0.0 19.7   0.0   0.0 19.1   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.80 2.10  1.81  2.10 1.80  2.10  2.10 1.81  2.10
95th%HCM2kQ:  0.0  0.0   0.0  22.6  0.0  22.0   0.0 22.0   0.0   0.0 21.3   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.08 2.70  2.09  2.70 2.09  2.70  2.70 2.10  2.70
98th%HCM2kQ:  0.0  0.0   0.0  26.2  0.0  25.5   0.0 25.5   0.0   0.0 24.8   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #33
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 193.8  0.0  94.8   0.0  259   0.0   0.0  252   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    116.032 pounds
                      18.797 gallons
Carbon Dioxide:      362.021 pounds
Carbon Monoxide:      28.071 pounds
Hydrocarbons:          5.002 pounds
Nitrogen Oxides:       1.067 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    108.436 pounds
                      17.567 gallons
Carbon Dioxide:      338.320 pounds
Carbon Monoxide:      27.476 pounds
Hydrocarbons:          4.881 pounds
Nitrogen Oxides:       0.949 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Existing AM

Intersection #34:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     371     0   370     0     0     0     0 1512   508     0 1508  1216
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:  371     0   370     0     0     0     0 1512   508     0 1508  1216
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:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   403     0   402     0     0     0     0 1643   552     0 1639  1322
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:  403     0   402     0     0     0     0 1643   552     0 1639  1322
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
Final Vol.:   403     0   402     0     0     0     0 1643   552     0 1639  1322
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.90 1.00  0.73  1.00 1.00  1.00  1.00 0.89  0.83  1.00 0.89  0.73
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  2.00
Final Sat.:  3432    0  2786     0     0     0     0 5083  1583     0 5083  2786
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12 0.00  0.14  0.00 0.00  0.00  0.00 0.32  0.35  0.00 0.32  0.47
Crit Moves:             ****                     ****                     ****
Green/Cycle: 0.21 0.00  0.21  0.00 0.00  0.00  0.00 0.71  0.71  0.00 0.71  0.71
Volume/Cap:  0.55 0.00  0.67  0.00 0.00  0.00  0.00 0.46  0.49  0.00 0.46  0.67
Delay/Veh:   35.8  0.0  39.1   0.0  0.0   0.0   0.0  6.5   7.0   0.0  6.5   9.2
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  35.8  0.0  39.1   0.0  0.0   0.0   0.0  6.5   7.0   0.0  6.5   9.2
LOS by Move:   D    A     D     A    A     A     A    A     A     A    A     A
HCM2kAvgQ:     6    0     8     0    0     0     0    8     8     0    8    14
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       2  0  0  0  2    0  0  0  0  0    0  0  3  0  1    0  0  3  0  2
Lane Group:    L  xxxx    R   xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:    2     0     2     0     0     0     0    3     1     0    3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
Hev Veh Adj: 0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98  0.98  xxxx 0.98  0.98
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 1.00  0.83  1.00 1.00  1.00  1.00 0.98  0.83  1.00 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 0.97 1.00  0.88  1.00 1.00  1.00  1.00 0.91  1.00  1.00 0.91  0.88
Fnl Sat Adj: 0.90 1.00  0.73  1.00 1.00  1.00  1.00 0.89  0.83  1.00 0.89  0.73
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  1.00  0.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #34
```

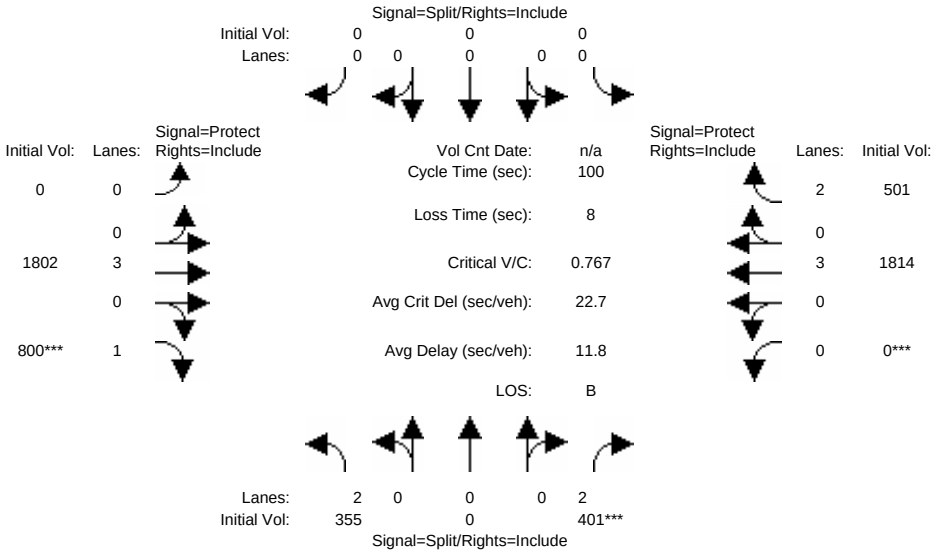


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.21 0.00  0.21  0.00 0.00  0.00  0.00 0.71  0.71  0.00 0.71  0.71
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           5.1  0.0   5.8   0.0  0.0   0.0   0.0  7.3   6.9   0.0  7.3  11.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  1.00  0.00 1.00  1.00
Q2:           1.1  0.0   1.8   0.0  0.0   0.0   0.0  0.8   1.0   0.0  0.8   2.0
HCM2KQueue:   6.3  0.0   7.6   0.0  0.0   0.0   0.0  8.1   7.9   0.0  8.1  13.7
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.20  1.18  1.20 1.20  1.20  1.20 1.18  1.18  1.20 1.18  1.17
70th%HCM2kQ:  7.5  0.0   9.0   0.0  0.0   0.0   0.0  9.6   9.3   0.0  9.6  16.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.60  1.53  1.60 1.60  1.60  1.60 1.53  1.53  1.60 1.53  1.49
85th%HCM2kQ:  9.7  0.0  11.7   0.0  0.0   0.0   0.0 12.4  12.1   0.0 12.4  20.4
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.69 1.80  1.67  1.80 1.80  1.80  1.80 1.67  1.67  1.80 1.67  1.60
90th%HCM2kQ: 10.6  0.0  12.8   0.0  0.0   0.0   0.0 13.5  13.2   0.0 13.5  21.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.92 2.10  1.89  2.10 2.10  2.10  2.10 1.88  1.89  2.10 1.88  1.78
95th%HCM2kQ: 12.1  0.0  14.5   0.0  0.0   0.0   0.0 15.3  14.9   0.0 15.2  24.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.32 2.70  2.26  2.70 2.70  2.70  2.70 2.24  2.24  2.70 2.24  2.05
98th%HCM2kQ: 14.6  0.0  17.2   0.0  0.0   0.0   0.0 18.2  17.7   0.0 18.1  28.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #34
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  89.7  0.0  92.3   0.0  0.0   0.0   0.0  179  62.5   0.0  178 185.3
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    116.624 pounds
                      18.893 gallons
Carbon Dioxide:      363.868 pounds
Carbon Monoxide:      26.371 pounds
Hydrocarbons:          4.167 pounds
Nitrogen Oxides:       1.148 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    106.484 pounds
                      17.250 gallons
Carbon Dioxide:      332.230 pounds
Carbon Monoxide:      25.592 pounds
Hydrocarbons:          4.005 pounds
Nitrogen Oxides:       1.006 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Existing PM

Intersection #34:



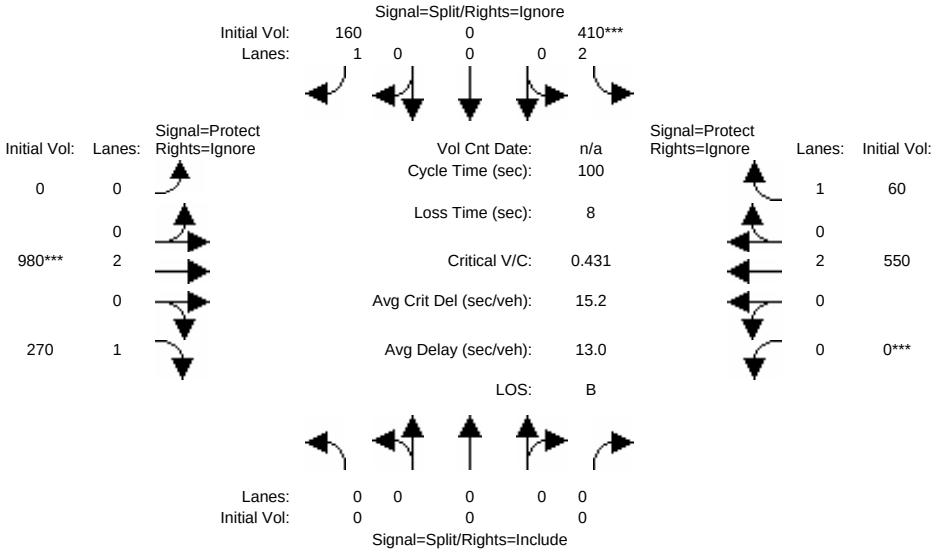

```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     355     0   401     0     0     0     0 1802   800     0 1814   501
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:  355     0   401     0     0     0     0 1802   800     0 1814   501
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:     0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92  0.92 0.92  0.92
PHF Volume:   386     0   436     0     0     0     0 1959   870     0 1972   545
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:  386     0   436     0     0     0     0 1959   870     0 1972   545
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
Final Vol.:   386     0   436     0     0     0     0 1959   870     0 1972   545
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.90 1.00  0.73  1.00 1.00  1.00  1.00 0.89  0.83  1.00 0.89  0.73
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  2.00
Final Sat.:  3432    0  2786     0     0     0     0 5083  1583     0 5083  2786
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.00  0.16  0.00 0.00  0.00  0.00 0.39  0.55  0.00 0.39  0.20
Crit Moves:             ****                                 ****  ****
Green/Cycle: 0.20 0.00  0.20  0.00 0.00  0.00  0.00 0.72  0.72  0.00 0.72  0.72
Volume/Cap:  0.55 0.00  0.77  0.00 0.00  0.00  0.00 0.54  0.77  0.00 0.54  0.27
Delay/Veh:   36.7  0.0  43.8   0.0  0.0   0.0   0.0  6.7  12.2   0.0  6.8   5.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  36.7  0.0  43.8   0.0  0.0   0.0   0.0  6.7  12.2   0.0  6.8   5.1
LOS by Move:   D     A     D     A    A     A     A    A     B     A    A     A
HCM2kAvgQ:     6     0     9     0    0     0     0   10    18     0   10     3
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       2  0  0  0  2    0  0  0  0  0    0  0  3  0  1    0  0  3  0  2
Lane Group:    L  xxxx    R   xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:    2     0     2     0    0     0     0    3     1     0    3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
Hev Veh Adj: 0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98  0.98  xxxx 0.98  0.98
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 1.00  0.83  1.00 1.00  1.00  1.00 0.98  0.83  1.00 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 0.97 1.00  0.88  1.00 1.00  1.00  1.00 0.91  1.00  1.00 0.91  0.88
Fnl Sat Adj: 0.90 1.00  0.73  1.00 1.00  1.00  1.00 0.89  0.83  1.00 0.89  0.73
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  1.00  0.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #34
```



```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.20 0.00  0.20  0.00 0.00  0.00  0.00 0.72  0.72  0.00 0.72  0.72
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           5.0  0.0   6.5   0.0  0.0   0.0   0.0  9.2  15.2   0.0  9.3   3.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  1.00  0.00 1.00  1.00
Q2:           1.2  0.0   2.6   0.0  0.0   0.0   0.0  1.1   3.0   0.0  1.2   0.4
HCM2KQueue:   6.1  0.0   9.1   0.0  0.0   0.0   0.0 10.4  18.2   0.0 10.5   3.4
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.20  1.18  1.20 1.20  1.20  1.20 1.18  1.16  1.20 1.18  1.19
70th%HCM2kQ:  7.3  0.0  10.7   0.0  0.0   0.0   0.0 12.2  21.2   0.0 12.3   4.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.60  1.52  1.60 1.60  1.60  1.60 1.51  1.46  1.60 1.51  1.57
85th%HCM2kQ:  9.4  0.0  13.8   0.0  0.0   0.0   0.0 15.7  26.7   0.0 15.8   5.3
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.69 1.80  1.65  1.80 1.80  1.80  1.80 1.64  1.56  1.80 1.64  1.74
90th%HCM2kQ: 10.4  0.0  15.0   0.0  0.0   0.0   0.0 17.0  28.5   0.0 17.1   5.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.93 2.10  1.86  2.10 2.10  2.10  2.10 1.84  1.72  2.10 1.84  2.00
95th%HCM2kQ: 11.8  0.0  16.9   0.0  0.0   0.0   0.0 19.0  31.3   0.0 19.2   6.8
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.32 2.70  2.20  2.70 2.70  2.70  2.70 2.15  1.95  2.70 2.15  2.47
98th%HCM2kQ: 14.2  0.0  19.9   0.0  0.0   0.0   0.0 22.3  35.5   0.0 22.5   8.4
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #34
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  86.5  0.0 102.8   0.0  0.0   0.0   0.0  226 137.0   0.0  229  48.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    123.048 pounds
                      19.934 gallons
Carbon Dioxide:      383.910 pounds
Carbon Monoxide:      27.956 pounds
Hydrocarbons:          4.459 pounds
Nitrogen Oxides:       1.205 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    112.531 pounds
                      18.230 gallons
Carbon Dioxide:      351.097 pounds
Carbon Monoxide:      27.147 pounds
Hydrocarbons:          4.291 pounds
Nitrogen Oxides:       1.057 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #1: Pocket Road/I-5 SB Ramps




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0    0     0     0    7     0     0    7     0     0    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   410    0   160     0  980   270     0  550    60
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   410    0   160     0  980   270     0  550    60
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:     0    0     0   410    0     0     0  980     0     0  550     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0   410    0     0     0  980     0     0  550     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:     0    0     0   410    0     0     0  980     0     0  550     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.90 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
Lanes:       0.00 0.00  0.00  2.00 0.00  1.00  0.00 2.00  1.00  0.00 2.00  1.00
Final Sat.:     0    0     0  3432    0  1900     0 3538  1900     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.12 0.00  0.00  0.00 0.28  0.00  0.00 0.16  0.00
Crit Moves:                   ****                ****                ****
Green/Cycle: 0.00 0.00  0.00  0.28 0.00  0.00  0.00 0.64  0.00  0.00 0.64  0.00
Volume/Cap:  0.00 0.00  0.00  0.43 0.00  0.00  0.00 0.43  0.00  0.00 0.24  0.00
Delay/Veh:    0.0  0.0   0.0  30.0  0.0   0.0   0.0  9.0   0.0   0.0  7.6   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  30.0  0.0   0.0   0.0  9.0   0.0   0.0  7.6   0.0
LOS by Move:    A    A     A     C    A     A     A    A     A     A    A     A
HCM2kAvgQ:      0    0     0     6    0     0     0    8     0     0    4     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  0  0  0    2  0  0  0  1    0  0  2  0  1    0  0  2  0  1
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R   xxxx   T     R   xxxx   T     R
#LnsInGrps:     0    0     0     2    0     1     0    2     1     0    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  0.93 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  0.97 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 1.00 1.00  1.00  0.90 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                            2000 HCM Operations Method
                              Base Volume Alternative
********************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
********************************************************************************
```


Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Green/Cycle:	0.00	0.00	0.00		0.28	0.00	0.00		0.00	0.64	0.00		0.00	0.64	0.00	
ArrivalType:		3				3				3				3		
ProgFactor:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Q1:	0.0	0.0	0.0		4.8	0.0	0.0		0.0	7.1	0.0		0.0	3.4	0.0	
UpstreamVC:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
UpstreamAdj:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
EarlyArrAdj:	0.00	0.00	0.00		1.00	0.00	0.00		0.00	1.00	0.00		0.00	1.00	0.00	
Q2:	0.0	0.0	0.0		0.7	0.0	0.0		0.0	0.8	0.0		0.0	0.3	0.0	
HCM2KQueue:	0.0	0.0	0.0		5.6	0.0	0.0		0.0	7.8	0.0		0.0	3.7	0.0	
70th%Factor:	1.20	1.20	1.20		1.19	1.20	1.20		1.20	1.18	1.20		1.20	1.19	1.20	
70th%HCM2kQ:	0.0	0.0	0.0		6.6	0.0	0.0		0.0	9.3	0.0		0.0	4.4	0.0	
85th%Factor:	1.60	1.60	1.60		1.55	1.60	1.60		1.60	1.53	1.60		1.60	1.57	1.60	
85th%HCM2kQ:	0.0	0.0	0.0		8.6	0.0	0.0		0.0	12.0	0.0		0.0	5.8	0.0	
90th%Factor:	1.80	1.80	1.80		1.70	1.80	1.80		1.80	1.67	1.80		1.80	1.73	1.80	
90th%HCM2kQ:	0.0	0.0	0.0		9.5	0.0	0.0		0.0	13.1	0.0		0.0	6.4	0.0	
95th%Factor:	2.10	2.10	2.10		1.94	2.10	2.10		2.10	1.89	2.10		2.10	1.99	2.10	
95th%HCM2kQ:	0.0	0.0	0.0		10.8	0.0	0.0		0.0	14.8	0.0		0.0	7.4	0.0	
98th%Factor:	2.70	2.70	2.70		2.35	2.70	2.70		2.70	2.25	2.70		2.70	2.45	2.70	
98th%HCM2kQ:	0.0	0.0	0.0		13.1	0.0	0.0		0.0	17.6	0.0		0.0	9.1	0.0	

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

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Intersection #1 Pocket Road/I-5 SB Ramps

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Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Run Speed:	30 MPH				30 MPH				30 MPH				30 MPH			
NumOfStops:	0.0	0.0	0.0		84.1	0.0	0.0		0.0	121	0.0		0.0	58.2	0.0	

Name: year 1995 composite fleet
Fuel Consumption: 40.304 pounds
6.529 gallons
Carbon Dioxide: 125.748 pounds
Carbon Monoxide: 9.247 pounds
Hydrocarbons: 1.506 pounds
Nitrogen Oxides: 0.388 pounds

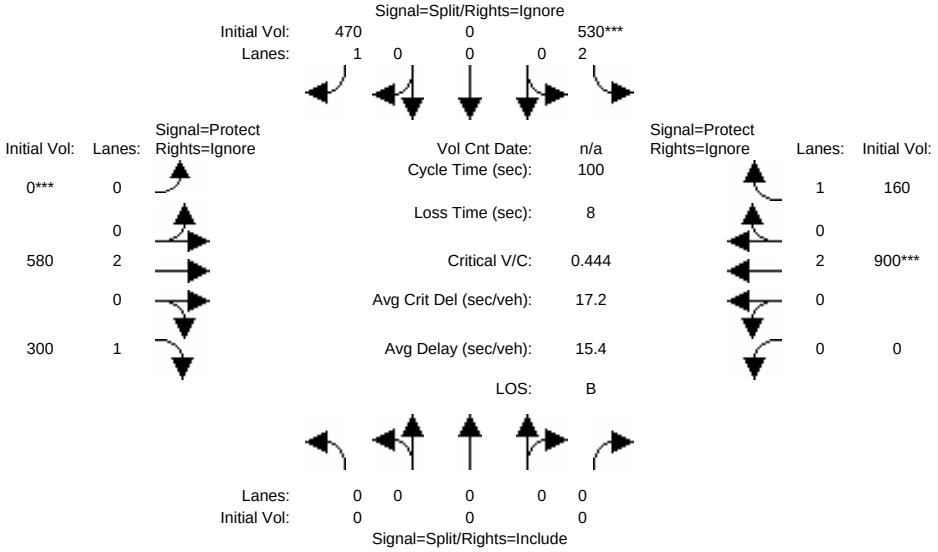
Name: year 2000 composite fleet
Fuel Consumption: 36.991 pounds
5.992 gallons
Carbon Dioxide: 115.410 pounds
Carbon Monoxide: 8.992 pounds
Hydrocarbons: 1.453 pounds
Nitrogen Oxides: 0.341 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Base Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP PM

Intersection #1: Pocket Road/I-5 SB Ramps



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	7	0	0	7	0	0	7	0
Volume Module:												
Base Vol:	0	0	0	530	0	470	0	580	300	0	900	160
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	530	0	470	0	580	300	0	900	160
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	530	0	0	0	580	0	0	900	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	530	0	0	0	580	0	0	900	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Vol.:	0	0	0	530	0	0	0	580	0	0	900	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3432	0	1900	0	3538	1900	0	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.16	0.00	0.00	0.25	0.00
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.57	0.00	0.00	0.57	0.00
Volume/Cap:	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.29	0.00	0.00	0.44	0.00
Delay/Veh:	0.0	0.0	0.0	25.4	0.0	0.0	0.0	11.0	0.0	0.0	12.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.4	0.0	0.0	0.0	11.0	0.0	0.0	12.4	0.0
LOS by Move:	A	A	A	C	A	A	A	B	A	A	B	A
HCM2kAvgQ:	0	0	0	7	0	0	0	5	0	0	8	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	2	0	0	1	0	0	2	0	1	0	0	2	0	1	0	0	2	0	1
Lane Group:	xxxx	xxxx	xxxx			L	xxxx		R	xxxx		T		R	xxxx		T		R					
#LnsInGrps:	0	0	0			2	0		1	0		2		1	0		2		1					
HCM Ops Input Saturation Adj Module:																								
Lane Width:	12	12	12			12	12		12	12		12		12	12		12		12					
CrosswalkWid	8					8				8					8									
% Hev Veh:	2					2				2					2									
Grade:	0%					0%				0%					0%									
Parking/Hr:	No					No				No					No									
Bus Stp/Hr:	0					0				0					0									
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >																							
Cnft Ped/Hr:	0					0				0					0									
ExclusiveRT:	Include					Include				Include					Include									
% RT Prtct:	0					0				0					0									
HCM Ops f(lt) Adj Case Module:																								
f(lt) Case:	xxxx	xxxx	xxxx			1	xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx		xxxx	xxxx	
HCM Ops Saturation Adj Module:																								
Ln Wid Adj:	xxxx	xxxx	xxxxx			1.00	xxxx	xxxxx		xxxx	1.00	xxxxx		xxxx	1.00	xxxxx		xxxx	1.00	xxxxx		xxxx	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx			0.98	xxxx	xxxxx		xxxx	0.98	xxxxx		xxxx	0.98	xxxxx		xxxx	0.98	xxxxx		xxxx	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx			1.00	xxxx	xxxxx		xxxx	1.00	xxxxx		xxxx	1.00	xxxxx		xxxx	1.00	xxxxx		xxxx	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx
Area Adj:	xxxx	xxxx	xxxxx			1.00	xxxx	xxxxx		xxxx	1.00	xxxxx		xxxx	1.00	xxxxx		xxxx	1.00	xxxxx		xxxx	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx			0.95	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx
PedBike Adj:	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	1.00	1.00		1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00			0.93	1.00	1.00		1.00	0.98	1.00		1.00	1.00	0.98		1.00	1.00	0.98		1.00	1.00	0.98
Usr Sat Adj:	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	1.00	1.00		1.00	1.00	1.00
MLF Sat Adj:	1.00	1.00	1.00			0.97	1.00	1.00		1.00	0.95	1.00		1.00	1.00	0.95		1.00	1.00	0.95		1.00	1.00	0.95
Fnl Sat Adj:	1.00	1.00	1.00			0.90	1.00	1.00		1.00	0.93	1.00		1.00	1.00	0.93		1.00	1.00	0.93		1.00	1.00	0.93
Delay Adjustment Factor Module:																								
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >																							
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >																							
DelAdjFctr:	0.00	0.00	0.00			1.00	0.00	0.00		0.00	1.00	0.00		0.00	1.00	0.00								

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #1 Pocket Road/I-5 SB Ramps


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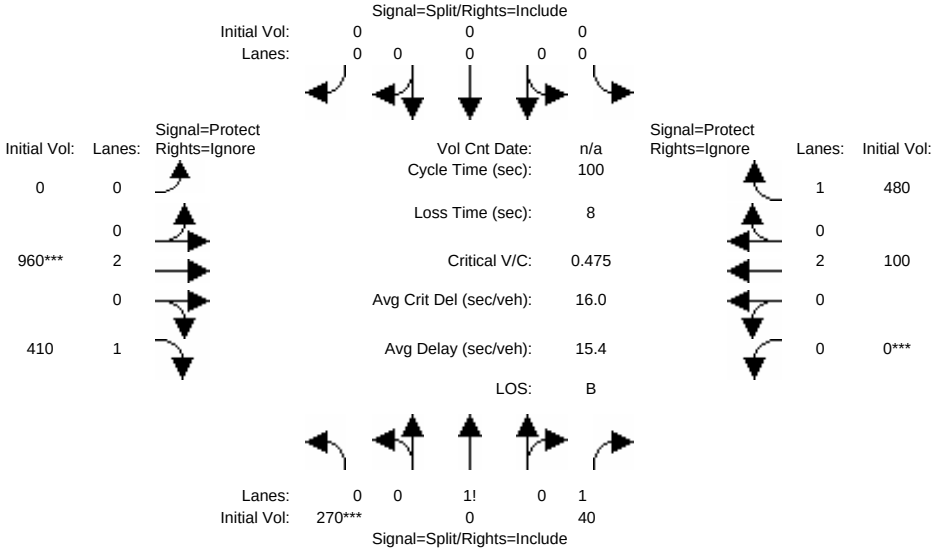
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.35 0.00  0.00  0.00 0.57  0.00  0.00 0.57  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   5.9  0.0   0.0   0.0  4.3   0.0   0.0  7.5   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.8  0.0   0.0   0.0  0.4   0.0   0.0  0.8   0.0
HCM2KQueue:   0.0  0.0   0.0   6.6  0.0   0.0   0.0  4.7   0.0   0.0  8.3   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.20  1.20 1.19  1.20  1.20 1.18  1.20
70th%HCM2kQ:  0.0  0.0   0.0   7.9  0.0   0.0   0.0  5.6   0.0   0.0  9.8   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.54 1.60  1.60  1.60 1.56  1.60  1.60 1.53  1.60
85th%HCM2kQ:  0.0  0.0   0.0  10.2  0.0   0.0   0.0  7.4   0.0   0.0 12.7   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.69 1.80  1.80  1.80 1.72  1.80  1.80 1.66  1.80
90th%HCM2kQ:  0.0  0.0   0.0  11.2  0.0   0.0   0.0  8.1   0.0   0.0 13.9   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.91 2.10  2.10  2.10 1.96  2.10  2.10 1.88  2.10
95th%HCM2kQ:  0.0  0.0   0.0  12.7  0.0   0.0   0.0  9.3   0.0   0.0 15.7   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.30 2.70  2.70  2.70 2.39  2.70  2.70 2.23  2.70
98th%HCM2kQ:  0.0  0.0   0.0  15.3  0.0   0.0   0.0 11.3   0.0   0.0 18.6   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 102.2  0.0   0.0   0.0 74.1   0.0   0.0  129   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     45.530 pounds
                       7.376 gallons
Carbon Dioxide:      142.053 pounds
Carbon Monoxide:      10.634 pounds
Hydrocarbons:          1.786 pounds
Nitrogen Oxides:       0.433 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     42.036 pounds
                       6.810 gallons
Carbon Dioxide:      131.152 pounds
Carbon Monoxide:      10.363 pounds
Hydrocarbons:          1.731 pounds
Nitrogen Oxides:       0.382 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #2: Meadowview Road/I-5 NB Ramps




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     7     0     0     0     0     0     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     270     0    40     0     0     0     0   960   410     0   100   480
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:  270     0    40     0     0     0     0   960   410     0   100   480
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   270     0    40     0     0     0     0   960     0     0   100     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  270     0    40     0     0     0     0   960     0     0   100     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   270     0    40     0     0     0     0   960     0     0   100     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
Lanes:       0.93 0.00  1.07  0.00 0.00  0.00  0.00 2.00  1.00  0.00 2.00  1.00
Final Sat.:  1629    0  1871     0    0     0     0 3538  1900     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.17 0.00  0.02  0.00 0.00  0.00  0.00 0.27  0.00  0.00 0.03  0.00
Crit Moves:  ****                                   ****        ****
Green/Cycle: 0.35 0.00  0.35  0.00 0.00  0.00  0.00 0.57  0.00  0.00 0.57  0.00
Volume/Cap:  0.48 0.00  0.06  0.00 0.00  0.00  0.00 0.48  0.00  0.00 0.05  0.00
Delay/Veh:   26.0  0.0  21.7   0.0  0.0   0.0   0.0 12.8   0.0   0.0  9.5   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  26.0  0.0  21.7   0.0  0.0   0.0   0.0 12.8   0.0   0.0  9.5   0.0
LOS by Move:   C    A     C     A    A     A     A    B     A     A    A     A
HCM2kAvgQ:     7    0     1     0    0     0     0    9     0     0    1     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  1    0  0  0  0  0    0  0  2  0  1    0  0  2  0  1
Lane Group:   LTR  LTR   LTR  xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:     1    1     2     0    0     0     0    2     1     0    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     4 xxxx     4  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.96 xxxx  0.96  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.92 1.00  0.92  1.00 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 0.92 1.00  0.92  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
```



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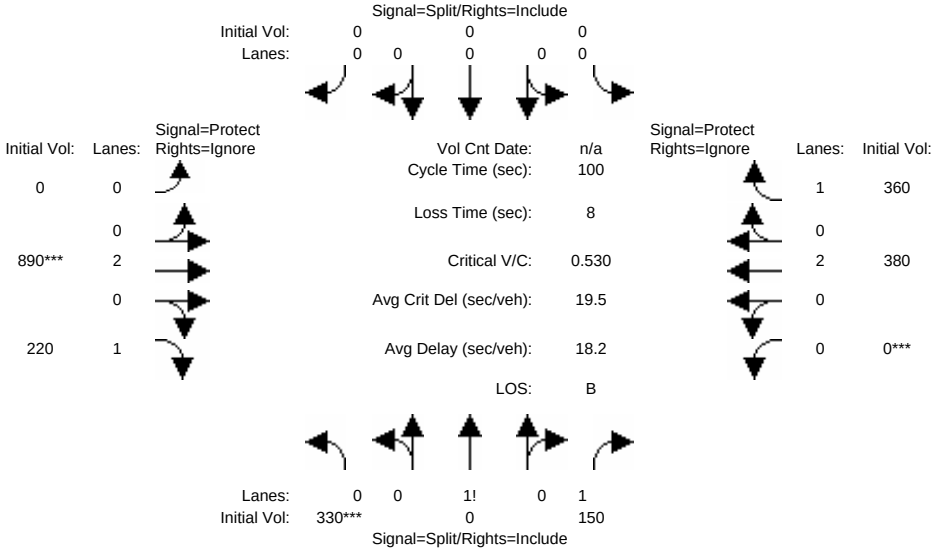
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.35 0.00  0.35  0.00 0.00  0.00  0.00 0.57  0.00  0.00 0.57  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.3  0.0   0.7   0.0  0.0   0.0   0.0  8.3   0.0   0.0  0.6   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.9  0.0   0.1   0.0  0.0   0.0   0.0  0.9   0.0   0.0  0.1   0.0
HCM2KQueue:   7.2  0.0   0.8   0.0  0.0   0.0   0.0  9.2   0.0   0.0  0.7   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.20  1.20 1.20  1.20  1.20 1.18  1.20  1.20 1.20  1.20
70th%HCM2kQ:  8.5  0.0   0.9   0.0  0.0   0.0   0.0 10.8   0.0   0.0  0.8   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.60  1.59  1.60 1.60  1.60  1.60 1.52  1.60  1.60 1.59  1.60
85th%HCM2kQ: 11.0  0.0   1.2   0.0  0.0   0.0   0.0 13.9   0.0   0.0  1.1   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.68 1.80  1.79  1.80 1.80  1.80  1.80 1.65  1.80  1.80 1.79  1.80
90th%HCM2kQ: 12.0  0.0   1.4   0.0  0.0   0.0   0.0 15.1   0.0   0.0  1.2   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.90 2.10  2.08  2.10 2.10  2.10  2.10 1.86  2.10  2.10 2.08  2.10
95th%HCM2kQ: 13.6  0.0   1.6   0.0  0.0   0.0   0.0 17.0   0.0   0.0  1.4   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.28 2.70  2.64  2.70 2.70  2.70  2.70 2.19  2.70  2.70 2.65  2.70
98th%HCM2kQ: 16.3  0.0   2.0   0.0  0.0   0.0   0.0 20.1   0.0   0.0  1.8   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  52.7  0.0   6.7   0.0  0.0   0.0   0.0  141   0.0   0.0 11.0   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     31.043 pounds
                       5.029 gallons
Carbon Dioxide:       96.855 pounds
Carbon Monoxide:       7.249 pounds
Hydrocarbons:          1.216 pounds
Nitrogen Oxides:       0.296 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     28.655 pounds
                       4.642 gallons
Carbon Dioxide:       89.404 pounds
Carbon Monoxide:       7.064 pounds
Hydrocarbons:          1.178 pounds
Nitrogen Oxides:       0.261 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP PM

Intersection #2: Meadowview Road/I-5 NB Ramps




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     7     0     0     0     0     0     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     330     0   150     0     0     0     0   890   220     0   380   360
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:  330     0   150     0     0     0     0   890   220     0   380   360
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   330     0   150     0     0     0     0   890     0     0   380     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  330     0   150     0     0     0     0   890     0     0   380     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   330     0   150     0     0     0     0   890     0     0   380     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.90 1.00  0.90  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
Lanes:       0.81 0.00  1.19  0.00 0.00  0.00  0.00 2.00  1.00  0.00 2.00  1.00
Final Sat.:  1398    0  2034     0     0     0     0 3538  1900     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.24 0.00  0.07  0.00 0.00  0.00  0.00 0.25  0.00  0.00 0.11  0.00
Crit Moves:  ****                                   ****        ****
Green/Cycle: 0.45 0.00  0.45  0.00 0.00  0.00  0.00 0.47  0.00  0.00 0.47  0.00
Volume/Cap:  0.53 0.00  0.17  0.00 0.00  0.00  0.00 0.53  0.00  0.00 0.23  0.00
Delay/Veh:   20.7  0.0  16.6   0.0  0.0   0.0   0.0 18.8   0.0   0.0 15.5   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  20.7  0.0  16.6   0.0  0.0   0.0   0.0 18.8   0.0   0.0 15.5   0.0
LOS by Move:   C    A     B     A    A     A     A    B     A     A    B     A
HCM2kAvgQ:     9    0     2     0    0     0     0   10     0     0    4     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  1    0  0  0  0  0    0  0  2  0  1    0  0  2  0  1
Lane Group:   LTR  LTR   LTR  xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:     1    1     2     0    0     0     0    2     1     0    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     4 xxxx     4  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      0.95 xxxx  0.95  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.97 xxxx  0.97  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.90 1.00  0.90  1.00 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 0.90 1.00  0.90  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
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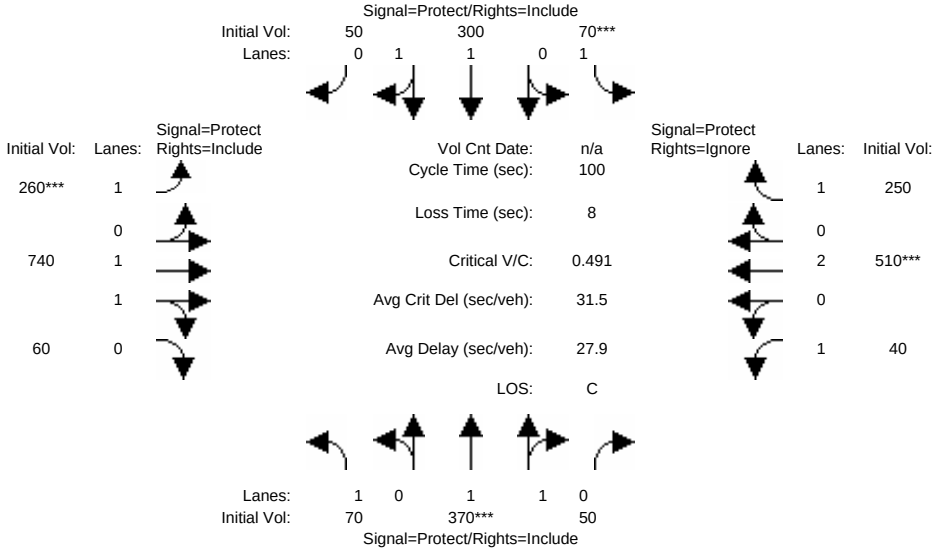
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.45 0.00  0.45  0.00 0.00  0.00  0.00 0.47  0.00  0.00 0.47  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           8.2  0.0   2.1   0.0  0.0   0.0   0.0  9.1   0.0   0.0  3.3   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           1.1  0.0   0.2   0.0  0.0   0.0   0.0  1.1   0.0   0.0  0.3   0.0
HCM2KQueue:   9.3  0.0   2.3   0.0  0.0   0.0   0.0 10.2   0.0   0.0  3.6   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.19  1.20 1.20  1.20  1.20 1.18  1.20  1.20 1.19  1.20
70th%HCM2kQ: 10.9  0.0   2.8   0.0  0.0   0.0   0.0 12.1   0.0   0.0  4.2   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.60  1.58  1.60 1.60  1.60  1.60 1.51  1.60  1.60 1.57  1.60
85th%HCM2kQ: 14.1  0.0   3.6   0.0  0.0   0.0   0.0 15.5   0.0   0.0  5.6   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.65 1.80  1.76  1.80 1.80  1.80  1.80 1.64  1.80  1.80 1.73  1.80
90th%HCM2kQ: 15.3  0.0   4.0   0.0  0.0   0.0   0.0 16.8   0.0   0.0  6.2   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.86 2.10  2.03  2.10 2.10  2.10  2.10 1.84  2.10  2.10 1.99  2.10
95th%HCM2kQ: 17.2  0.0   4.7   0.0  0.0   0.0   0.0 18.8   0.0   0.0  7.1   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.19 2.70  2.54  2.70 2.70  2.70  2.70 2.15  2.70  2.70 2.46  2.70
98th%HCM2kQ: 20.3  0.0   5.8   0.0  0.0   0.0   0.0 22.1   0.0   0.0  8.8   0.0
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  59.9  0.0  22.5   0.0  0.0   0.0   0.0  156   0.0   0.0 55.9   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     43.384 pounds
                       7.028 gallons
Carbon Dioxide:      135.359 pounds
Carbon Monoxide:      10.306 pounds
Hydrocarbons:          1.783 pounds
Nitrogen Oxides:       0.406 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     40.289 pounds
                       6.527 gallons
Carbon Dioxide:      125.701 pounds
Carbon Monoxide:      10.065 pounds
Hydrocarbons:          1.733 pounds
Nitrogen Oxides:       0.359 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP AM

Intersection #3: Meadowview Road/Freeport Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	70	370	50	70	300	50	260	740	60	40	510	250
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:	70	370	50	70	300	50	260	740	60	40	510	250
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	70	370	50	70	300	50	260	740	60	40	510	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	370	50	70	300	50	260	740	60	40	510	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	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	70	370	50	70	300	50	260	740	60	40	510	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.93	0.91	0.91	0.93	0.92	0.92	0.93	0.93	1.00
Lanes:	1.00	1.76	0.24	1.00	1.71	0.29	1.00	1.85	0.15	1.00	2.00	1.00
Final Sat.:	1769	3061	414	1769	2969	495	1769	3236	262	1769	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.12	0.04	0.10	0.10	0.15	0.23	0.23	0.02	0.14	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.11	0.25	0.25	0.08	0.22	0.22	0.30	0.49	0.49	0.11	0.29	0.00
Volume/Cap:	0.37	0.49	0.49	0.49	0.46	0.46	0.49	0.47	0.47	0.21	0.49	0.00
Delay/Veh:	42.6	32.8	32.8	46.7	34.4	34.4	29.5	17.3	17.3	41.4	29.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.6	32.8	32.8	46.7	34.4	34.4	29.5	17.3	17.3	41.4	29.5	0.0
LOS by Move:	D	C	C	D	C	C	C	B	B	D	C	A
HCM2kAvgQ:	2	6	6	3	5	5	7	9	9	1	7	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	2	0	1
Lane Group:	L	RT		RT	L	RT		RT	L	RT		RT	L	T		R				
#LnsInGrps:	1	2		2	1	2		2	1	2		2	1	2		1				
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	0.98	0.98	xxxx	0.98	0.98	xxxx	0.99	0.99	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.96	0.96	0.93	0.96	0.96	0.93	0.97	0.97	0.93	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.91	0.91	0.93	0.91	0.91	0.93	0.92	0.92	0.93	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #3 Meadowview Road/Freeport Boulevard


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*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.11 0.25  0.25  0.08 0.22  0.22  0.30 0.49  0.49  0.11 0.29  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.8  5.3   5.3   1.9  4.4   4.4   5.9  7.8   7.8   1.0  6.2   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Q2:           0.6  0.9   0.9   0.9  0.8   0.8   0.9  0.9   0.9   0.3  0.9   0.0
HCM2KQueue:   2.4  6.2   6.2   2.7  5.3   5.3   6.9  8.7   8.7   1.3  7.1   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.19 1.19  1.19  1.18 1.18  1.18  1.20 1.18  1.20
70th%HCM2kQ:  2.8  7.3   7.3   3.3  6.3   6.3   8.1 10.2  10.2   1.5  8.4   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.58 1.54  1.54  1.57 1.55  1.55  1.54 1.52  1.52  1.59 1.54  1.60
85th%HCM2kQ:  3.7  9.6   9.6   4.3  8.2   8.2  10.6 13.2  13.2   2.0 10.9   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.76 1.69  1.69  1.75 1.71  1.71  1.68 1.66  1.66  1.78 1.68  1.80
90th%HCM2kQ:  4.1 10.5  10.5   4.8  9.0   9.0  11.6 14.4  14.4   2.3 11.9   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.03 1.93  1.93  2.02 1.95  1.95  1.91 1.87  1.87  2.06 1.90  2.10
95th%HCM2kQ:  4.8 11.9  11.9   5.5 10.3  10.3  13.1 16.2  16.2   2.6 13.5   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.53 2.32  2.32  2.51 2.37  2.37  2.29 2.21  2.21  2.61 2.28  2.70
98th%HCM2kQ:  6.0 14.4  14.4   6.9 12.5  12.5  15.7 19.2  19.2   3.3 16.2   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  16.2 79.3  10.7  16.8 65.2  10.9  53.4  123  10.0   9.1  105   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     80.140 pounds
                      12.983 gallons
Carbon Dioxide:      250.036 pounds
Carbon Monoxide:      19.821 pounds
Hydrocarbons:          3.678 pounds
Nitrogen Oxides:       0.699 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     75.540 pounds
                      12.237 gallons
Carbon Dioxide:      235.683 pounds
Carbon Monoxide:      19.460 pounds
Hydrocarbons:          3.605 pounds
Nitrogen Oxides:       0.627 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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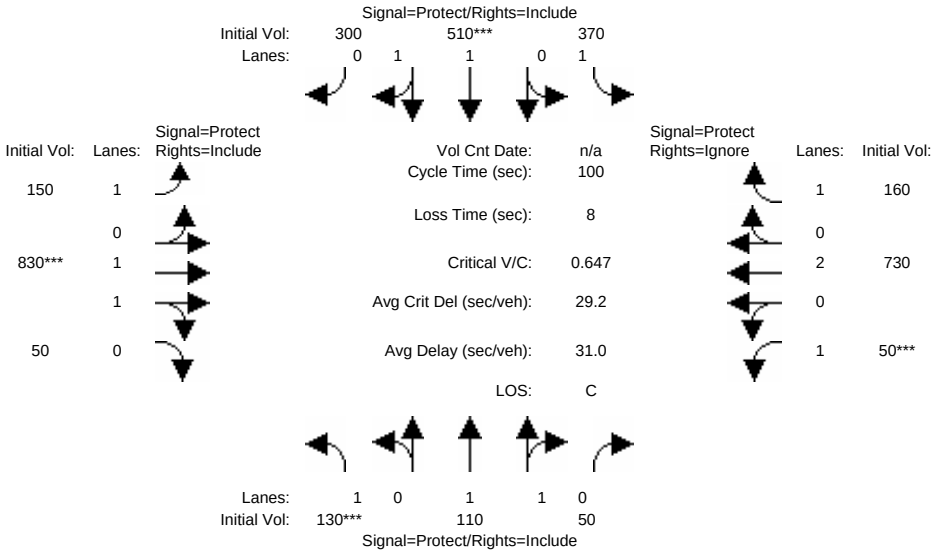
Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP PM

Intersection #3: Meadowview Road/Freeport Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	130	110	50	370	510	300	150	830	50	50	730	160
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:	130	110	50	370	510	300	150	830	50	50	730	160
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	130	110	50	370	510	300	150	830	50	50	730	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	130	110	50	370	510	300	150	830	50	50	730	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	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	130	110	50	370	510	300	150	830	50	50	730	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.88	0.88	0.93	0.92	0.92	0.93	0.93	1.00
Lanes:	1.00	1.37	0.63	1.00	1.26	0.74	1.00	1.89	0.11	1.00	2.00	1.00
Final Sat.:	1769	2318	1054	1769	2105	1238	1769	3307	199	1769	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.07	0.05	0.05	0.21	0.24	0.24	0.08	0.25	0.25	0.03	0.21	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.11	0.12	0.12	0.36	0.37	0.37	0.13	0.39	0.39	0.05	0.31	0.00
Volume/Cap:	0.65	0.39	0.39	0.58	0.65	0.65	0.67	0.65	0.65	0.57	0.67	0.00
Delay/Veh:	49.9	41.1	41.1	26.9	27.3	27.3	49.2	26.4	26.4	54.7	31.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.9	41.1	41.1	26.9	27.3	27.3	49.2	26.4	26.4	54.7	31.7	0.0
LOS by Move:	D	D	D	C	C	C	D	C	C	D	C	A
HCM2kAvgQ:	5	3	3	10	12	12	6	12	12	2	11	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	2	0	1
Lane Group:	L	RT		RT		L	RT		RT		L	RT		RT		L	T		R	
#LnsInGrps:	1	2		2		1	2		2		1	2		2		1	2		1	
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	0.95	0.95	xxxx	0.95	0.95	xxxx	0.99	0.99	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.97	0.97	0.93	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.89	0.89	0.93	0.88	0.88	0.93	0.92	0.92	0.93	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #3 Meadowview Road/Freeport Boulevard


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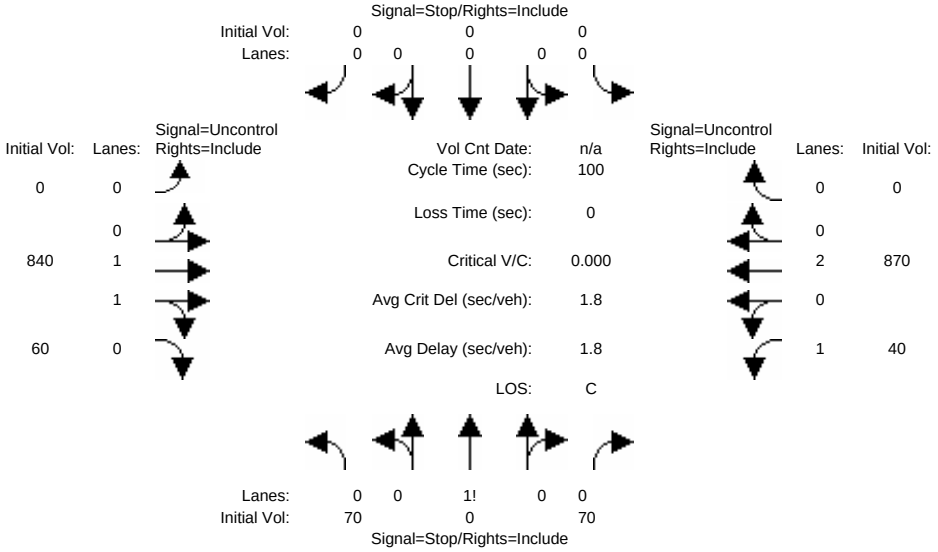
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.11 0.12  0.12  0.36 0.37  0.37  0.13 0.39  0.39  0.05 0.31  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.5  2.2   2.2   8.3  9.8   9.8   4.0 10.6  10.6   1.4  9.3   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Q2:           1.6  0.6   0.6   1.3  1.8   1.8   1.7  1.8   1.8   1.1  1.9   0.0
HCM2KQueue:   5.0  2.8   2.8   9.6 11.6  11.6   5.7 12.3  12.3   2.4 11.2   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.18 1.17  1.17  1.19 1.17  1.17  1.19 1.18  1.20
70th%HCM2kQ:  6.0  3.3   3.3  11.3 13.6  13.6   6.7 14.5  14.5   2.9 13.1   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.57  1.57  1.52 1.50  1.50  1.55 1.50  1.50  1.58 1.51  1.60
85th%HCM2kQ:  7.8  4.4   4.4  14.5 17.4  17.4   8.8 18.5  18.5   3.8 16.8   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.71 1.75  1.75  1.65 1.62  1.62  1.70 1.62  1.62  1.75 1.63  1.80
90th%HCM2kQ:  8.6  4.9   4.9  15.8 18.8  18.8   9.7 19.9  19.9   4.2 18.2   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.95 2.01  2.01  1.85 1.82  1.82  1.94 1.80  1.80  2.02 1.82  2.10
95th%HCM2kQ:  9.8  5.6   5.6  17.8 21.0  21.0  11.0 22.2  22.2   4.9 20.4   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.38 2.51  2.51  2.18 2.11  2.11  2.35 2.09  2.09  2.53 2.12  2.70
98th%HCM2kQ: 12.0  7.0   7.0  20.9 24.4  24.4  13.3 25.7  25.7   6.1 23.7   0.0
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  31.1 25.4  11.5  74.5  106  62.2  35.8  170  10.3  12.2  159   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    111.920 pounds
                      18.131 gallons
Carbon Dioxide:      349.189 pounds
Carbon Monoxide:      27.935 pounds
Hydrocarbons:          5.256 pounds
Nitrogen Oxides:       0.964 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    105.844 pounds
                      17.147 gallons
Carbon Dioxide:      330.232 pounds
Carbon Monoxide:      27.457 pounds
Hydrocarbons:          5.160 pounds
Nitrogen Oxides:       0.867 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline NP AM

Intersection #4: Meadowview Road/Manorside Drive




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      70    0    70     0    0     0     0  840    60    40  870     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:   70    0    70     0    0     0     0  840    60    40  870     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:    70    0    70     0    0     0     0  840    60    40  870     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    70    0    70     0    0     0     0  840    60    40  870     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8 xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1385 xxxx   450  xxxx xxxx xxxxx  xxxx xxxx xxxxx   900 xxxx xxxxx
Potent Cap.:  134 xxxx   556  xxxx xxxx xxxxx  xxxx xxxx xxxxx   751 xxxx xxxxx
Move Cap.:    129 xxxx   556  xxxx xxxx xxxxx  xxxx xxxx xxxxx   751 xxxx xxxxx
Total Cap:    256    0 xxxxx     0    0 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  0.27 xxxx  0.13  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.05 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  10.1 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     B    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  350 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  1.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 21.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    C     *     *    *     *     *    *     *     *    *     *
ApproachDel:      21.9           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       C              *                *                *
------------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
------------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance [Median Type: TWLTL][Median Storage: 1 car]
------------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage One Module:
Cnflict Vol: 870     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 370   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   370   900 xxxxx  852   852 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
------------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage Two Module:
Cnflict Vol: 515     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 565   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   534   852 xxxxx  787   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:   70    0    70     0    0     0     0  840    60    40  870     0
ApproachDel:      21.9           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.9]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=140]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1950]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Meadowview Road/Manorside Drive

****

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	1 0	1	0 2	0 0
Initial Vol:	70	0	70	0	0	0	0	840	60	40	870	0

Major Street Volume: 1810
Minor Approach Volume: 140
Minor Approach Volume Threshold: 80 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
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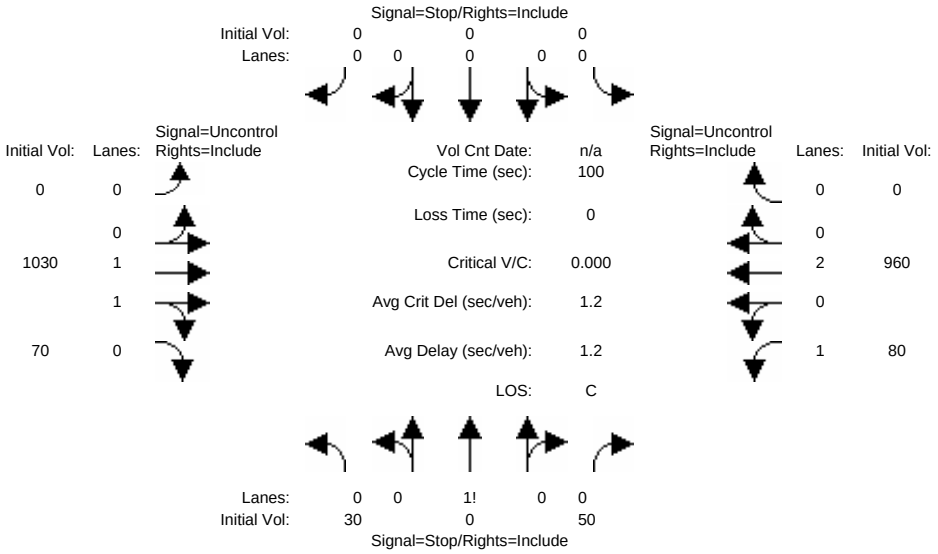
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline NP PM

Intersection #4: Meadowview Road/Manorside Drive




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      30    0    50     0    0     0     0 1030    70    80  960     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:   30    0    50     0    0     0     0 1030    70    80  960     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:    30    0    50     0    0     0     0 1030    70    80  960     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    30    0    50     0    0     0     0 1030    70    80  960     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8 xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1705 xxxx   550  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1100 xxxx xxxxx
Potent Cap.:   82 xxxx   479  xxxx xxxx xxxxx  xxxx xxxx xxxxx   630 xxxx xxxxx
Move Cap.:     74 xxxx   479  xxxx xxxx xxxxx  xxxx xxxx xxxxx   630 xxxx xxxxx
Total Cap:    191    0 xxxxx     0    0 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  0.16 xxxx  0.10  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.13 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.4 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  11.5 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     B    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  306 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  1.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 20.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    C     *     *    *     *     *    *     *     *    *     *
ApproachDel:      20.9           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       C              *                *                *
-----------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance [Median Type: TWLTL][Median Storage: 1 car]
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage One Module:
Cnflict Vol:1065     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 292   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   292   900 xxxxx  786   786 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage Two Module:
Cnflict Vol: 640     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 487   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   425   786 xxxxx  806   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
                     Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:   30    0    50     0    0     0     0 1030    70    80  960     0
ApproachDel:      20.9           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=80]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2220]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #4 Meadowview Road/Manorside Drive

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	1 0	1	0 2	0 0
Initial Vol:	30	0	50	0	0	0	0	1030	70	80	960	0

Major Street Volume: 2140
Minor Approach Volume: 80
Minor Approach Volume Threshold: 23 [less than minimum of 100]

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #5: Meadowview Road/24th Street

Signal=Protect/Rights=Include

	L		T		R
Initial Vol:	90		120		180***
Lanes:	1	0	2	0	1

Initial Vol:	Lanes:	Signal=Protect Rights=Include			Signal=Protect Rights=Include	Lanes:	Initial Vol:
			Vol Cnt Date:	n/a			
200***	1		Cycle Time (sec):	100		1	400***
	0		Loss Time (sec):	16		0	
580	2		Critical V/C:	0.639		2	720
	0		Avg Crit Del (sec/veh):	36.8		0	
40	1		Avg Delay (sec/veh):	31.1		1	150
			LOS:	C			

	L		T		R
Lanes:	1	0	2	0	1
Initial Vol:	40		220		110***

Signal=Protect/Rights=Include

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	40	220	110	180	120	90	200	580	40	150	720	400
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:	40	220	110	180	120	90	200	580	40	150	720	400
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:	40	220	110	180	120	90	200	580	40	150	720	400
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	220	110	180	120	90	200	580	40	150	720	400
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
Final Vol.:	40	220	110	180	120	90	200	580	40	150	720	400
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	1769	3538	1583	1769	3538	1583	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.02	0.06	0.07	0.10	0.03	0.06	0.11	0.16	0.03	0.08	0.20	0.25
Crit Moves:			****	****			****					****
Green/Cycle:	0.11	0.11	0.11	0.16	0.16	0.16	0.18	0.38	0.38	0.20	0.40	0.40
Volume/Cap:	0.20	0.57	0.64	0.64	0.22	0.36	0.64	0.43	0.07	0.43	0.51	0.64
Delay/Veh:	40.9	44.4	50.5	44.2	37.0	38.7	42.6	23.4	20.0	36.3	23.3	26.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.9	44.4	50.5	44.2	37.0	38.7	42.6	23.4	20.0	36.3	23.3	26.7
LOS by Move:	D	D	D	D	D	D	D	C	B	D	C	C
HCM2kAvgQ:	1	4	4	6	2	3	7	7	1	4	9	11
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	1	2	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #5 Meadowview Road/24th Street

```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.11 0.11  0.11  0.16 0.16  0.16  0.18 0.38  0.38  0.20 0.40  0.40
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.0  3.1   2.9   4.7  1.5   2.2   5.2  6.3   0.7   3.7  8.0   9.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.3  1.2   1.5   1.6  0.3   0.6   1.6  0.8   0.1   0.7  1.0   1.7
HCM2KQueue:   1.3  4.3   4.4   6.3  1.8   2.8   6.7  7.1   0.8   4.4  9.0  10.7
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.19  1.19 1.20  1.19  1.18 1.18  1.20  1.19 1.18  1.18
70th%HCM2kQ:  1.5  5.1   5.3   7.4  2.2   3.3   8.0  8.4   0.9   5.2 10.7  12.5
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.59 1.56  1.56  1.54 1.58  1.57  1.54 1.54  1.59  1.56 1.52  1.51
85th%HCM2kQ:  2.0  6.6   6.9   9.7  2.9   4.4  10.4 10.9   1.2   6.9 13.7  16.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.78 1.72  1.72  1.69 1.77  1.75  1.69 1.68  1.78  1.72 1.65  1.63
90th%HCM2kQ:  2.2  7.3   7.6  10.6  3.2   4.9  11.4 11.9   1.4   7.6 14.9  17.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.06 1.97  1.97  1.92 2.04  2.01  1.91 1.90  2.07  1.97 1.86  1.83
95th%HCM2kQ:  2.6  8.4   8.7  12.0  3.7   5.6  12.9 13.5   1.6   8.7 16.8  19.5
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.61 2.42  2.41  2.32 2.57  2.51  2.30 2.28  2.64  2.41 2.20  2.14
98th%HCM2kQ:  3.3 10.3  10.6  14.5  4.6   7.0  15.5 16.1   2.1  10.6 19.9  22.8
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #5 Meadowview Road/24th Street
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   9.1 52.3  26.3  42.1 26.2  20.1  46.4  108   6.4  33.0  137  80.9
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     97.248 pounds
                      15.754 gallons
Carbon Dioxide:      303.414 pounds
Carbon Monoxide:      24.285 pounds
Hydrocarbons:          4.579 pounds
Nitrogen Oxides:       0.831 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     92.004 pounds
                      14.905 gallons
Carbon Dioxide:      287.052 pounds
Carbon Monoxide:      23.873 pounds
Hydrocarbons:          4.496 pounds
Nitrogen Oxides:       0.747 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP PM

Intersection #5: Meadowview Road/24th Street

Signal=Protect/Rights=Include
Initial Vol: 240 220 590***
Lanes: 1 0 2 0 1

Initial Vol:	Lanes:	Signal=Protect Rights=Include			Signal=Protect Rights=Include	Lanes:	Initial Vol:
			Vol Cnt Date:	n/a			
170***	1		Cycle Time (sec):	100		1	260
	0		Loss Time (sec):	16		0	
760	2		Critical V/C:	0.798		2	720***
	0		Avg Crit Del (sec/veh):	41.9		0	
30	1		Avg Delay (sec/veh):	39.3		1	120
			LOS:	D			

Lanes: 1 0 2 0 1
Initial Vol: 20 130*** 80
Signal=Protect/Rights=Include

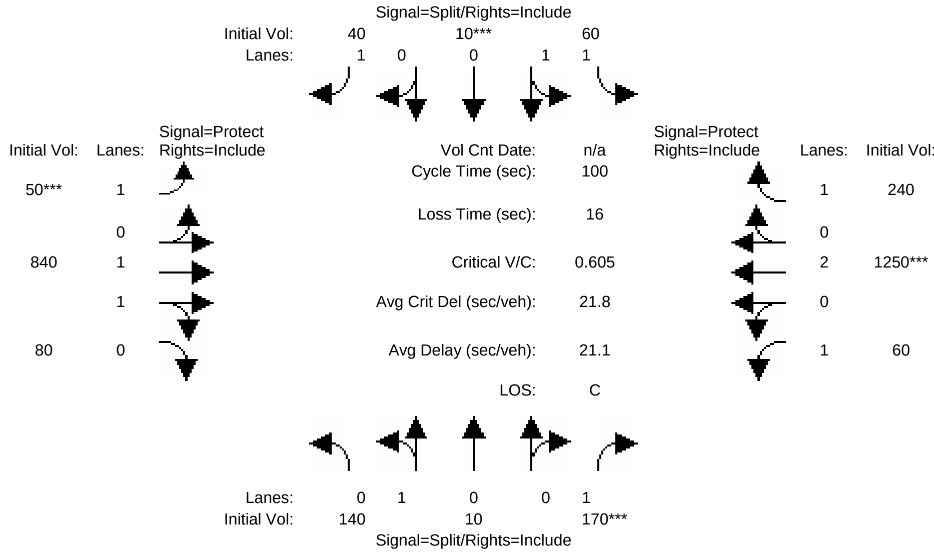
```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5    7     0     5    7     0     5    7     0     5    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      20  130    80   590  220   240   170  760    30   120  720   260
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:   20  130    80   590  220   240   170  760    30   120  720   260
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:    20  130    80   590  220   240   170  760    30   120  720   260
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   20  130    80   590  220   240   170  760    30   120  720   260
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
Final Vol.:    20  130    80   590  220   240   170  760    30   120  720   260
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.93  0.83  0.93 0.93  0.83  0.93 0.93  0.83  0.93 0.93  0.83
Lanes:       1.00 2.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00  1.00 2.00  1.00
Final Sat.:  1769 3538  1583  1769 3538  1583  1769 3538  1583  1769 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.04  0.05  0.33 0.06  0.15  0.10 0.21  0.02  0.07 0.20  0.16
Crit Moves:       ****        ****             ****                  ****
Green/Cycle: 0.12 0.07  0.07  0.41 0.36  0.36  0.12 0.28  0.28  0.09 0.25  0.25
Volume/Cap:  0.10 0.52  0.72  0.82 0.17  0.42  0.82 0.78  0.07  0.78 0.82  0.66
Delay/Veh:   39.5 47.0  66.2  34.1 22.1  24.8  65.6 37.2  26.7  66.1 41.9  38.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  39.5 47.0  66.2  34.1 22.1  24.8  65.6 37.2  26.7  66.1 41.9  38.1
LOS by Move:    D    D     E     C    C     C     E    D     C     E    D     D
HCM2kAvgQ:      1    3     4    18    2     6     7   13     1     6   13     8
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:         1  0  2  0  1   1  0  2  0  1   1  0  2  0  1   1  0  2  0  1
Lane Group:     L    T     R     L    T     R     L    T     R     L    T     R
#LnsInGrps:     1    2     1     1    2     1     1    2     1     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  1.00  1.00 0.95  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 0.93 0.93  0.83  0.93 0.93  0.83  0.93 0.93  0.83  0.93 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #5 Meadowview Road/24th Street
```

```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.12 0.07  0.07  0.41 0.36  0.36  0.12 0.28  0.28  0.09 0.25  0.25
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.5  1.8   2.2  14.6  2.2   5.0   4.6 10.2   0.6   3.3  9.9   6.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.1  1.0   1.8   3.7  0.2   0.7   2.9  2.9   0.1   2.3  3.5   1.8
HCM2KQueue:   0.6  2.8   4.0  18.4  2.4   5.8   7.5 13.1   0.7   5.5 13.4   8.3
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.19  1.16 1.19  1.19  1.18 1.17  1.20  1.19 1.17  1.18
70th%HCM2kQ:  0.7  3.4   4.7  21.4  2.9   6.8   8.8 15.4   0.8   6.6 15.7   9.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.59 1.57  1.56  1.46 1.58  1.55  1.53 1.49  1.59  1.55 1.49  1.53
85th%HCM2kQ:  1.0  4.4   6.2  26.9  3.8   8.9  11.5 19.6   1.1   8.6 20.0  12.7
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.79 1.75  1.73  1.56 1.75  1.70  1.68 1.61  1.79  1.70 1.60  1.66
90th%HCM2kQ:  1.1  4.9   6.8  28.6  4.2   9.8  12.5 21.1   1.2   9.4 21.5  13.8
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.08 2.01  1.98  1.72 2.02  1.94  1.90 1.79  2.08  1.94 1.78  1.88
95th%HCM2kQ:  1.3  5.7   7.8  31.5  4.9  11.2  14.2 23.5   1.4  10.7 23.9  15.6
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.65 2.51  2.44  1.94 2.53  2.34  2.26 2.06  2.65  2.35 2.06  2.23
98th%HCM2kQ:  1.6  7.1   9.6  35.7  6.1  13.5  16.9 27.1   1.8  13.0 27.6  18.5
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #5 Meadowview Road/24th Street
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   4.5 31.4  19.6 131.5 37.7  45.4  41.5  175   5.5  29.4  170  58.5
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    133.662 pounds
                      21.653 gallons
Carbon Dioxide:      417.026 pounds
Carbon Monoxide:      34.027 pounds
Hydrocarbons:          6.620 pounds
Nitrogen Oxides:       1.092 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    127.401 pounds
                      20.639 gallons
Carbon Dioxide:      397.492 pounds
Carbon Monoxide:      33.532 pounds
Hydrocarbons:          6.521 pounds
Nitrogen Oxides:       0.990 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP AM

Intersection #6: Meadowview Road/Detroit Boulevard



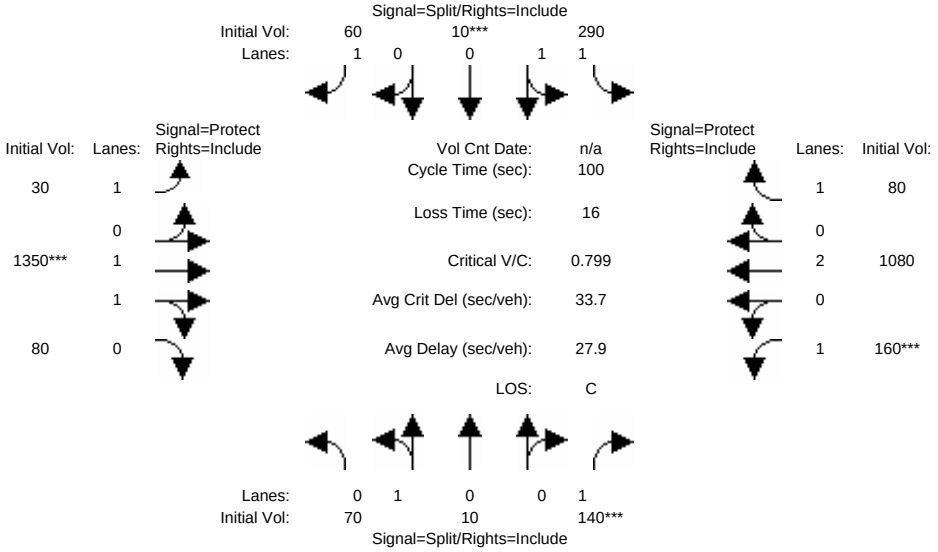

```
Approach:      North Bound       South Bound        East Bound        West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0    7     0     0    7     0     5    7     0     5    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     140   10   170    60   10    40    50  840    80    60 1250   240
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:  140   10   170    60   10    40    50  840    80    60 1250   240
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:   140   10   170    60   10    40    50  840    80    60 1250   240
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  140   10   170    60   10    40    50  840    80    60 1250   240
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
Final Vol.:   140   10   170    60   10    40    50  840    80    60 1250   240
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.94 0.94  0.83  0.94 0.94  0.83  0.93 0.92  0.92  0.93 0.93  0.83
Lanes:       0.93 0.07  1.00  1.71 0.29  1.00  1.00 1.83  0.17  1.00 2.00  1.00
Final Sat.:  1660  119  1583  3061  510  1583  1769 3188   304  1769 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.08  0.11  0.02 0.02  0.03  0.03 0.26  0.26  0.03 0.35  0.15
Crit Moves:             ****       ****        ****                   ****
Green/Cycle: 0.17 0.17  0.17  0.07 0.07  0.07  0.05 0.51  0.51  0.10 0.55  0.55
Volume/Cap:  0.50 0.50  0.64  0.28 0.28  0.36  0.57 0.52  0.52  0.35 0.64  0.27
Delay/Veh:   39.2 39.2  44.0  44.7 44.7  46.4  54.7 16.8  16.8  43.6 16.2  12.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  39.2 39.2  44.0  44.7 44.7  46.4  54.7 16.8  16.8  43.6 16.2  12.0
LOS by Move:    D    D     D     D    D     D     D    B     B     D    B     B
HCM2kAvgQ:      5    5     6     1    1     2     2   10    10     2   14     4
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:         0  1  0  0  1    1  1  0  0  1    1  0  1  1  0    1  0  2  0  1
Lane Group:    LT   LT     R    LT   LT     R     L   RT    RT     L    T     R
#LnsInGrps:     1    1     1     2    2     1     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:     < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     4    4  xxxx     4    4  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx 0.99  0.99  xxxx xxxx  0.85
LT Adj:      0.96 0.96 xxxxx  0.96 0.96 xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.94 0.94  0.83  0.94 0.94  0.83  0.93 0.97  0.97  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.94 0.94  0.83  0.94 0.94  0.83  0.93 0.92  0.92  0.93 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*********************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
```

```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.17 0.17  0.17  0.07 0.07  0.07  0.05 0.51  0.51  0.10 0.55  0.55
ArrivalType:         3              3              3                    3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.8  3.8   4.4   0.9  0.9   1.1   1.4  9.0   9.0   1.6 12.7   3.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.0  1.0   1.6   0.4  0.4   0.5   1.1  1.1   1.1   0.5  1.7   0.4
HCM2KQueue:   4.7  4.7   6.0   1.3  1.3   1.6   2.4 10.1  10.1   2.1 14.4   3.9
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.20 1.20  1.20  1.19 1.18  1.18  1.19 1.17  1.19
70th%HCM2kQ:  5.6  5.6   7.1   1.6  1.6   1.9   2.9 11.9  11.9   2.5 16.8   4.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.56 1.56  1.55  1.59 1.59  1.58  1.58 1.51  1.51  1.58 1.49  1.56
85th%HCM2kQ:  7.4  7.4   9.2   2.1  2.1   2.5   3.8 15.3  15.3   3.3 21.4   6.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.72 1.72  1.70  1.77 1.77  1.77  1.75 1.64  1.64  1.76 1.59  1.73
90th%HCM2kQ:  8.1  8.1  10.1   2.3  2.3   2.8   4.2 16.6  16.6   3.7 22.9   6.7
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.96 1.96  1.93  2.06 2.06  2.05  2.02 1.84  1.84  2.03 1.77  1.98
95th%HCM2kQ:  9.3  9.3  11.5   2.7  2.7   3.3   4.9 18.6  18.6   4.2 25.4   7.7
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.39 2.39  2.33  2.60 2.60  2.58  2.53 2.16  2.16  2.55 2.03  2.44
98th%HCM2kQ: 11.4 11.4  13.9   3.4  3.4   4.1   6.1 21.8  21.8   5.3 29.2   9.5
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  31.8  2.3  39.6  14.2  2.4   9.5  12.2  141  13.4  14.0  216  31.7
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     79.400 pounds
                      12.863 gallons
Carbon Dioxide:      247.728 pounds
Carbon Monoxide:      19.136 pounds
Hydrocarbons:          3.396 pounds
Nitrogen Oxides:       0.727 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     74.122 pounds
                      12.008 gallons
Carbon Dioxide:      231.259 pounds
Carbon Monoxide:      18.724 pounds
Hydrocarbons:          3.312 pounds
Nitrogen Oxides:       0.646 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP PM

Intersection #6: Meadowview Road/Detroit Boulevard




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     7     0     0     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      70   10   140   290   10    60    30 1350    80   160 1080    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:   70   10   140   290   10    60    30 1350    80   160 1080    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:    70   10   140   290   10    60    30 1350    80   160 1080    80
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   70   10   140   290   10    60    30 1350    80   160 1080    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
Final Vol.:    70   10   140   290   10    60    30 1350    80   160 1080    80
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.94 0.94  0.83  0.93 0.93  0.83  0.93 0.92  0.92  0.93 0.93  0.83
Lanes:       0.87 0.13  1.00  1.93 0.07  1.00  1.00 1.89  0.11  1.00 2.00  1.00
Final Sat.:  1561  223  1583  3434  118  1583  1769 3313   196  1769 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.04  0.09  0.08 0.08  0.04  0.02 0.41  0.41  0.09 0.31  0.05
Crit Moves:             ****        ****              ****        ****
Green/Cycle: 0.11 0.11  0.11  0.11 0.11  0.11  0.09 0.51  0.51  0.11 0.54  0.54
Volume/Cap:  0.40 0.40  0.80  0.80 0.80  0.36  0.19 0.80  0.80  0.80 0.57  0.09
Delay/Veh:   42.8 42.8  65.6  55.1 55.1  42.9  42.9 22.9  22.9  63.0 15.9  11.4
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  42.8 42.8  65.6  55.1 55.1  42.9  42.9 22.9  22.9  63.0 15.9  11.4
LOS by Move:    D    D     E     E    E     D     D    C     C     E    B     B
HCM2kAvgQ:      3    3     6     7    7     2     1   21    21     7   12     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  1  0  0  1    1  1  0  0  1    1  0  1  1  0    1  0  2  0  1
Lane Group:   LT   LT     R    LT   LT     R     L   RT     RT    L    T     R
#LnsInGrps:    1    1     1     2    2     1     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      4    4  xxxx     4    4  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx 0.99  0.99  xxxx xxxx  0.85
LT Adj:      0.96 0.96 xxxxx  0.95 0.95 xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.94 0.94  0.83  0.93 0.93  0.83  0.93 0.97  0.97  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.94 0.94  0.83  0.93 0.93  0.83  0.93 0.92  0.92  0.93 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
```

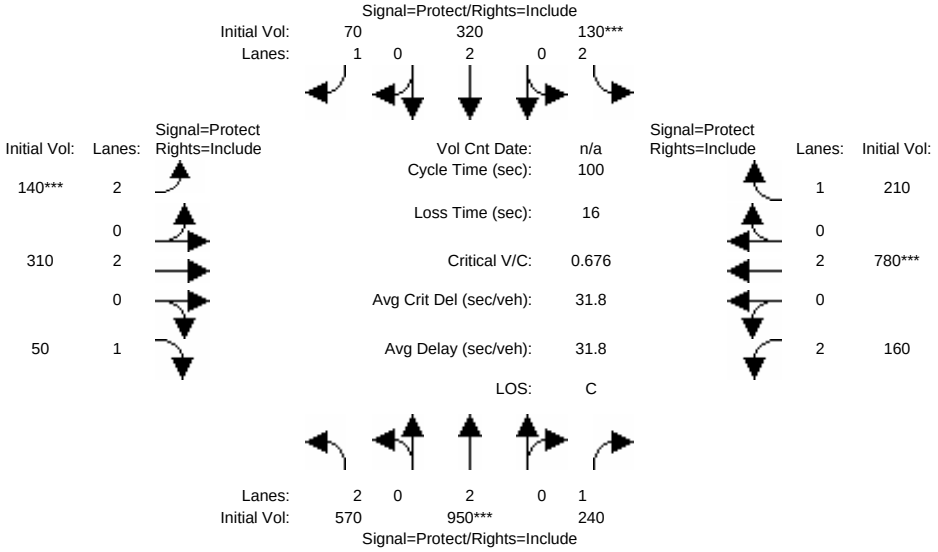


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.11 0.11  0.11  0.11 0.11  0.11  0.09 0.51  0.51  0.11 0.54  0.54
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.1  2.1   3.8   4.1  4.1   1.5   0.8 17.3  17.3   4.3 10.6   1.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.7  0.7   2.5   2.6  2.6   0.5   0.2  3.5   3.5   2.6  1.3   0.1
HCM2KQueue:   2.7  2.7   6.3   6.6  6.6   2.1   1.0 20.7  20.7   6.9 11.8   1.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.18 1.18  1.19  1.20 1.16  1.16  1.18 1.17  1.20
70th%HCM2kQ:  3.2  3.2   7.5   7.9  7.9   2.5   1.2 24.0  24.0   8.2 13.9   1.4
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.57 1.57  1.54  1.54 1.54  1.58  1.59 1.45  1.45  1.54 1.50  1.59
85th%HCM2kQ:  4.3  4.3   9.7  10.2 10.2   3.3   1.6 30.1  30.1  10.7 17.8   1.9
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.75 1.75  1.69  1.69 1.69  1.76  1.78 1.54  1.54  1.68 1.62  1.78
90th%HCM2kQ:  4.8  4.8  10.7  11.2 11.2   3.7   1.8 32.0  32.0  11.7 19.2   2.1
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.02 2.02  1.92  1.91 1.91  2.03  2.07 1.69  1.69  1.91 1.81  2.06
95th%HCM2kQ:  5.5  5.5  12.1  12.7 12.7   4.2   2.1 35.0  35.0  13.3 21.4   2.5
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.51 2.51  2.32  2.30 2.30  2.55  2.63 1.90  1.90  2.29 2.10  2.61
98th%HCM2kQ:  6.8  6.8  14.6  15.3 15.3   5.3   2.6 39.5  39.5  15.9 24.9   3.1
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  16.3  2.3  34.1  70.8  2.4  13.9   7.0  279  16.5  39.0  180   9.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    107.075 pounds
                      17.346 gallons
Carbon Dioxide:      334.073 pounds
Carbon Monoxide:      26.488 pounds
Hydrocarbons:          4.915 pounds
Nitrogen Oxides:       0.935 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    100.932 pounds
                      16.351 gallons
Carbon Dioxide:      314.907 pounds
Carbon Monoxide:      26.006 pounds
Hydrocarbons:          4.817 pounds
Nitrogen Oxides:       0.838 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #7: Mack Road/Franklin Boulevard




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     570  950   240   130  320    70   140  310    50   160  780   210
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:  570  950   240   130  320    70   140  310    50   160  780   210
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:   570  950   240   130  320    70   140  310    50   160  780   210
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  570  950   240   130  320    70   140  310    50   160  780   210
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
Final Vol.:   570  950   240   130  320    70   140  310    50   160  780   210
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  3432 3538  1583  3432 3538  1583  3432 3538  1583  3432 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.17 0.27  0.15  0.04 0.09  0.04  0.04 0.09  0.03  0.05 0.22  0.13
Crit Moves:       ****        ****             ****                   ****
Green/Cycle: 0.29 0.40  0.40  0.06 0.16  0.16  0.06 0.25  0.25  0.14 0.33  0.33
Volume/Cap:  0.57 0.68  0.38  0.68 0.57  0.28  0.68 0.36  0.13  0.33 0.68  0.41
Delay/Veh:   30.7 26.2  21.8  55.5 40.1  37.5  54.6 31.4  29.5  39.2 30.7  26.7
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  30.7 26.2  21.8  55.5 40.1  37.5  54.6 31.4  29.5  39.2 30.7  26.7
LOS by Move:   C    C     C     E    D     D     D    C     C     D    C     C
HCM2kAvgQ:     8   13     5     3    6     2     4    4     1     3   12     5
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       2  0  2  0  1    2  0  2  0  1    2  0  2  0  1    2  0  2  0  1
Lane Group:    L     T     R     L     T     R     L     T     R     L     T     R
#LnsInGrps:    2     2     1     2     2     1     2     2     1     2     2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid         8                 8                 8                 8
% Hev Veh:           2                 2                 2                 2
Grade:              0%                0%                0%                0%
Parking/Hr:         No                No                No                No
Bus Stp/Hr:          0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:          0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 0.97 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00
Fnl Sat Adj: 0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
```



```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.29 0.40  0.40  0.06 0.16  0.16  0.06 0.25  0.25  0.14 0.33  0.33
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.9 11.4   4.7   1.8  4.3   1.7   2.0  3.7   1.1   2.1  9.9   4.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.2  2.0   0.6   1.5  1.2   0.4   1.5  0.5   0.1   0.5  1.9   0.7
HCM2KQueue:   8.2 13.4   5.3   3.3  5.5   2.1   3.5  4.3   1.2   2.6 11.8   5.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.17  1.19  1.19 1.19  1.19  1.19 1.19  1.20  1.19 1.17  1.19
70th%HCM2kQ:  9.6 15.7   6.3   4.0  6.6   2.5   4.2  5.1   1.5   3.0 13.8   6.2
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.49  1.55  1.57 1.55  1.58  1.57 1.56  1.59  1.58 1.50  1.55
85th%HCM2kQ: 12.5 20.0   8.3   5.2  8.6   3.3   5.5  6.7   1.9   4.0 17.7   8.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.67 1.60  1.71  1.74 1.70  1.76  1.74 1.72  1.78  1.75 1.62  1.71
90th%HCM2kQ: 13.6 21.5   9.1   5.8  9.4   3.7   6.1  7.4   2.2   4.5 19.1   8.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.88 1.78  1.95  2.00 1.94  2.03  1.99 1.97  2.06  2.02 1.81  1.95
95th%HCM2kQ: 15.4 23.9  10.4   6.7 10.7   4.2   7.0  8.5   2.5   5.2 21.4  10.1
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.23 2.06  2.36  2.47 2.35  2.55  2.46 2.42  2.61  2.52 2.10  2.37
98th%HCM2kQ: 18.2 27.6  12.6   8.3 13.0   5.3   8.6 10.4   3.2   6.4 24.8  12.3
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 120.7  196  42.6  31.9 73.9  15.4  34.3 64.0   9.7  36.1  169  40.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    136.257 pounds
                      22.074 gallons
Carbon Dioxide:      425.123 pounds
Carbon Monoxide:      34.087 pounds
Hydrocarbons:          6.441 pounds
Nitrogen Oxides:       1.165 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    128.982 pounds
                      20.895 gallons
Carbon Dioxide:      402.424 pounds
Carbon Monoxide:      33.514 pounds
Hydrocarbons:          6.326 pounds
Nitrogen Oxides:       1.048 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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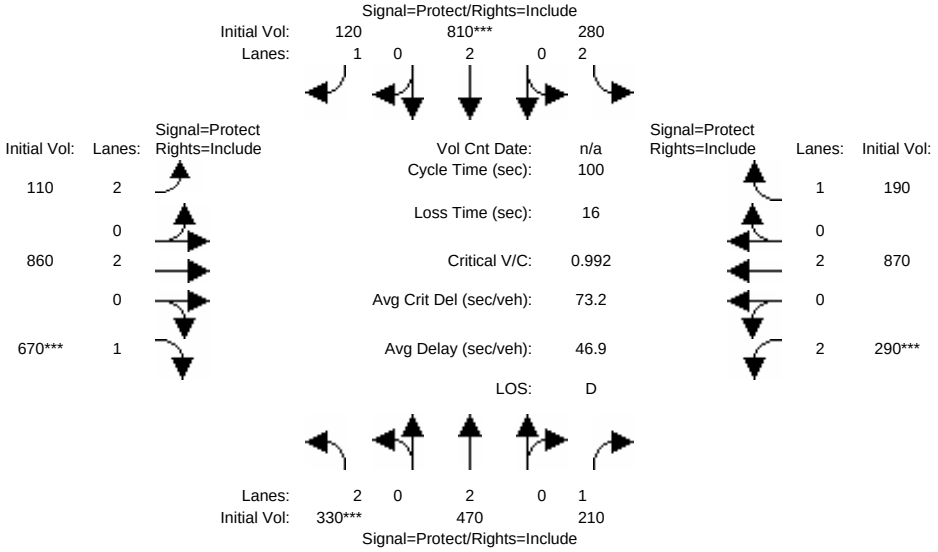
Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP PM

Intersection #7: Mack Road/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	330	470	210	280	810	120	110	860	670	290	870	190
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:	330	470	210	280	810	120	110	860	670	290	870	190
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:	330	470	210	280	810	120	110	860	670	290	870	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	330	470	210	280	810	120	110	860	670	290	870	190
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
Final Vol.:	330	470	210	280	810	120	110	860	670	290	870	190
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3432	3538	1583	3432	3538	1583	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.10	0.13	0.13	0.08	0.23	0.08	0.03	0.24	0.42	0.08	0.25	0.12
Crit Moves:	****				****				****	****		
Green/Cycle:	0.10	0.20	0.20	0.12	0.23	0.23	0.09	0.43	0.43	0.09	0.43	0.43
Volume/Cap:	0.99	0.65	0.65	0.65	0.99	0.33	0.37	0.57	0.99	0.99	0.58	0.28
Delay/Veh:	92.1	38.8	41.4	45.3	67.7	32.5	43.9	22.2	60.9	95.9	22.4	19.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	92.1	38.8	41.4	45.3	67.7	32.5	43.9	22.2	60.9	95.9	22.4	19.0
LOS by Move:	F	D	D	D	E	C	D	C	E	F	C	B
HCM2kAvgQ:	9	8	7	5	19	3	2	11	27	8	11	4
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #7 Mack Road/Franklin Boulevard


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*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.10 0.20  0.20  0.12 0.23  0.23  0.09 0.43  0.43  0.09 0.43  0.43
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.7  6.3   5.4   3.8 11.8   2.8   1.5  9.5  18.5   4.1  9.7   3.4
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           4.5  1.7   1.7   1.6  7.1   0.5   0.6  1.3   8.8   4.2  1.3   0.4
HCM2KQueue:   9.2  8.0   7.0   5.4 18.9   3.3   2.0 10.8  27.3   8.4 11.0   3.8
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.18  1.18  1.19 1.16  1.19  1.20 1.18  1.15  1.18 1.18  1.19
70th%HCM2kQ: 10.9  9.5   8.3   6.5 22.0   3.9   2.4 12.7  31.4   9.9 13.0   4.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.53  1.54  1.55 1.46  1.57  1.58 1.51  1.42  1.53 1.51  1.56
85th%HCM2kQ: 14.1 12.3  10.8   8.4 27.6   5.1   3.2 16.3  38.8  12.8 16.6   6.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.65 1.67  1.68  1.70 1.56  1.74  1.76 1.63  1.50  1.66 1.63  1.73
90th%HCM2kQ: 15.3 13.4  11.8   9.3 29.4   5.7   3.6 17.6  41.0  14.0 18.0   6.6
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.86 1.88  1.91  1.94 1.71  2.00  2.04 1.83  1.63  1.88 1.83  1.98
95th%HCM2kQ: 17.2 15.1  13.4  10.6 32.3   6.5   4.2 19.8  44.5  15.7 20.1   7.6
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.19 2.24  2.28  2.36 1.93  2.48  2.55 2.14  1.82  2.22 2.13  2.44
98th%HCM2kQ: 20.3 18.0  16.1  12.8 36.5   8.1   5.2 23.1  49.8  18.7 23.4   9.4
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  82.4  108  48.2  66.7  202  25.0  26.0  163 166.5  72.4  166  31.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    235.463 pounds
                      38.145 gallons
Carbon Dioxide:      734.645 pounds
Carbon Monoxide:      60.761 pounds
Hydrocarbons:         12.107 pounds
Nitrogen Oxides:       1.828 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    225.722 pounds
                      36.567 gallons
Carbon Dioxide:      704.251 pounds
Carbon Monoxide:      59.992 pounds
Hydrocarbons:         11.953 pounds
Nitrogen Oxides:       1.670 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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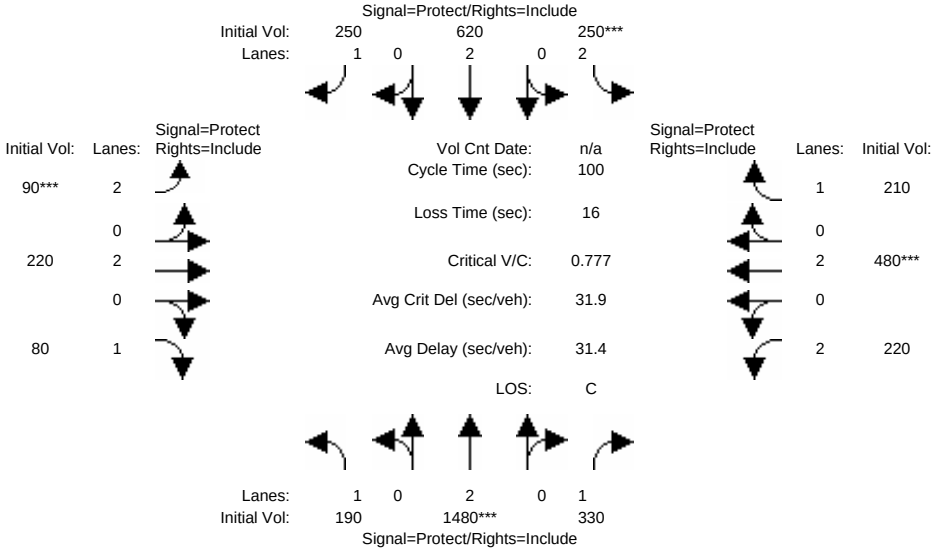
Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #8: Cosumnes River Boulevard/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	190	1480	330	250	620	250	90	220	80	220	480	210
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:	190	1480	330	250	620	250	90	220	80	220	480	210
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:	190	1480	330	250	620	250	90	220	80	220	480	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	190	1480	330	250	620	250	90	220	80	220	480	210
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
Final Vol.:	190	1480	330	250	620	250	90	220	80	220	480	210
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
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.:	1769	3538	1583	3432	3538	1583	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.11	0.42	0.21	0.07	0.18	0.16	0.03	0.06	0.05	0.06	0.14	0.13
Crit Moves:		****		****			****				****	
Green/Cycle:	0.24	0.53	0.53	0.09	0.38	0.38	0.05	0.12	0.12	0.11	0.17	0.17
Volume/Cap:	0.46	0.79	0.40	0.79	0.46	0.41	0.52	0.54	0.44	0.61	0.79	0.78
Delay/Veh:	33.6	21.6	14.4	57.4	23.3	23.0	49.3	43.2	42.9	45.7	46.9	52.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.6	21.6	14.4	57.4	23.3	23.0	49.3	43.2	42.9	45.7	46.9	52.8
LOS by Move:	C	C	B	E	C	C	D	D	D	D	D	D
HCM2kAvgQ:	5	21	6	6	8	6	2	4	3	4	10	8
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0 2	0 1	2	0 2	0 1	2	0 2	0 1	2	0 2	0 1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #8 Cosumnes River Boulevard/Franklin Boulevard

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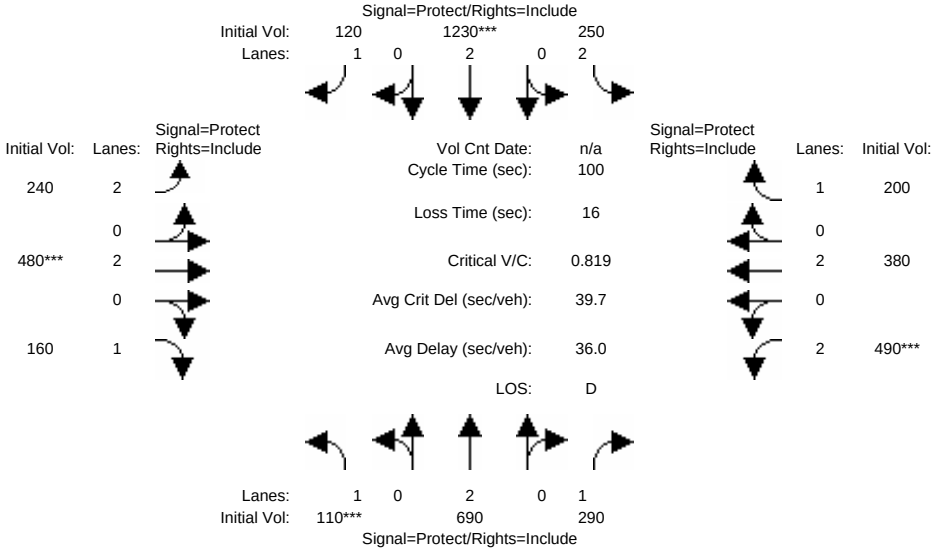
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.24 0.53  0.53  0.09 0.38  0.38  0.05 0.12  0.12  0.11 0.17  0.17
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.5 17.6   5.5   3.5  6.8   5.1   1.3  3.0   2.1   3.0  6.7   5.6
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.8  3.4   0.6   2.4  0.8   0.7   0.9  1.1   0.7   1.3  2.9   2.6
HCM2KQueue:   5.3 21.0   6.1   5.9  7.6   5.8   2.2  4.1   2.8   4.4  9.6   8.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.16  1.19  1.19 1.18  1.19  1.19 1.19  1.19  1.19 1.18  1.18
70th%HCM2kQ:  6.3 24.3   7.3   7.0  9.0   6.8   2.6  4.9   3.4   5.2 11.3   9.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.45  1.54  1.55 1.53  1.55  1.58 1.56  1.57  1.56 1.52  1.53
85th%HCM2kQ:  8.3 30.4   9.5   9.2 11.6   8.9   3.5  6.4   4.4   6.8 14.5  12.5
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.71 1.54  1.69  1.70 1.67  1.70  1.76 1.73  1.75  1.72 1.65  1.67
90th%HCM2kQ:  9.1 32.3  10.4  10.1 12.7   9.8   3.9  7.1   4.9   7.5 15.8  13.6
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.95 1.69  1.93  1.93 1.89  1.94  2.03 1.98  2.01  1.97 1.85  1.88
95th%HCM2kQ: 10.4 35.4  11.8  11.5 14.4  11.2   4.5  8.1   5.7   8.6 17.8  15.4
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.36 1.90  2.32  2.33 2.26  2.34  2.54 2.43  2.51  2.42 2.18  2.23
98th%HCM2kQ: 12.6 39.8  14.2  13.9 17.2  13.5   5.6 10.0   7.0  10.5 20.9  18.2
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  40.7  301  49.3  61.2  116  45.7  22.0 51.9  18.6  52.6  115  50.2
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    151.818 pounds
                      24.595 gallons
Carbon Dioxide:      473.672 pounds
Carbon Monoxide:      37.939 pounds
Hydrocarbons:          7.159 pounds
Nitrogen Oxides:       1.298 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    143.662 pounds
                      23.273 gallons
Carbon Dioxide:      448.224 pounds
Carbon Monoxide:      37.297 pounds
Hydrocarbons:          7.030 pounds
Nitrogen Oxides:       1.168 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP PM

Intersection #8: Cosumnes River Boulevard/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	110	690	290	250	1230	120	240	480	160	490	380	200
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:	110	690	290	250	1230	120	240	480	160	490	380	200
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:	110	690	290	250	1230	120	240	480	160	490	380	200
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	110	690	290	250	1230	120	240	480	160	490	380	200
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
Final Vol.:	110	690	290	250	1230	120	240	480	160	490	380	200
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
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.:	1769	3538	1583	3432	3538	1583	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.18	0.07	0.35	0.08	0.07	0.14	0.10	0.14	0.11	0.13
Crit Moves:	****				****			****			****	
Green/Cycle:	0.08	0.36	0.36	0.14	0.42	0.42	0.12	0.17	0.17	0.17	0.22	0.22
Volume/Cap:	0.82	0.54	0.50	0.54	0.82	0.18	0.58	0.82	0.61	0.82	0.49	0.58
Delay/Veh:	76.8	25.6	25.5	41.5	29.1	18.1	43.5	49.2	42.9	48.5	34.7	37.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.8	25.6	25.5	41.5	29.1	18.1	43.5	49.2	42.9	48.5	34.7	37.3
LOS by Move:	E	C	C	D	C	B	D	D	D	D	C	D
HCM2kAvgQ:	6	9	7	4	20	2	4	10	6	10	6	6
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #8 Cosumnes River Boulevard/Franklin Boulevard


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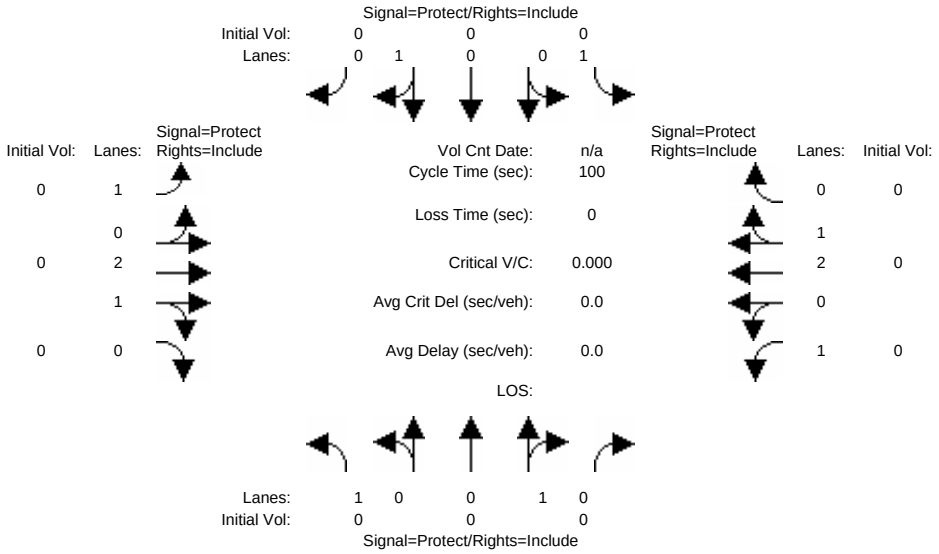
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.08 0.36  0.36  0.14 0.42  0.42  0.12 0.17  0.17  0.17 0.22  0.22
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.0  8.0   6.3   3.3 15.9   2.1   3.2  6.8   4.1   6.8  4.9   5.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           2.5  1.1   1.0   1.1  3.7   0.2   1.2  3.1   1.4   3.1  0.9   1.3
HCM2KQueue:   5.5  9.1   7.3   4.4 19.6   2.3   4.5  9.9   5.5   9.9  5.8   6.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.18  1.18  1.19 1.16  1.19  1.19 1.18  1.19  1.18 1.19  1.19
70th%HCM2kQ:  6.5 10.7   8.6   5.2 22.8   2.7   5.3 11.7   6.6  11.6  6.9   7.4
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.52  1.54  1.56 1.46  1.58  1.56 1.52  1.55  1.52 1.55  1.54
85th%HCM2kQ:  8.5 13.8  11.1   6.9 28.6   3.6   7.0 15.0   8.6  15.0  9.0   9.6
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.70 1.65  1.68  1.72 1.55  1.76  1.72 1.64  1.70  1.64 1.70  1.69
90th%HCM2kQ:  9.4 15.0  12.2   7.6 30.4   4.0   7.7 16.3   9.4  16.3  9.8  10.6
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.94 1.86  1.90  1.97 1.70  2.03  1.97 1.85  1.94  1.85 1.93  1.92
95th%HCM2kQ: 10.7 16.9  13.8   8.7 33.4   4.7   8.8 18.3  10.7  18.3 11.2  12.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.35 2.20  2.27  2.41 1.92  2.54  2.41 2.17  2.35  2.17 2.34  2.32
98th%HCM2kQ: 13.0 20.0  16.5  10.6 37.7   5.8  10.8 21.5  13.0  21.4 13.6  14.5
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  27.1  136  56.4  58.2  271  18.7  56.7  116  37.1 118.0 83.1  44.7
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    174.905 pounds
                      28.335 gallons
Carbon Dioxide:      545.702 pounds
Carbon Monoxide:      44.214 pounds
Hydrocarbons:          8.501 pounds
Nitrogen Oxides:       1.458 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    166.241 pounds
                      26.931 gallons
Carbon Dioxide:      518.672 pounds
Carbon Monoxide:      43.530 pounds
Hydrocarbons:          8.363 pounds
Nitrogen Oxides:       1.318 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP AM

Intersection #14: Cosumnes River Boulevard/Street A



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Lane Group:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#LnsInGrps:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	0			0			0			0		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hev Veh Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bus Stp Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RT Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PedBike Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HCM Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

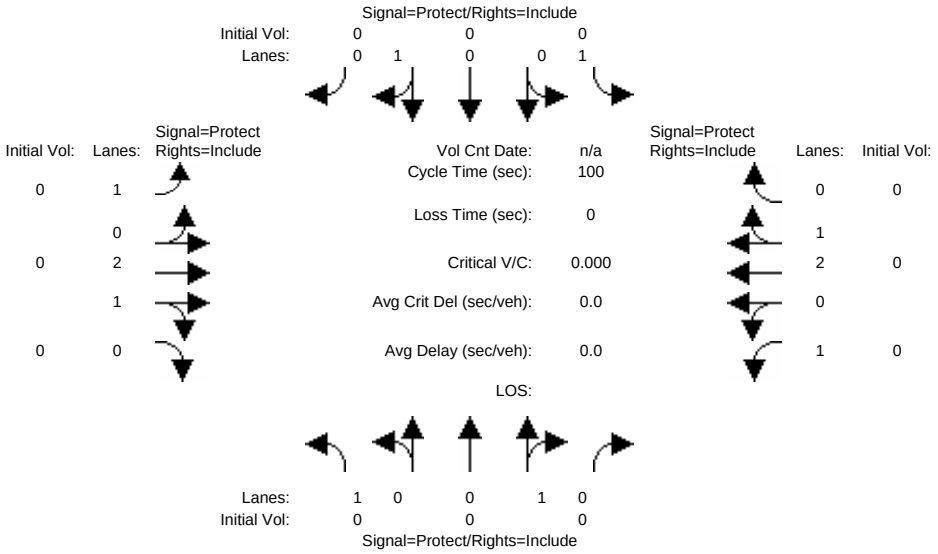
Intersection #14 Cosumnes River Boulevard/Street A


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #14 Cosumnes River Boulevard/Street A
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #14 Cosumnes River Boulevard/Street A
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP PM

Intersection #14: Cosumnes River Boulevard/Street A



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Lane Group:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#LnsInGrps:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	0			0			0			0		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hev Veh Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bus Stp Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RT Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PedBike Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HCM Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

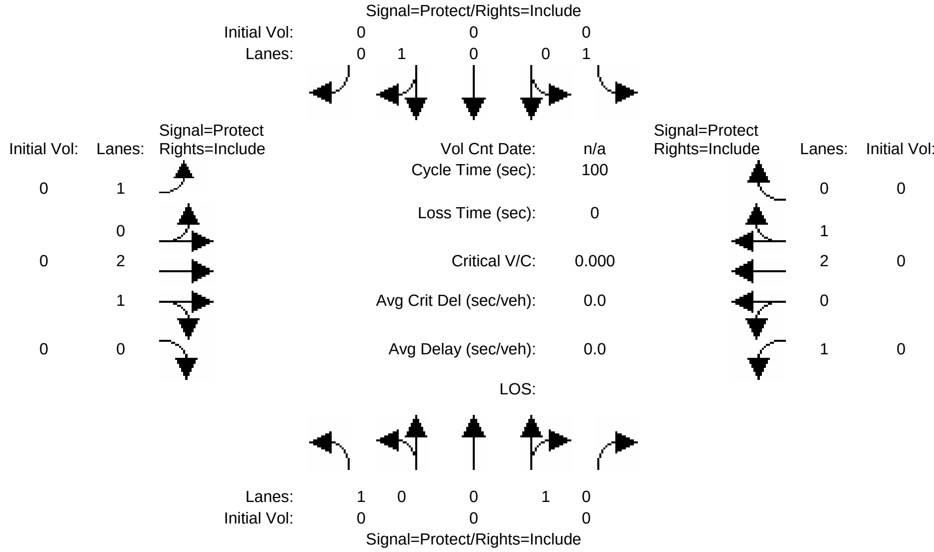
Intersection #14 Cosumnes River Boulevard/Street A


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #14 Cosumnes River Boulevard/Street A
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #14 Cosumnes River Boulevard/Street A
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #15: Cosumnes River Boulevard/Street B




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0    0    0     0    0    0     0    0    0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:   0    0     0    0    0     0    0    0     0    0    0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:    0    0     0    0    0     0    0    0     0    0    0     0
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   0    0     0    0    0     0    0    0     0    0    0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:    0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:      0    0     0    0    0     0    0    0     0    0    0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:    0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:     0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:    0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12   12   12    12   12   12    12   12   12    12
CrosswalkWid        8                8                8                8
% Hev Veh:          0                0                0                0
Grade:             0%               0%               0%               0%
Parking/Hr:        No               No               No               No
Bus Stp/Hr:         0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:        0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:         0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:    0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
```

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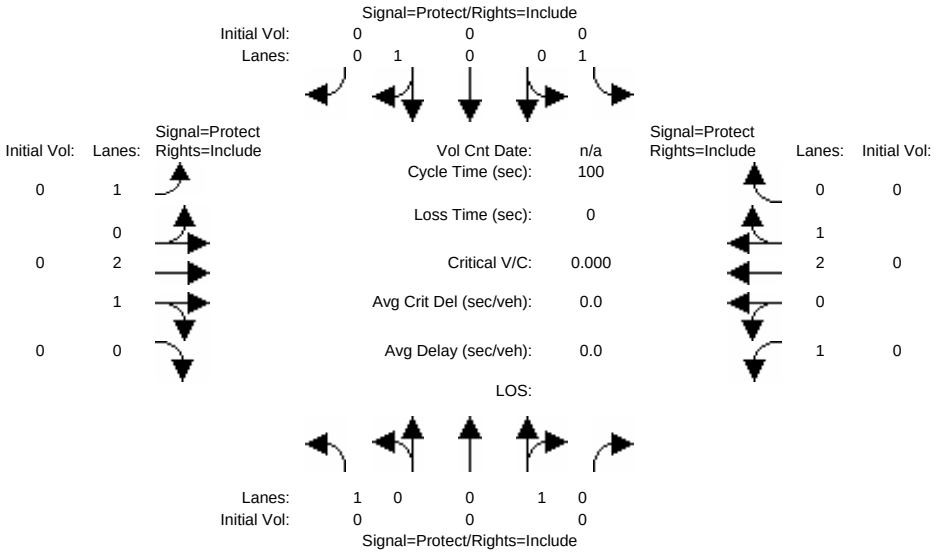
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP PM

Intersection #15: Cosumnes River Boulevard/Street B



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Lane Group:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#LnsInGrps:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	0			0			0			0		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hev Veh Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bus Stp Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RT Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PedBike Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HCM Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #15 Cosumnes River Boulevard/Street B


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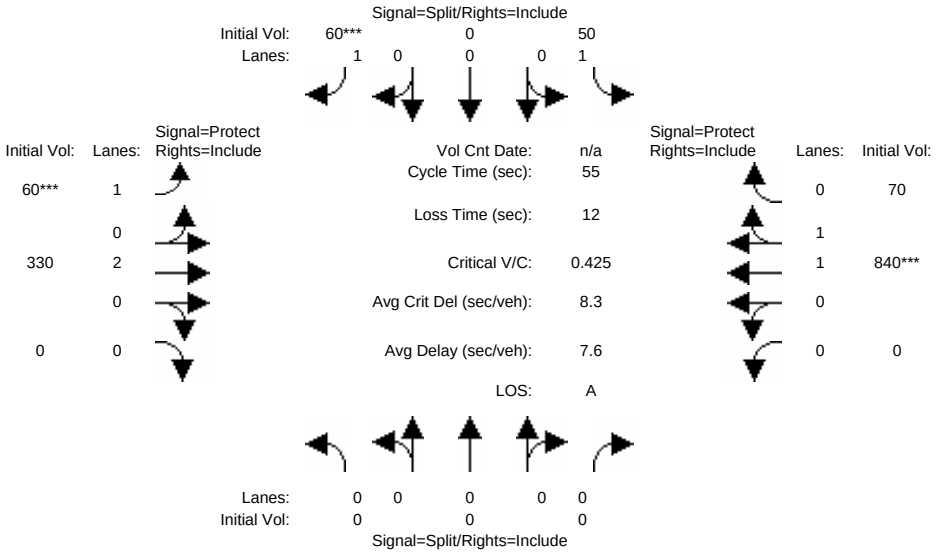
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #16: Cosumnes River Boulevard/24th Street




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     7     0     5     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0    50     0    60    60   330     0     0   840    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:    0     0     0    50     0    60    60   330     0     0   840    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:     0     0     0    50     0    60    60   330     0     0   840    70
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0    50     0    60    60   330     0     0   840    70
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
Final Vol.:     0     0     0    50     0    60    60   330     0     0   840    70
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.93  1.00  0.83  0.93  0.93  1.00  1.00  0.92  0.92
Lanes:       0.00  0.00  0.00  1.00  0.00  1.00  1.00  2.00  0.00  0.00  1.85  0.15
Final Sat.:     0     0     0  1769     0  1583  1769  3538     0     0  3226   269
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.03  0.00  0.04  0.03  0.09  0.00  0.00  0.26  0.26
Crit Moves:                                ****  ****                    ****
Green/Cycle: 0.00  0.00  0.00  0.09  0.00  0.09  0.09  0.69  0.00  0.00  0.60  0.60
Volume/Cap:  0.00  0.00  0.00  0.32  0.00  0.43  0.37  0.13  0.00  0.00  0.43  0.43
Delay/Veh:    0.0   0.0   0.0  24.8   0.0  25.9  25.0   2.9   0.0   0.0   6.0   6.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0  24.8   0.0  25.9  25.0   2.9   0.0   0.0   6.0   6.0
LOS by Move:    A     A     A     C     A     C     C     A     A     A     A     A
HCM2kAvgQ:      0     0     0     1     0     2     1     1     0     0     5     5
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  0  0  0    1  0  0  0  1    1  0  2  0  0    0  0  1  1  0
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R    L    T   xxxx  xxxx  RT    RT
#LnsInGrps:     0     0     0     1     0     1     1     2     0     0     2     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx  0.98  0.98 0.98 xxxxx  xxxx 0.98  0.98
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx 0.99  0.99
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 1.00  1.00  1.00  0.93  1.00  0.83  0.93  0.98  1.00  1.00  0.97  0.97
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.95  1.00  1.00  0.95  0.95
Fnl Sat Adj: 1.00  1.00  1.00  0.93  1.00  0.83  0.93  0.93  1.00  1.00  0.92  0.92
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00  0.00  0.00  1.00  0.00  1.00  1.00  1.00  0.00  0.00  1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
```

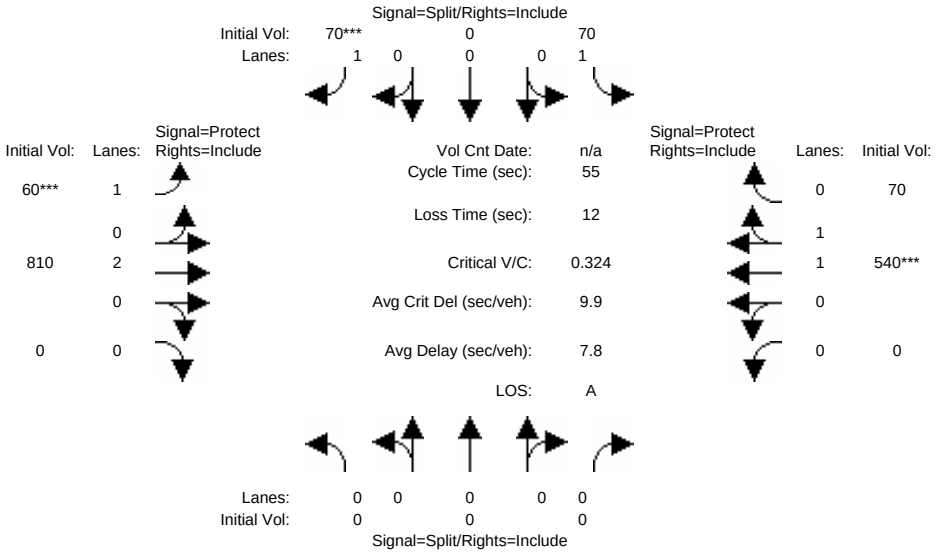


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.09 0.00  0.09  0.09 0.69  0.00  0.00 0.60  0.60
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.7  0.0   0.9   0.9  0.9   0.0   0.0  3.9   3.9
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   0.5  0.0   0.7   0.6  0.2   0.0   0.0  0.8   0.8
HCM2KQueue:   0.0  0.0   0.0   1.2  0.0   1.6   1.4  1.1   0.0   0.0  4.7   4.7
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.20  1.20 1.20  1.20  1.20 1.19  1.19
70th%HCM2kQ:  0.0  0.0   0.0   1.4  0.0   1.9   1.7  1.3   0.0   0.0  5.6   5.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.59 1.60  1.58  1.59 1.59  1.60  1.60 1.56  1.56
85th%HCM2kQ:  0.0  0.0   0.0   1.9  0.0   2.5   2.3  1.7   0.0   0.0  7.3   7.3
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.78 1.80  1.77  1.77 1.78  1.80  1.80 1.72  1.72
90th%HCM2kQ:  0.0  0.0   0.0   2.1  0.0   2.8   2.5  1.9   0.0   0.0  8.0   8.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.06 2.10  2.05  2.05 2.07  2.10  2.10 1.96  1.96
95th%HCM2kQ:  0.0  0.0   0.0   2.4  0.0   3.2   2.9  2.2   0.0   0.0  9.2   9.2
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.61 2.70  2.59  2.60 2.62  2.70  2.70 2.40  2.40
98th%HCM2kQ:  0.0  0.0   0.0   3.1  0.0   4.1   3.7  2.8   0.0   0.0 11.2  11.2
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  11.7  0.0  14.2  14.1 27.8   0.0   0.0  113   9.4
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     24.007 pounds
                       3.889 gallons
Carbon Dioxide:       74.903 pounds
Carbon Monoxide:       5.217 pounds
Hydrocarbons:          0.748 pounds
Nitrogen Oxides:       0.256 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     21.602 pounds
                       3.499 gallons
Carbon Dioxide:       67.398 pounds
Carbon Monoxide:       5.032 pounds
Hydrocarbons:          0.710 pounds
Nitrogen Oxides:       0.222 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP PM

Intersection #16: Cosumnes River Boulevard/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	7	0	5	7	0	0	7	0
Volume Module:												
Base Vol:	0	0	0	70	0	70	60	810	0	0	540	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:	0	0	0	70	0	70	60	810	0	0	540	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:	0	0	0	70	0	70	60	810	0	0	540	70
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	70	0	70	60	810	0	0	540	70
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
Final Vol.:	0	0	0	70	0	70	60	810	0	0	540	70
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	0.93	0.93	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.77	0.23
Final Sat.:	0	0	0	1769	0	1583	1769	3538	0	0	3079	399
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.04	0.03	0.23	0.00	0.00	0.18	0.18
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.14	0.00	0.14	0.10	0.65	0.00	0.00	0.54	0.54
Volume/Cap:	0.00	0.00	0.00	0.29	0.00	0.32	0.32	0.35	0.00	0.00	0.32	0.32
Delay/Veh:	0.0	0.0	0.0	22.0	0.0	22.3	23.8	4.6	0.0	0.0	7.1	7.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	22.0	0.0	22.3	23.8	4.6	0.0	0.0	7.1	7.1
LOS by Move:	A	A	A	C	A	C	C	A	A	A	A	A
HCM2kAvgQ:	0	0	0	1	0	1	1	4	0	0	3	3
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	1	0	0	0	1	1	0	2	0	0	0	0	1	1	0
Lane Group:	xxxx	xxxx	xxxx	L	xxxx	R	L	T	xxxx	xxxx	RT	RT
#LnsInGrps:	0	0	0	1	0	1	1	2	0	0	2	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	0.98	0.98	xxxxx	xxxx	0.98	0.98
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	0.98	0.98
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.93	1.00	0.83	0.93	0.98	1.00	1.00	0.96	0.96
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Fnl Sat Adj:	1.00	1.00	1.00	0.93	1.00	0.83	0.93	0.93	1.00	1.00	0.92	0.92
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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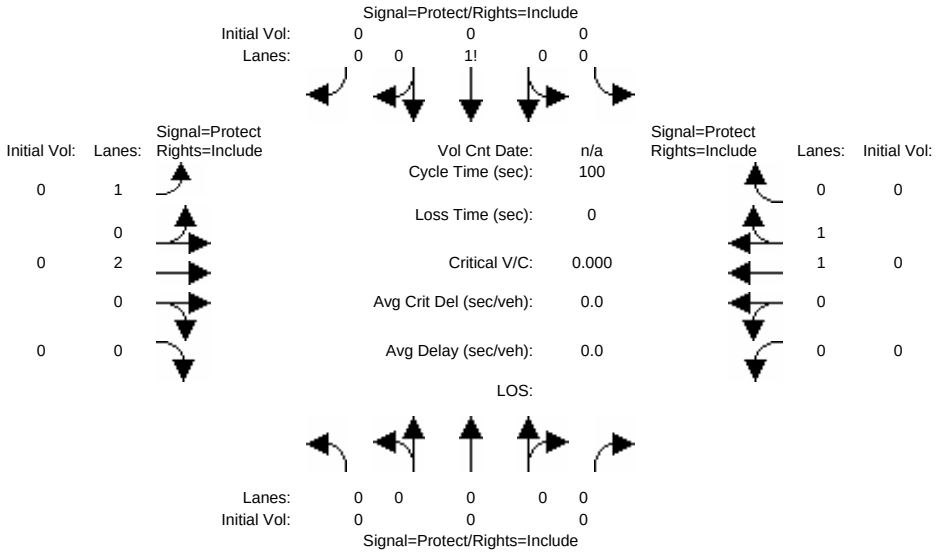
Intersection #16 Cosumnes River Boulevard/24th Street


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.14 0.00  0.14  0.10 0.65  0.00  0.00 0.54  0.54
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   1.0  0.0   1.0   0.8  3.0   0.0   0.0  2.7   2.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   0.4  0.0   0.5   0.5  0.5   0.0   0.0  0.5   0.5
HCM2KQueue:   0.0  0.0   0.0   1.4  0.0   1.4   1.3  3.5   0.0   0.0  3.2   3.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.20  1.20 1.19  1.20  1.20 1.19  1.19
70th%HCM2kQ:  0.0  0.0   0.0   1.6  0.0   1.7   1.6  4.2   0.0   0.0  3.8   3.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.59 1.60  1.59  1.59 1.57  1.60  1.60 1.57  1.57
85th%HCM2kQ:  0.0  0.0   0.0   2.2  0.0   2.3   2.1  5.5   0.0   0.0  5.0   5.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.77 1.80  1.77  1.77 1.74  1.80  1.80 1.74  1.74
90th%HCM2kQ:  0.0  0.0   0.0   2.4  0.0   2.5   2.3  6.1   0.0   0.0  5.6   5.6
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.06 2.10  2.05  2.06 1.99  2.10  2.10 2.00  2.00
95th%HCM2kQ:  0.0  0.0   0.0   2.8  0.0   2.9   2.7  7.1   0.0   0.0  6.4   6.4
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.60 2.70  2.60  2.60 2.46  2.70  2.70 2.48  2.48
98th%HCM2kQ:  0.0  0.0   0.0   3.5  0.0   3.7   3.4  8.7   0.0   0.0  8.0   8.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  15.7  0.0  15.8  13.9 93.1   0.0   0.0 75.2   9.7
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     27.859 pounds
                       4.513 gallons
Carbon Dioxide:       86.921 pounds
Carbon Monoxide:       6.070 pounds
Hydrocarbons:          0.874 pounds
Nitrogen Oxides:       0.297 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     25.086 pounds
                       4.064 gallons
Carbon Dioxide:       78.267 pounds
Carbon Monoxide:       5.856 pounds
Hydrocarbons:          0.830 pounds
Nitrogen Oxides:       0.258 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP AM

Intersection #17: Cosumnes River Boulevard/Stone-Boswell Access West




```
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0     0     0     0     0     0     0     0     0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:       0     0     0     0     0     0     0     0     0     0     0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:      0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            0                 0                 0                 0
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:      Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                         2000 HCM Operations Method
                           Base Volume Alternative
********************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
```



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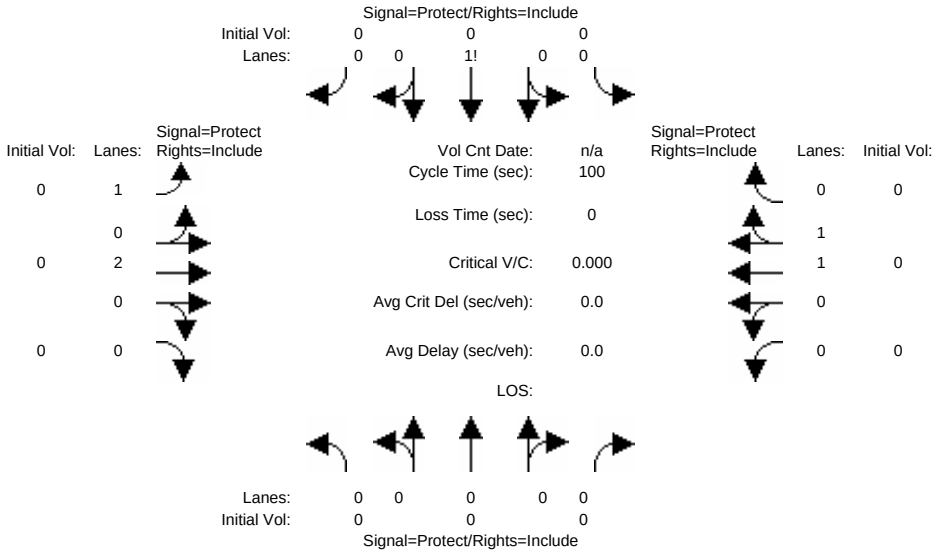
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP PM

Intersection #17: Cosumnes River Boulevard/Stone-Boswell Access West




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0     0     0     0     0     0     0     0     0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:       0     0     0     0     0     0     0     0     0     0     0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:      0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            0                 0                 0                 0
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:      Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
```

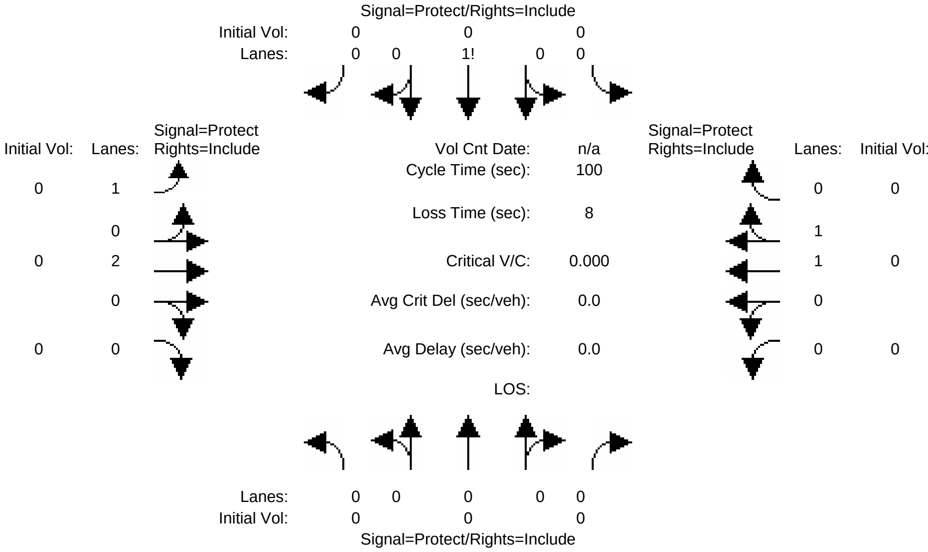


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #18: Cosumnes River Boulevard/Stone-Boswell Access East




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:   0    0     0     0    0     0     0    0     0     0    0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:    0    0     0     0    0     0     0    0     0     0    0     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0    0     0     0    0     0     0    0     0     0    0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:      0    0     0     0    0     0     0    0     0     0    0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:     0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid        8                8                8                8
% Hev Veh:          2                2                2                2
Grade:             0%               0%               0%               0%
Parking/Hr:        No               No               No               No
Bus Stp/Hr:         0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:        0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:         0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
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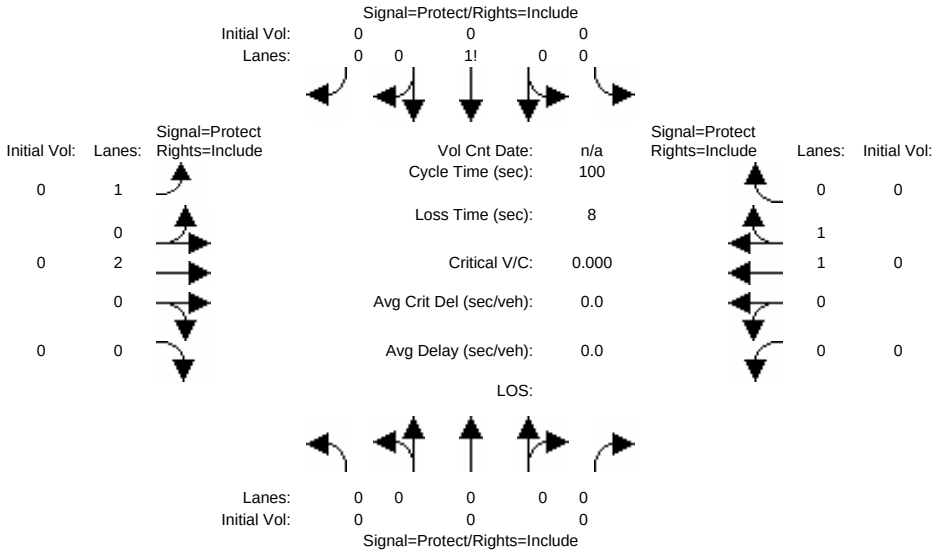
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP PM

Intersection #18: Cosumnes River Boulevard/Stone-Boswell Access East

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Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0     0     0     0     0     0     0     0     0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:       0     0     0     0     0     0     0     0     0     0     0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:      0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:      Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
```



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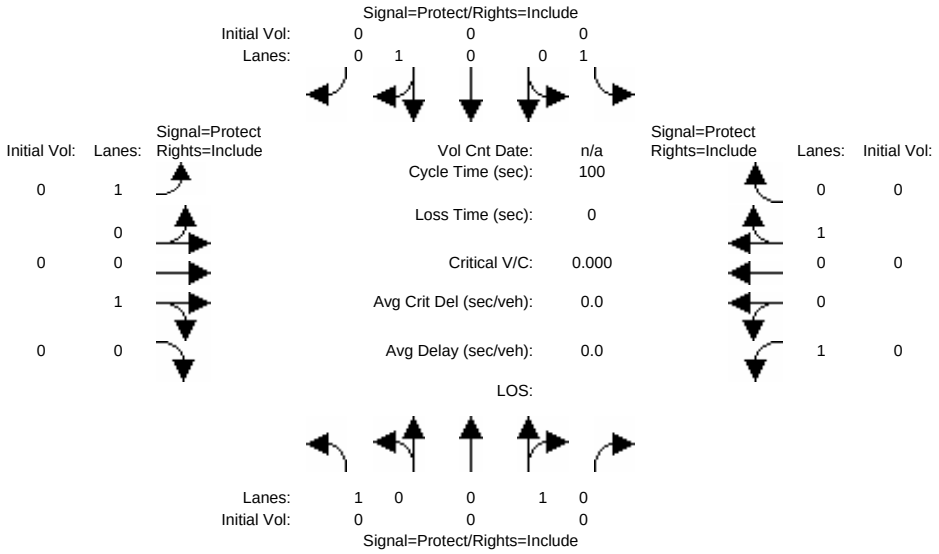
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP AM

Intersection #20: Delta Shores Circle/Street C




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0     0     0     0     0     0     0     0     0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:       0     0     0     0     0     0     0     0     0     0     0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:      0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            0                 0                 0                 0
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #20 Delta Shores Circle/Street C
```

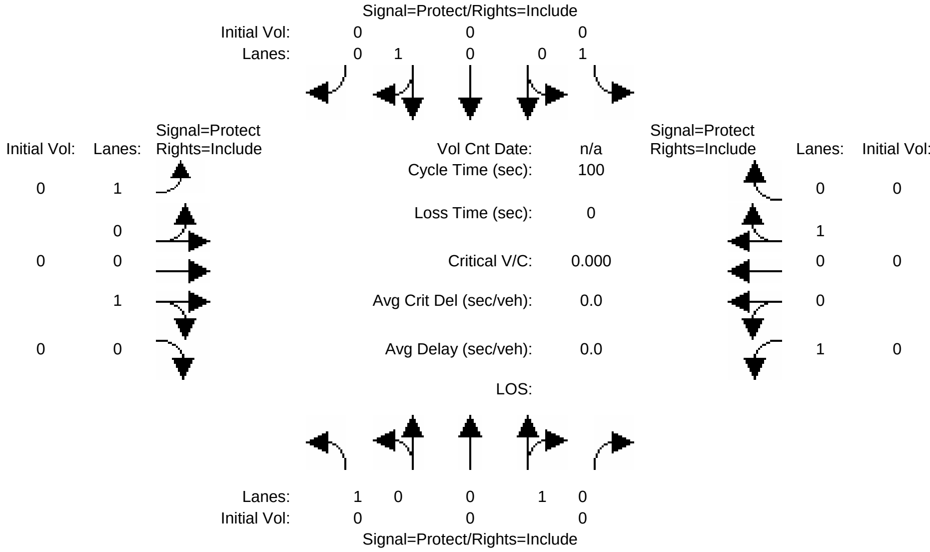


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #20 Delta Shores Circle/Street C
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #20 Delta Shores Circle/Street C
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP PM

Intersection #20: Delta Shores Circle/Street C



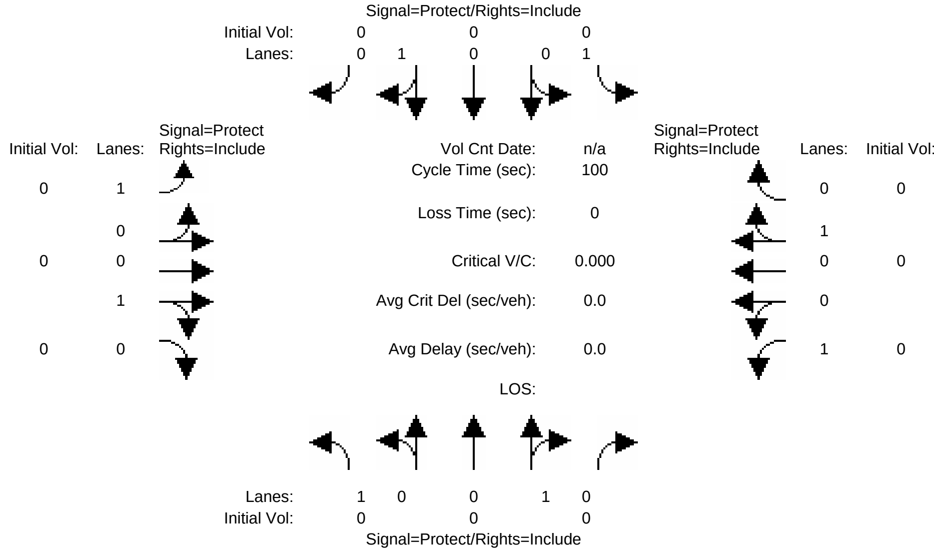

```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:    0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0    0    0     0    0    0     0    0    0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:   0    0     0    0    0     0    0    0     0    0    0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:    0    0     0    0    0     0    0    0     0    0    0     0
Reduct Vol:    0    0     0    0    0     0    0    0     0    0    0     0
Reduced Vol:   0    0     0    0    0     0    0    0     0    0    0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:    0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:      0    0     0    0    0     0    0    0     0    0    0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:    0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:     0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:    0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12   12   12    12   12   12    12   12   12    12
CrosswalkWid        8                8                8                8
% Hev Veh:          0                0                0                0
Grade:             0%               0%               0%               0%
Parking/Hr:        No               No               No               No
Bus Stp/Hr:         0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:        0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:         0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:    0    0     0    0    0     0    0    0     0    0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #20 Delta Shores Circle/Street C
```

```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #20 Delta Shores Circle/Street C
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #20 Delta Shores Circle/Street C
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP AM

Intersection #21: Delta Shores Circle/Street A




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:   0    0     0     0    0     0     0    0     0     0    0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:    0    0     0     0    0     0     0    0     0     0    0     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0    0     0     0    0     0     0    0     0     0    0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:      0    0     0     0    0     0     0    0     0     0    0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:     0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid        8                8                8                8
% Hev Veh:          0                0                0                0
Grade:             0%               0%               0%               0%
Parking/Hr:        No               No               No               No
Bus Stp/Hr:         0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:        0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:         0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #21 Delta Shores Circle/Street A
```

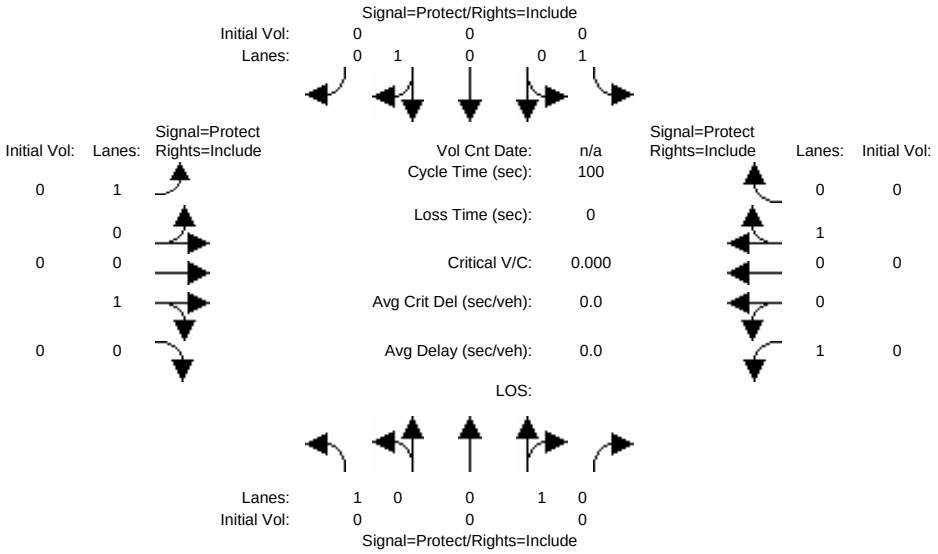


```
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #21 Delta Shores Circle/Street A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #21 Delta Shores Circle/Street A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP PM

Intersection #21: Delta Shores Circle/Street A



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Lane Group:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#LnsInGrps:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	0			0			0			0		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hev Veh Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bus Stp Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RT Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PedBike Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HCM Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No			> > > > > > > > > > > > > > >								
Signal Type:	< < < < < < < < < < < < < < <			Actuated			> > > > > > > > > > > > > > >					
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

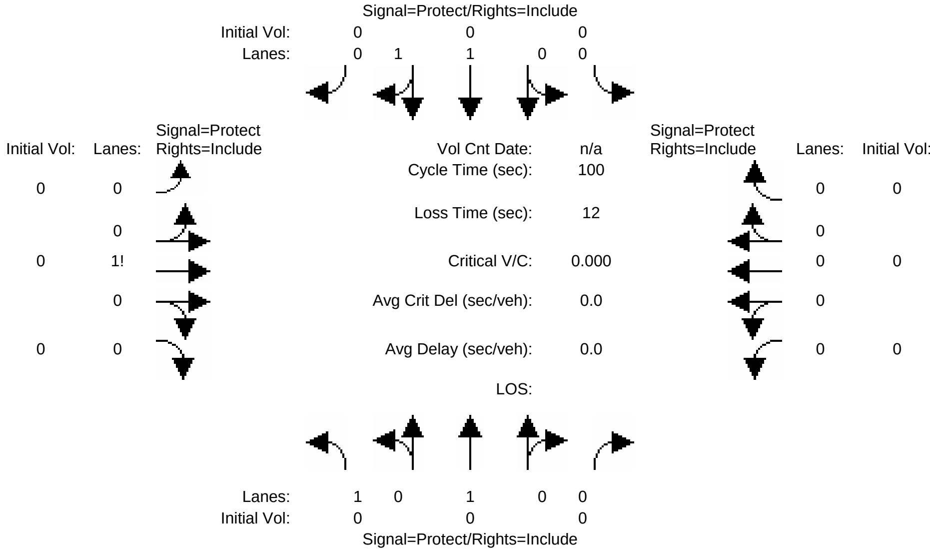
Intersection #21 Delta Shores Circle/Street A


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #21 Delta Shores Circle/Street A
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                 3                 3                 3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #21 Delta Shores Circle/Street A
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #22: Delta Shores Circle North/24th Street




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     0     0    0     0     0    0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0    0     0     0    0     0     0    0     0     0    0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0    0     0     0    0     0     0    0     0     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0     0    0     0     0    0     0     0    0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:     0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:       0    0     0     0    0     0     0    0     0     0    0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:     0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:      0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:     0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No    > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
```

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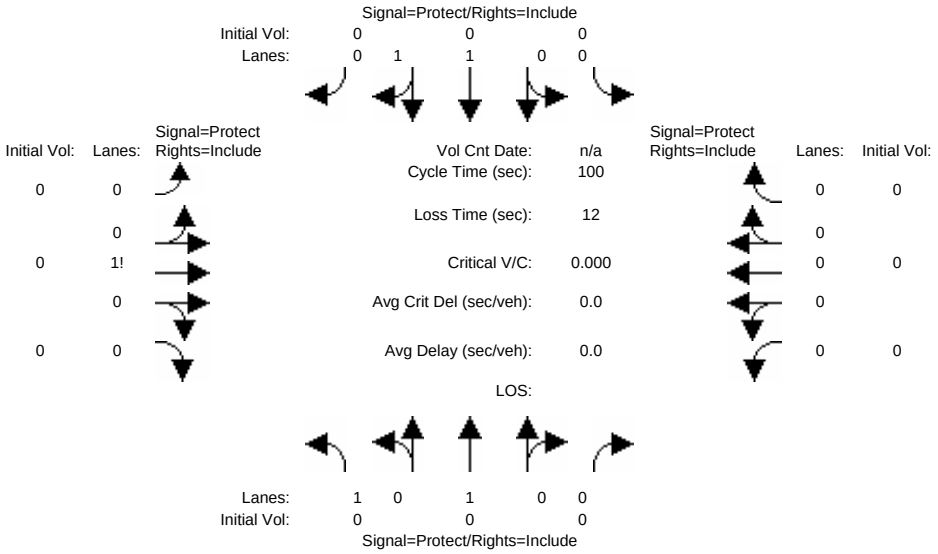
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP PM

Intersection #22: Delta Shores Circle North/24th Street




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0     0     0     0     0     0     0     0     0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:       0     0     0     0     0     0     0     0     0     0     0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:      0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:      Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
```

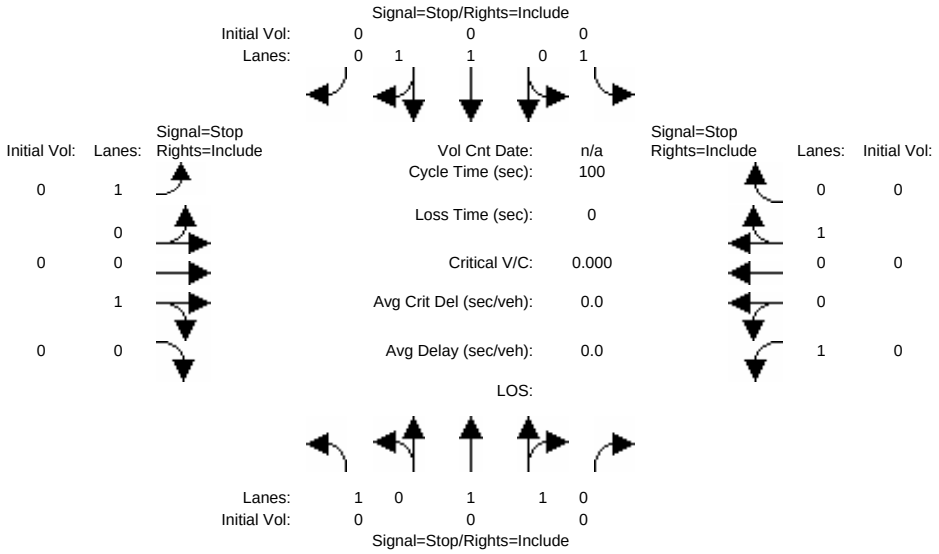


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (alternative)
Baseline NP AM

Intersection #23: Street C/ 24th Street



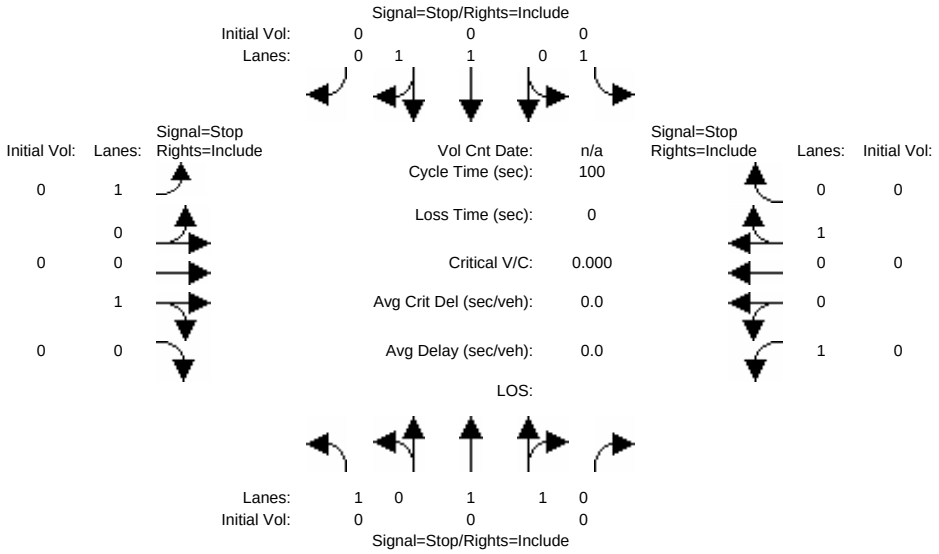

```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0     0     0     0     0     0     0     0     0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
ApproachDel:       0.0              0.0              0.0              0.0
Delay Adj:        0.00             0.00             0.00             0.00
ApprAdjDel:        0.0              0.0              0.0              0.0
LOS by Appr:
AllWayAvgQ:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
              Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #23 Street C/ 24th Street
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Lanes:       1  0  1  1  0    1  0  1  1  0    1  0  0  1  0    1  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:            0
Minor Approach Volume:          0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (alternative)
Baseline NP PM

Intersection #23: Street C/ 24th Street



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Volume Module:																
Base Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Growth Adj:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
Initial Bse:	0	0	0		0	0	0		0	0	0		0	0	0	
User Adj:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
PHF Adj:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
PHF Volume:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PCE Adj:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
MLF Adj:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
Final Vol.:	0	0	0		0	0	0		0	0	0		0	0	0	
Saturation Flow Module:																
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		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
Final Sat.:	0	0	0		0	0	0		0	0	0		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
Crit Moves:																
Delay/Veh:	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	
LOS by Move:																
ApproachDel:	0.0				0.0				0.0				0.0			
Delay Adj:	0.00				0.00				0.00				0.00			
ApprAdjDel:	0.0				0.0				0.0				0.0			
LOS by Appr:																
AllWayAvgQ:	0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #23 Street C/ 24th Street

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	0	1 0	1	0	0	1 0
Initial Vol:	0	0	0		0	0	0		0	0	0		0	0	0	

Major Street Volume: 0
Minor Approach Volume: 0
Minor Approach Volume Threshold: +Inf

SIGNAL WARRANT DISCLAIMER

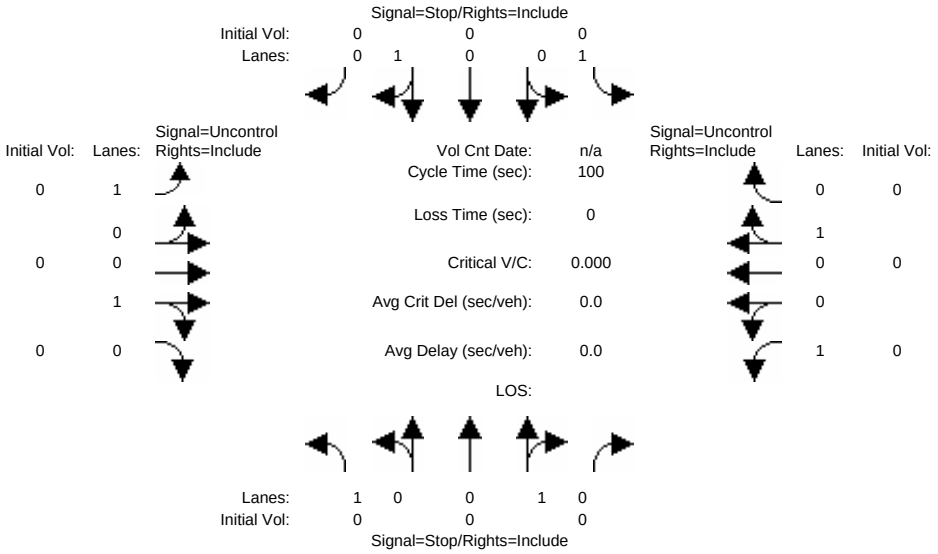
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Baseline NP AM

Intersection #24: Street A/Street C




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
FollowUpTim:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Potent Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
Move Cap.:      1     1     1     1     1     1     1     1     1     1     1     1
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Control Del:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
SharedQueue:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Shrd ConDel:  1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0
Shared LOS:
ApproachDel:       0.0              0.0              0.0              0.0
ApproachLOS:
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #24 Street A/Street C
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        1  0  0  1  0    1  0  0  1  0    1  0  0  1  0    1  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
ApproachDel:       0.0              0.0              0.0              0.0
------------|---------------||---------------||---------------||---------------|
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #24 Street A/Street C
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        1  0  0  1  0    1  0  0  1  0    1  0  0  1  0    1  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```

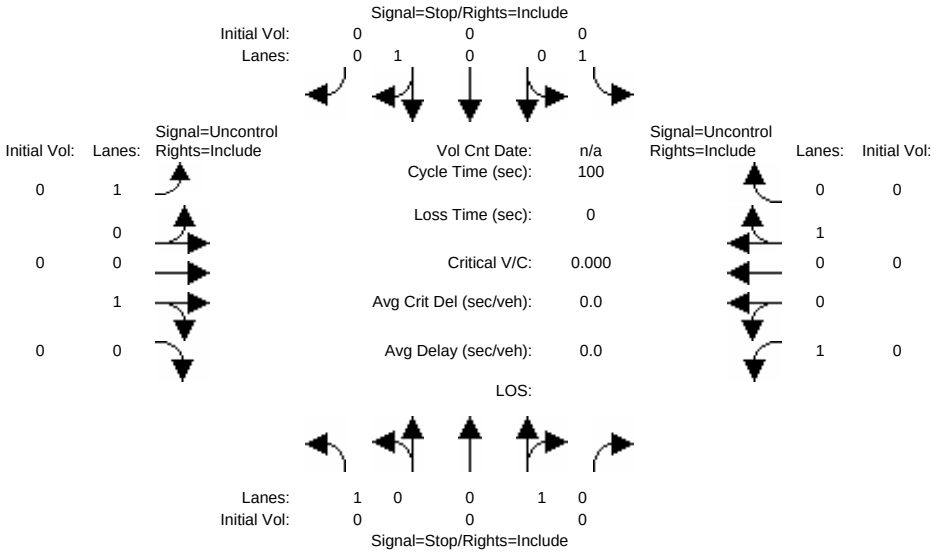

"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline NP PM

Intersection #24: Street A/Street C




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
FollowUpTim:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Potent Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
Move Cap.:      1     1     1     1     1     1     1     1     1     1     1     1
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Control Del:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
SharedQueue:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Shrd ConDel:  1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0
Shared LOS:
ApproachDel:       0.0              0.0              0.0              0.0
ApproachLOS:
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #24 Street A/Street C
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        1  0  0  1  0    1  0  0  1  0    1  0  0  1  0    1  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
ApproachDel:       0.0              0.0              0.0              0.0
------------|---------------||---------------||---------------||---------------|
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #24 Street A/Street C
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        1  0  0  1  0    1  0  0  1  0    1  0  0  1  0    1  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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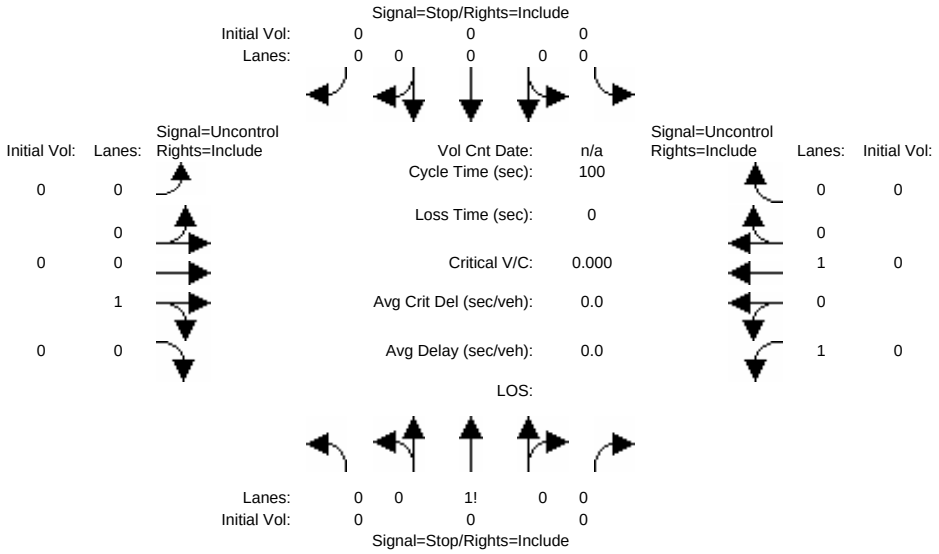
Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline NP AM

Intersection #25: Street C/Street B




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
FollowUpTim:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Potent Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
Move Cap.:      1     1     1     1     1     1     1     1     1     1     1     1
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Control Del:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
SharedQueue:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Shrd ConDel:  1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0
Shared LOS:
ApproachDel:       0.0              0.0              0.0              0.0
ApproachLOS:
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #25 Street C/Street B
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
ApproachDel:       0.0              0.0              0.0              0.0
------------|---------------||---------------||---------------||---------------|
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
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"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
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signal warrant (such as the 4-hour or 8-hour warrants).

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a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #25 Street C/Street B
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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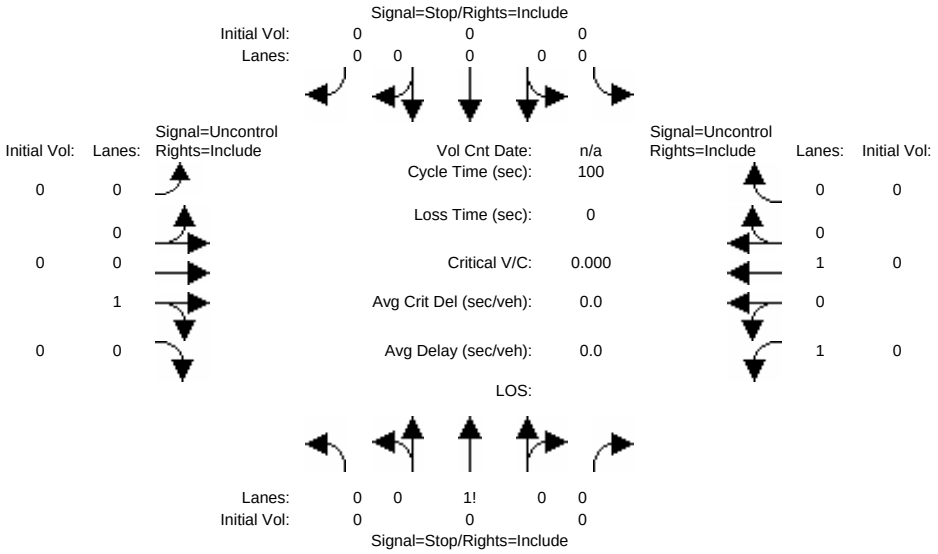
Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline NP PM

Intersection #25: Street C/Street B




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
FollowUpTim:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Potent Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
Move Cap.:      1     1     1     1     1     1     1     1     1     1     1     1
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Control Del:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
SharedQueue:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Shrd ConDel:  1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0
Shared LOS:
ApproachDel:       0.0              0.0              0.0              0.0
ApproachLOS:
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #25 Street C/Street B
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
ApproachDel:       0.0              0.0              0.0              0.0
------------|---------------||---------------||---------------||---------------|
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
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a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #25 Street C/Street B
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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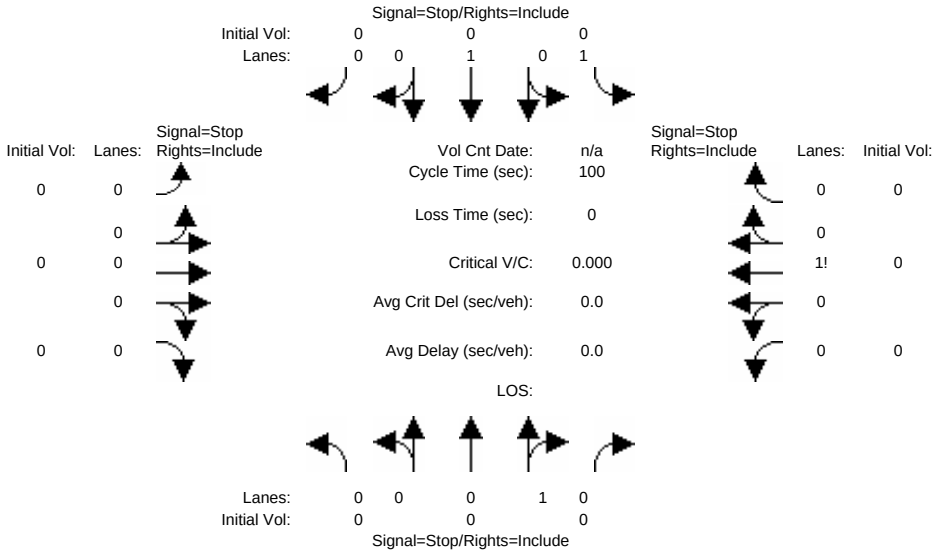
Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Baseline NP AM

Intersection #26: Street D/Street E



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
ApproachDel:	0.0			0.0			0.0			0.0		
Delay Adj:	0.00			0.00			0.00			0.00		
ApprAdjDel:	0.0			0.0			0.0			0.0		
LOS by Appr:												
AllWayAvgQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #26 Street D/Street E

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0	0	0 1 0	1	0	1 0 0	0	0	0 0 0	0	0	1! 0 0
Initial Vol:	0	0	0	0	0	0	0	0	0	0	0	0

Major Street Volume: 0
Minor Approach Volume: 0
Minor Approach Volume Threshold: +Inf

SIGNAL WARRANT DISCLAIMER
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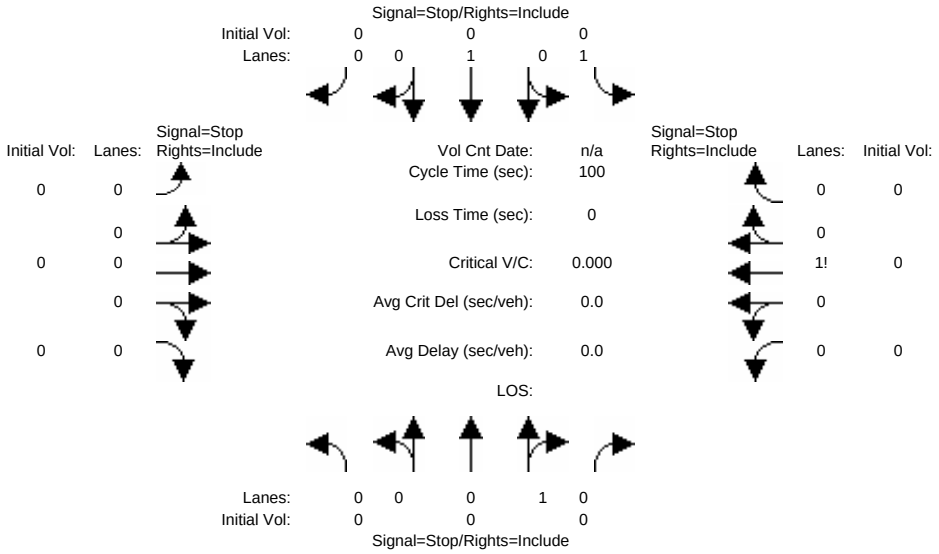
Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Baseline NP PM

Intersection #26: Street D/Street E



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
ApproachDel:	0.0			0.0			0.0			0.0		
Delay Adj:	0.00			0.00			0.00			0.00		
ApprAdjDel:	0.0			0.0			0.0			0.0		
LOS by Appr:												
AllWayAvgQ:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 Street D/Street E

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Lanes:	0	0	0	1	0	1	0	0	0	0	0	0
Initial Vol:	0	0	0	0	0	0	0	0	0	0	0	0

Major Street Volume: 0
Minor Approach Volume: 0
Minor Approach Volume Threshold: +Inf

SIGNAL WARRANT DISCLAIMER
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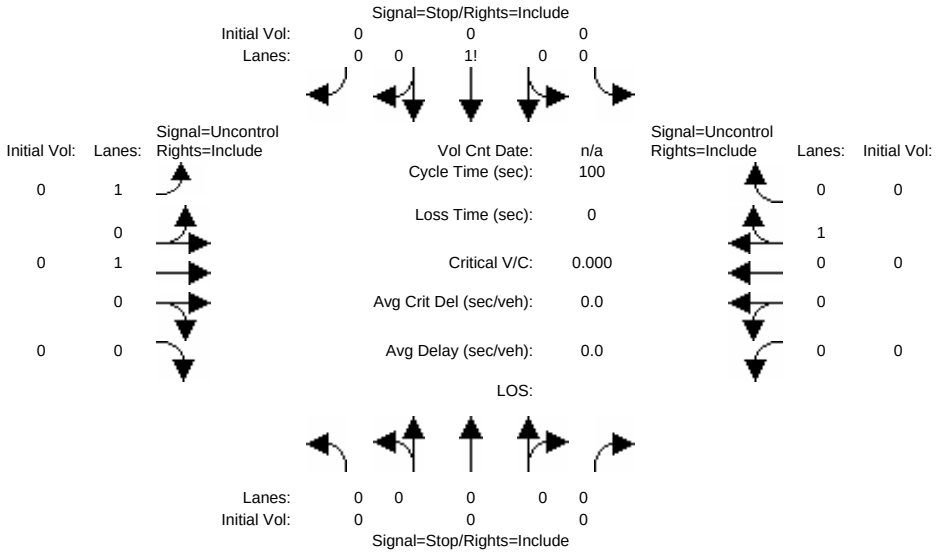
Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline NP AM

Intersection #27: Street E/Street G




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
FollowUpTim:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Potent Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
Move Cap.:      1     1     1     1     1     1     1     1     1     1     1     1
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Control Del:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
SharedQueue:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Shrd ConDel:  1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0
Shared LOS:
ApproachDel:       0.0              0.0              0.0              0.0
ApproachLOS:
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #27 Street E/Street G
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  1  0  0    0  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
ApproachDel:       0.0              0.0              0.0              0.0
------------|---------------||---------------||---------------||---------------|
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #27 Street E/Street G
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  1  0  0    0  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```

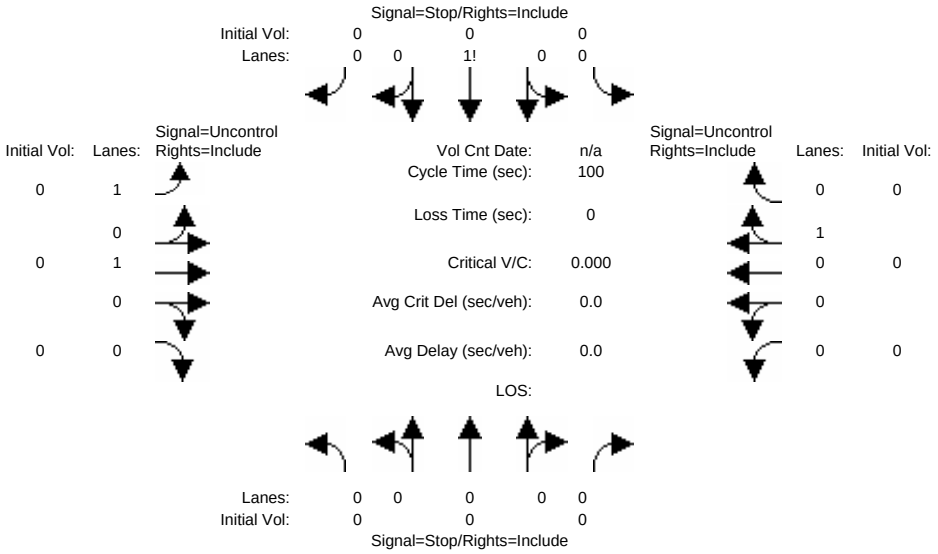
"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline NP PM

Intersection #27: Street E/Street G




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
FollowUpTim:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Potent Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
Move Cap.:      1     1     1     1     1     1     1     1     1     1     1     1
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Control Del:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
SharedQueue:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Shrd ConDel:  1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0
Shared LOS:
ApproachDel:       0.0              0.0              0.0              0.0
ApproachLOS:
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #27 Street E/Street G
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  1  0  0    0  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
ApproachDel:       0.0              0.0              0.0              0.0
------------|---------------||---------------||---------------||---------------|
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
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"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #27 Street E/Street G
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  1  0  0    0  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #28: Delta Shores Circle South/Street D South

Signal=Protect/Rights=Include
Initial Vol: 0 0 0
Lanes: 1 0 1 0 1

Initial Vol: Lanes: Signal=Protect Rights=Include
0 2
0
0 1
0
0 1

Vol Cnt Date: n/a
Cycle Time (sec): 100
Loss Time (sec): 16
Critical V/C: 0.000
Avg Crit Del (sec/veh): 0.0
Avg Delay (sec/veh): 0.0
LOS:

Signal=Protect Rights=Include Lanes: Initial Vol:
0 0
1
0 0
0
1 0

Lanes: 2 0 0 1 0
Initial Vol: 0 0 0
Signal=Protect/Rights=Include

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:   0    0     0     0    0     0     0    0     0     0    0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:    0    0     0     0    0     0     0    0     0     0    0     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0    0     0     0    0     0     0    0     0     0    0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:      0    0     0     0    0     0     0    0     0     0    0     0
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
HCM2kAvgQ:     0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Lane Group:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
#LnsInGrps:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid        8                8                8                8
% Hev Veh:          2                2                2                2
Grade:             0%               0%               0%               0%
Parking/Hr:        No               No               No               No
Bus Stp/Hr:         0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:        0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:         0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:    0    0     0     0    0     0     0    0     0     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Hev Veh Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Grade Adj:   0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Parking Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Bus Stp Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Area Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
RT Adj:      0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
LT Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PedBike Adj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
        Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #28 Delta Shores Circle South/Street D South
```

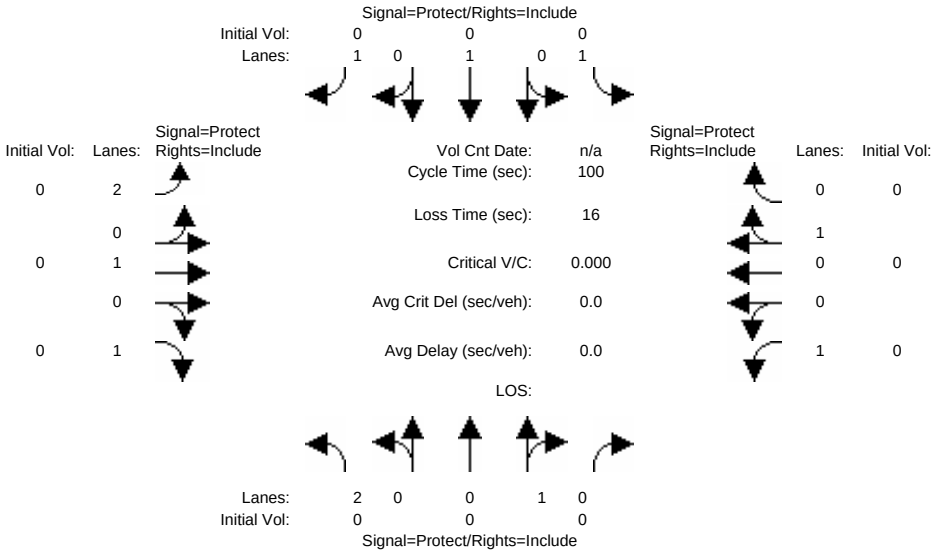


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #28 Delta Shores Circle South/Street D South
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #28 Delta Shores Circle South/Street D South
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP PM

Intersection #28: Delta Shores Circle South/Street D South



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Growth Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Initial Bse:	0	0	0	0	0	0	0	0	0	0	0	0
User Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PHF Volume:	0	0	0	0	0	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PCE Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MLF Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Vol.:	0	0	0	0	0	0	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	0	0	0	0	0	0	0	0	0	0	0	0
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	0	0	0	0	0	0	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:												
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:												
HCM2kAvgQ:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	1! 0	0	0	1! 0	0	0	1! 0	0	0	1! 0
Lane Group:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
#LnsInGrps:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	0	0	0	0	0	0	0	0	0	0	0	0
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hev Veh Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grade Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Parking Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bus Stp Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Area Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RT Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PedBike Adj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HCM Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

****

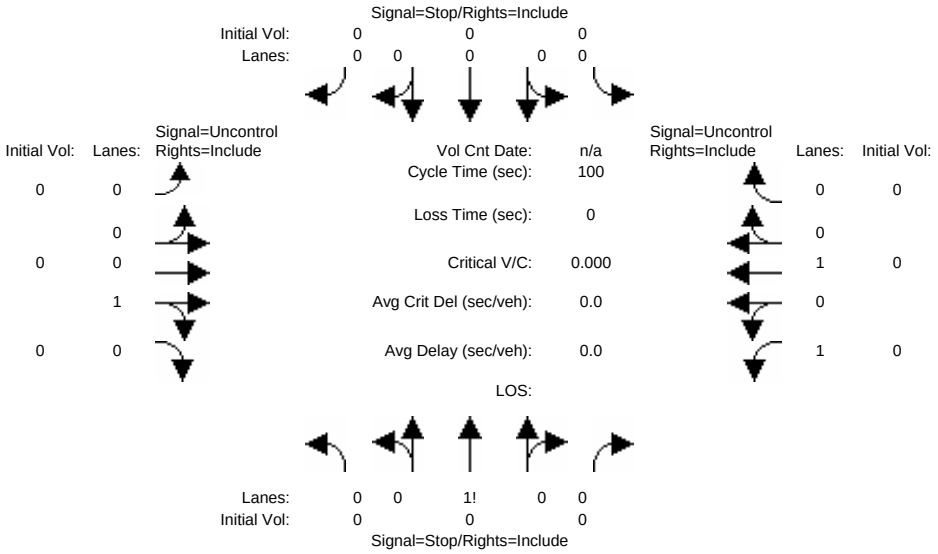
Intersection #28 Delta Shores Circle South/Street D South


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
CrsswalkWid:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
CrsswalkLen:  0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
MinPedGrn:    0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedGrn:       0.00     0.00    0.00     0.00    0.00     0.00    0.00     0.00
PedVol:          0        0       0        0       0        0       0        0
PedFlowRate:     0        0       0        0       0        0       0        0
BikeVol:         0        0       0        0       0        0       0        0
BikeFlwRate:     0        0       0        0       0        0       0        0
PedOcc:      0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
BikeOcc:     0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedAfterOcc: 0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
rOcc:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
TurnVehAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Prta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plt:         0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
Plta:        0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
PedBikeAdj:  0.000    0.000   0.000    0.000   0.000    0.000   0.000    0.000
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #28 Delta Shores Circle South/Street D South
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q1:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
                       Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #28 Delta Shores Circle South/Street D South
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:      0.000 pounds
                       0.000 gallons
Carbon Dioxide:        0.000 pounds
Carbon Monoxide:       0.000 pounds
Hydrocarbons:          0.000 pounds
Nitrogen Oxides:       0.000 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline NP AM

Intersection #29: Street C/Stone-Boswell Access West




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
FollowUpTim:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Potent Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
Move Cap.:      1     1     1     1     1     1     1     1     1     1     1     1
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Control Del:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
SharedQueue:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Shrd ConDel:  1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0
Shared LOS:
ApproachDel:       0.0              0.0              0.0              0.0
ApproachLOS:
```

```
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #29 Street C/Stone-Boswell Access West
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
ApproachDel:       0.0              0.0              0.0              0.0
------------|---------------||---------------||---------------||---------------|
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #29 Street C/Stone-Boswell Access West
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```

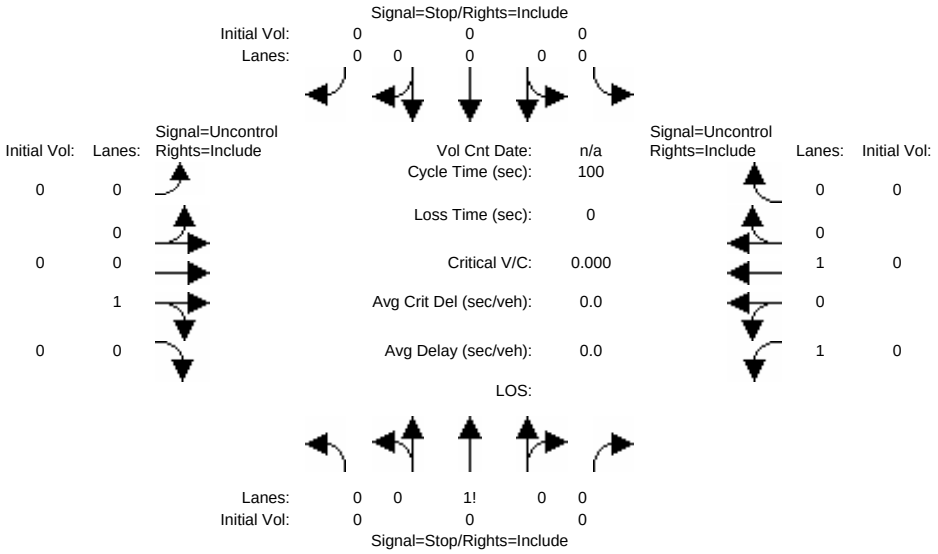

"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Baseline NP PM

Intersection #29: Street C/Stone-Boswell Access West




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
FollowUpTim:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Potent Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
Move Cap.:      1     1     1     1     1     1     1     1     1     1     1     1
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Control Del:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
SharedQueue:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Shrd ConDel:  1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0
Shared LOS:
ApproachDel:       0.0              0.0              0.0              0.0
ApproachLOS:
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #29 Street C/Stone-Boswell Access West
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
ApproachDel:       0.0              0.0              0.0              0.0
------------|---------------||---------------||---------------||---------------|
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #29 Street C/Stone-Boswell Access West
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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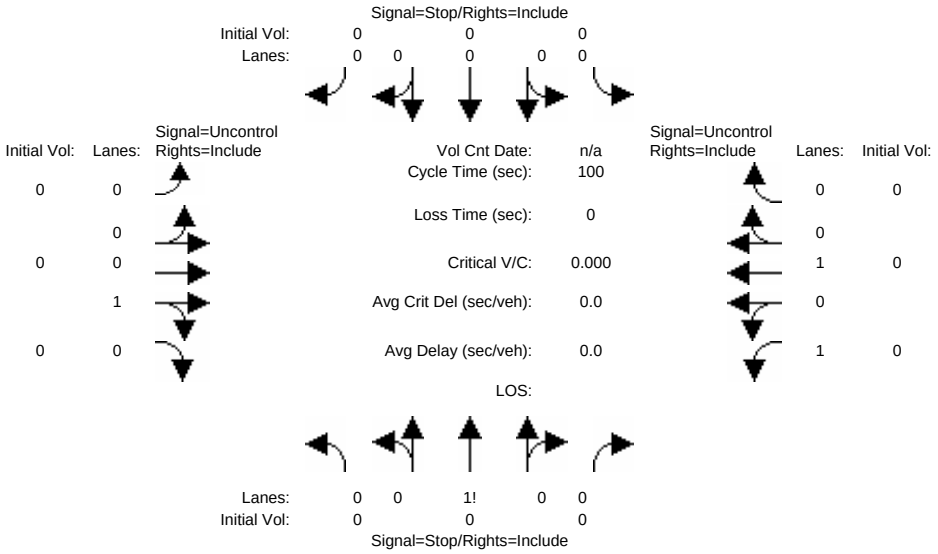
Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Baseline NP AM

Intersection #30: Street C/Stone-Boswell Access East




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
FollowUpTim:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Potent Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
Move Cap.:      1     1     1     1     1     1     1     1     1     1     1     1
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Control Del:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
SharedQueue:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Shrd ConDel:  1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0
Shared LOS:
ApproachDel:       0.0              0.0              0.0              0.0
ApproachLOS:
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #30 Street C/Stone-Boswell Access East
*******************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
ApproachDel:       0.0              0.0              0.0              0.0
------------|---------------||---------------||---------------||---------------|
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #30 Street C/Stone-Boswell Access East
*******************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```

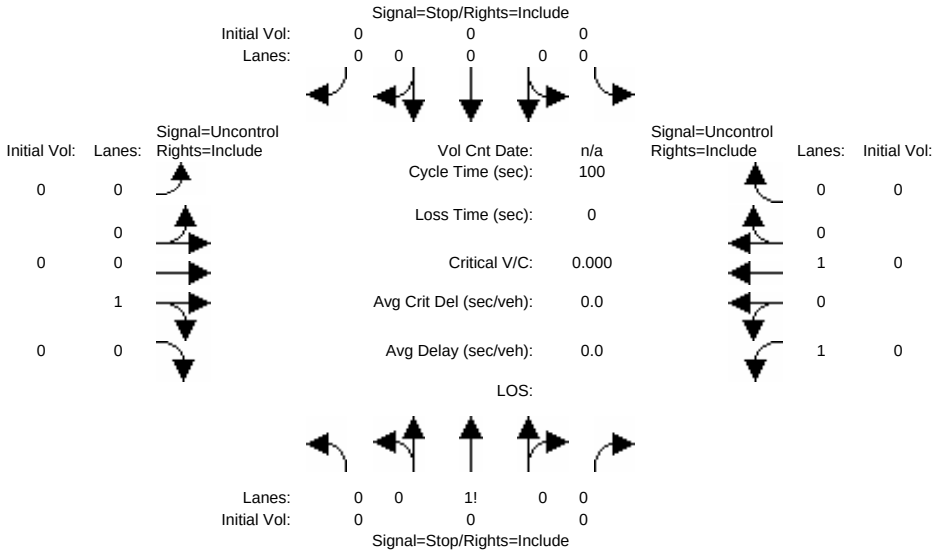

"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline NP PM

Intersection #30: Street C/Stone-Boswell Access East




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
FollowUpTim:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:    0     0     0     0     0     0     0     0     0     0     0     0
Potent Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
Move Cap.:      1     1     1     1     1     1     1     1     1     1     1     1
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Control Del:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.:    0     0     0     0     0     0     0     0     0     0     0     0
SharedQueue:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Shrd ConDel:  1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0   1.0  1.0   1.0
Shared LOS:
ApproachDel:       0.0              0.0              0.0              0.0
ApproachLOS:
```

```
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #30 Street C/Stone-Boswell Access East
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
ApproachDel:       0.0              0.0              0.0              0.0
------------|---------------||---------------||---------------||---------------|
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #30 Street C/Stone-Boswell Access East
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```

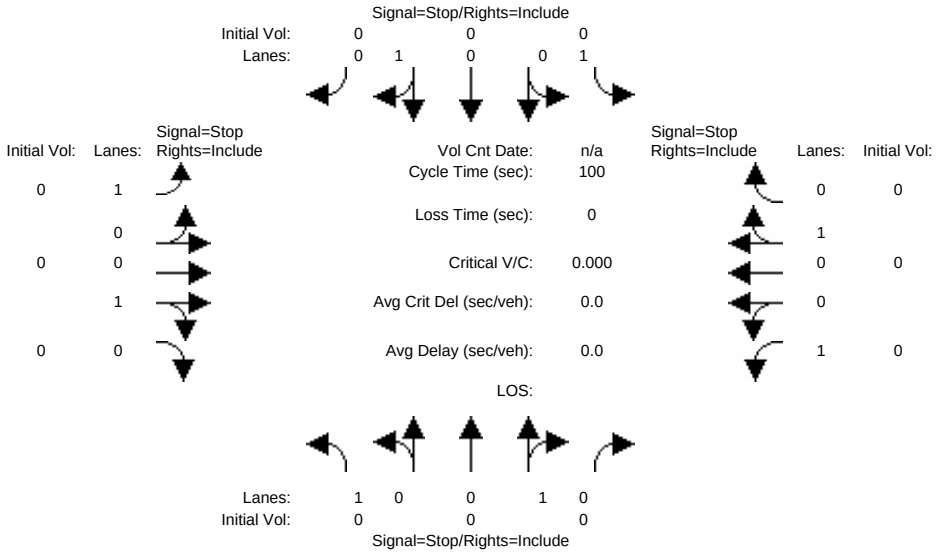
"indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Baseline NP AM

Intersection #31: Street C/Detroit Boulevard



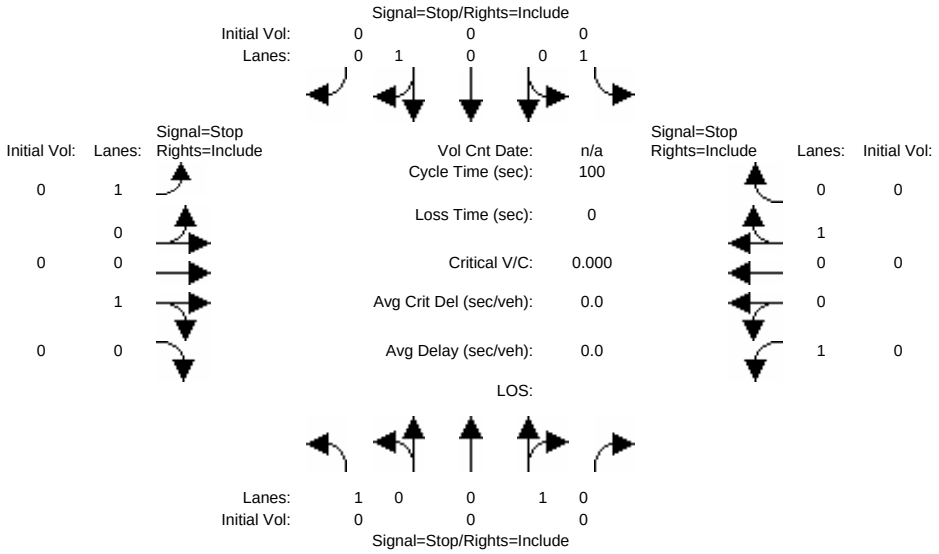

```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0     0     0     0     0     0     0     0     0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
ApproachDel:       0.0              0.0              0.0              0.0
Delay Adj:        0.00             0.00             0.00             0.00
ApprAdjDel:        0.0              0.0              0.0              0.0
LOS by Appr:
AllWayAvgQ:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
              Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #31 Street C/Detroit Boulevard
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Lanes:       1  0  0  1  0    1  0  0  1  0    1  0  0  1  0    1  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Baseline NP PM

Intersection #31: Street C/Detroit Boulevard



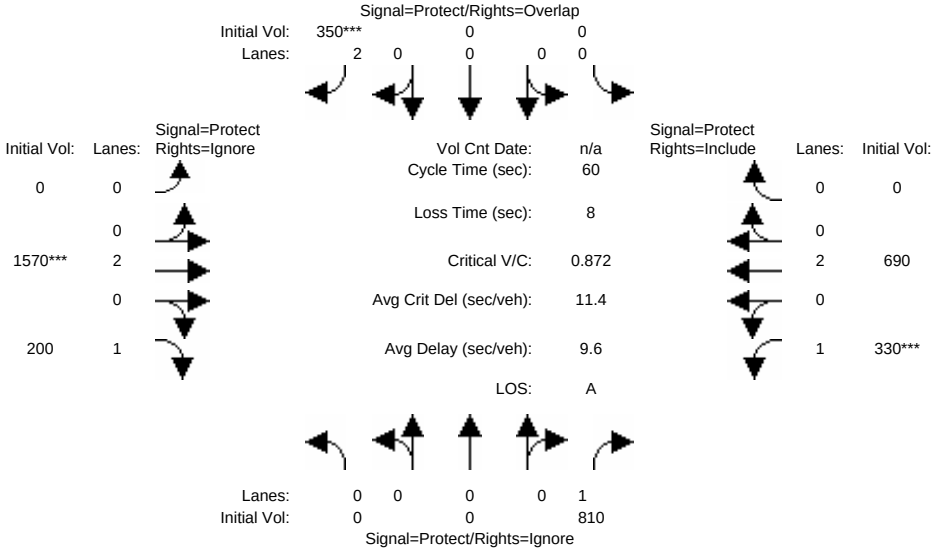

```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0     0     0     0     0     0     0     0     0     0
Growth Adj:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Initial Bse:    0     0     0     0     0     0     0     0     0     0     0     0
User Adj:    0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
PHF Volume:     0     0     0     0     0     0     0     0     0     0     0     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0     0     0     0     0     0     0     0     0     0
PCE Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
MLF Adj:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Vol.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
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  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Final Sat.:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
Crit Moves:
Delay/Veh:    0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
LOS by Move:
ApproachDel:       0.0              0.0              0.0              0.0
Delay Adj:        0.00             0.00             0.00             0.00
ApprAdjDel:        0.0              0.0              0.0              0.0
LOS by Appr:
AllWayAvgQ:   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
              Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #31 Street C/Detroit Boulevard
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign        Stop Sign        Stop Sign
Lanes:       1  0  0  1  0    1  0  0  1  0    1  0  0  1  0    1  0  0  1  0
Initial Vol:    0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             0
Minor Approach Volume:           0
Minor Approach Volume Threshold: +Inf
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP AM

Intersection #32:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     4     0   25     0     4   25     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0   810     0     0   350     0 1570   200   330  690     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   810     0     0   350     0 1570   200   330  690     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Volume:     0     0     0     0     0   350     0 1570     0   330  690     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:    0     0     0     0     0   350     0 1570     0   330  690     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
Final Vol.:     0     0     0     0     0   350     0 1570     0   330  690     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  1.00 1.00  0.73  1.00 0.93  1.00  0.93 0.93  1.00
Lanes:       0.00 0.00  1.00  0.00 0.00  2.00  0.00 2.00  1.00  1.00 2.00  0.00
Final Sat.:     0     0  1900     0     0  2786     0 3538  1900  1769 3538     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.13  0.00 0.44  0.00  0.19 0.20  0.00
Crit Moves:                                ****        ****        ****
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.74  0.00 0.58  0.00  0.78 0.28  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0  29.7   0.0  3.4   0.0  30.1  3.4   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0  29.7   0.0  3.4   0.0  30.1  3.4   0.0
LOS by Move:    A    A     A     A    A     C     A    A     A     C    A     A
HCM2kAvgQ:      0    0     0     0    0     5     0    7     0     8    3     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  1    0  0  0  0  2    0  0  2  0  1    1  0  2  0  0
Lane Group:  xxxx xxxx    R   xxxx xxxx    R   xxxx   T     R    L    T   xxxx
#LnsInGrps:     0    0     1     0    0     2     0    2     1    1    2     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  xxxx xxxx  0.98  xxxx 0.98 xxxxx  0.98 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx
Area Adj:    xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.83  1.00 0.98  1.00  0.93 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.88  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.73  1.00 0.93  1.00  0.93 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #32
```

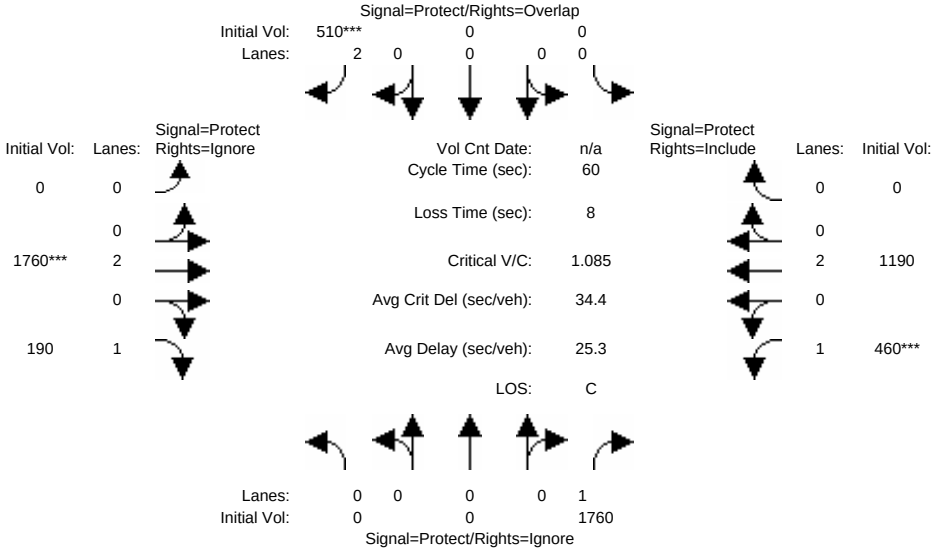


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.0  0.0   3.1   0.0  5.9   0.0   5.1  2.3   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   2.3   0.0  1.4   0.0   2.8  0.4   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   5.4   0.0  7.3   0.0   8.0  2.6   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.19  1.20 1.18  1.20  1.18 1.19  1.20
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   6.4   0.0  8.7   0.0   9.4  3.2   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.60 1.60  1.55  1.60 1.54  1.60  1.53 1.57  1.60
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   8.4   0.0 11.2   0.0  12.2  4.2   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.80 1.80  1.71  1.80 1.68  1.80  1.67 1.75  1.80
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   9.2   0.0 12.3   0.0  13.3  4.6   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.10 2.10  1.94  2.10 1.90  2.10  1.89 2.02  2.10
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  10.5   0.0 13.9   0.0  15.0  5.3   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.70 2.70  2.36  2.70 2.27  2.70  2.24 2.52  2.70
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  12.7   0.0 16.6   0.0  17.8  6.6   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #32
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0  83.1   0.0  169   0.0  77.1 64.3   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     54.013 pounds
                       8.750 gallons
Carbon Dioxide:      168.520 pounds
Carbon Monoxide:      12.005 pounds
Hydrocarbons:          1.821 pounds
Nitrogen Oxides:       0.552 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     49.002 pounds
                       7.938 gallons
Carbon Dioxide:      152.885 pounds
Carbon Monoxide:      11.620 pounds
Hydrocarbons:          1.741 pounds
Nitrogen Oxides:       0.481 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP PM

Intersection #32:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	4	0	25	0	4	25	0
Volume Module:												
Base Vol:	0	0	1760	0	0	510	0	1760	190	460	1190	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	1760	0	0	510	0	1760	190	460	1190	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	510	0	1760	0	460	1190	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	510	0	1760	0	460	1190	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Final Vol.:	0	0	0	0	0	510	0	1760	0	460	1190	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.73	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	1.00	0.00	0.00	2.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	1900	0	0	2786	0	3538	1900	1769	3538	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.50	0.00	0.26	0.34	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.76	0.00	0.24	0.70	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	1.08	0.00	0.65	0.00	1.08	0.48	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	88.5	0.0	4.0	0.0	90.8	4.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	88.5	0.0	4.0	0.0	90.8	4.2	0.0
LOS by Move:	A	A	A	A	A	F	A	A	A	F	A	A
HCM2kAvgQ:	0	0	0	0	0	12	0	9	0	18	6	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	1	0	0	0	0	2	0	0	2	0	1	1	0	2	0	0
Lane Group:	xxxx	xxxx	R	xxxx	xxxx	R	xxxx	T	R	L	T	xxxx
#LnsInGrps:	0	0	1	0	0	2	0	2	1	1	2	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.98	xxxx	0.98	xxxxx	0.98	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx
Area Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.83	1.00	0.98	1.00	0.93	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.73	1.00	0.93	1.00	0.93	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

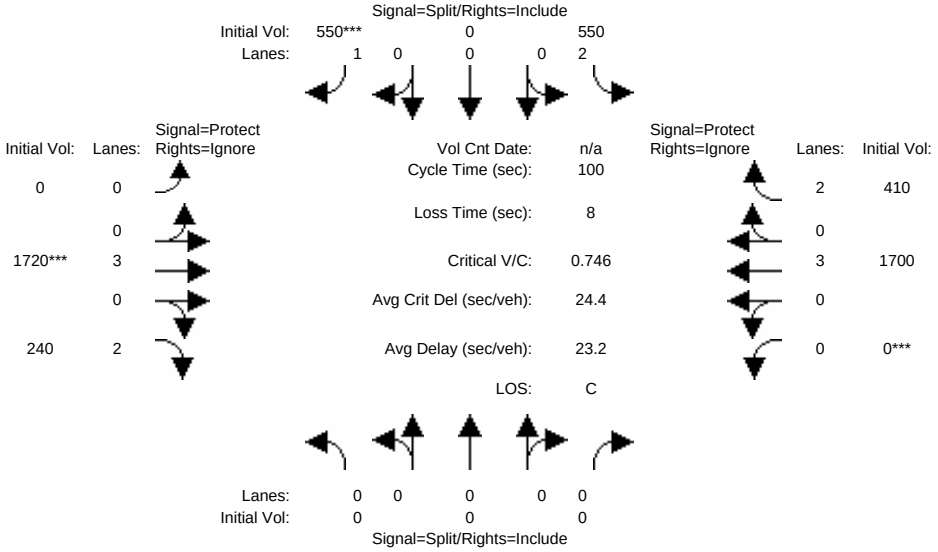
Intersection #32


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.0  0.0   4.8   0.0  7.4   0.0   7.7  4.7   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   7.5   0.0  1.8   0.0  10.1  0.9   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0  12.3   0.0  9.2   0.0  17.8  5.6   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.17  1.20 1.18  1.20  1.16 1.19  1.20
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  14.4   0.0 10.9   0.0  20.7  6.7   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.60 1.60  1.50  1.60 1.52  1.60  1.47 1.55  1.60
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  18.4   0.0 14.0   0.0  26.1  8.7   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.80 1.80  1.62  1.80 1.65  1.80  1.56 1.70  1.80
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  19.9   0.0 15.2   0.0  27.8  9.6   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.10 2.10  1.80  2.10 1.86  2.10  1.72 1.94  2.10
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  22.1   0.0 17.1   0.0  30.6 10.9   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.70 2.70  2.09  2.70 2.19  2.70  1.95 2.35  2.70
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  25.7   0.0 20.2   0.0  34.8 13.2   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #32
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0 129.5   0.0  210   0.0 118.1  134   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    115.217 pounds
                      18.665 gallons
Carbon Dioxide:      359.476 pounds
Carbon Monoxide:      28.260 pounds
Hydrocarbons:          5.222 pounds
Nitrogen Oxides:       0.969 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    108.409 pounds
                      17.562 gallons
Carbon Dioxide:      338.236 pounds
Carbon Monoxide:      27.734 pounds
Hydrocarbons:          5.114 pounds
Nitrogen Oxides:       0.871 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP AM

Intersection #33:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   550     0   550     0 1720   240     0 1700   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:    0     0     0   550     0   550     0 1720   240     0 1700   410
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:     0     0     0   550     0   550     0 1720     0     0 1700     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:    0     0     0   550     0   550     0 1720     0     0 1700     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:     0     0     0   550     0   550     0 1720     0     0 1700     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.90 1.00  0.83  1.00 0.89  0.88  1.00 0.89  0.88
Lanes:       0.00 0.00  0.00  2.00 0.00  1.00  0.00 3.00  2.00  0.00 3.00  2.00
Final Sat.:     0     0     0  3432     0  1583     0 5083  3344     0 5083  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.16 0.00  0.35  0.00 0.34  0.00  0.00 0.33  0.00
Crit Moves:                                ****        ****        ****
Green/Cycle: 0.00 0.00  0.00  0.47 0.00  0.47  0.00 0.45  0.00  0.00 0.45  0.00
Volume/Cap:  0.00 0.00  0.00  0.34 0.00  0.75  0.00 0.75  0.00  0.00 0.74  0.00
Delay/Veh:    0.0  0.0   0.0  17.1  0.0  26.0   0.0 23.9   0.0   0.0 23.7   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  17.1  0.0  26.0   0.0 23.9   0.0   0.0 23.7   0.0
LOS by Move:    A    A     A     B    A     C     A    C     A     A    C     A
HCM2kAvgQ:      0    0     0     6    0    15     0   17     0     0   17     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  0    2  0  0  0  1    0  0  3  0  2    0  0  3  0  2
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R   xxxx   T     R   xxxx   T     R
#LnsInGrps:     0     0     0     2     0     1     0    3     2     0    3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx  0.98  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  0.93 1.00  0.83  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  0.97 1.00  1.00  1.00 0.91  0.88  1.00 0.91  0.88
Fnl Sat Adj: 1.00 1.00  1.00  0.90 1.00  0.83  1.00 0.89  0.88  1.00 0.89  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #33
```

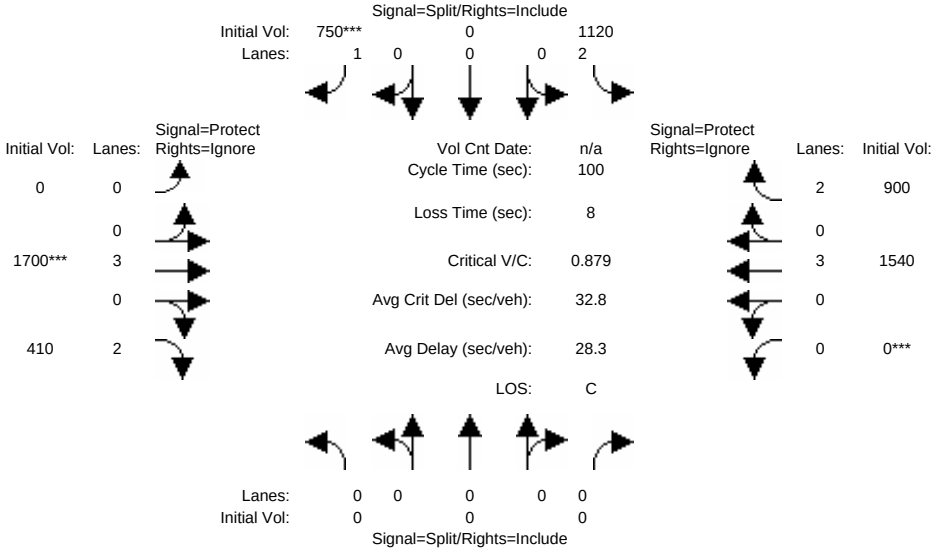


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.47 0.00  0.47  0.00 0.45  0.00  0.00 0.45  0.00
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   5.0  0.0  12.5   0.0 14.4   0.0   0.0 14.2   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.5  0.0   2.6   0.0  2.7   0.0   0.0  2.6   0.0
HCM2KQueue:   0.0  0.0   0.0   5.5  0.0  15.1   0.0 17.1   0.0   0.0 16.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.19 1.20  1.17  1.20 1.17  1.20  1.20 1.17  1.20
70th%HCM2kQ:  0.0  0.0   0.0   6.6  0.0  17.7   0.0 19.9   0.0   0.0 19.5   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.55 1.60  1.48  1.60 1.47  1.60  1.60 1.47  1.60
85th%HCM2kQ:  0.0  0.0   0.0   8.6  0.0  22.4   0.0 25.1   0.0   0.0 24.7   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.70 1.80  1.59  1.80 1.57  1.80  1.80 1.57  1.80
90th%HCM2kQ:  0.0  0.0   0.0   9.4  0.0  24.0   0.0 26.9   0.0   0.0 26.4   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.94 2.10  1.76  2.10 1.73  2.10  2.10 1.74  2.10
95th%HCM2kQ:  0.0  0.0   0.0  10.7  0.0  26.6   0.0 29.6   0.0   0.0 29.1   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.35 2.70  2.01  2.70 1.97  2.70  2.70 1.98  2.70
98th%HCM2kQ:  0.0  0.0   0.0  13.0  0.0  30.5   0.0 33.7   0.0   0.0 33.1   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #33
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  87.4  0.0 112.5   0.0  355   0.0   0.0  349   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    129.444 pounds
                      20.970 gallons
Carbon Dioxide:      403.864 pounds
Carbon Monoxide:      31.478 pounds
Hydrocarbons:          5.652 pounds
Nitrogen Oxides:       1.187 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    121.180 pounds
                      19.631 gallons
Carbon Dioxide:      378.080 pounds
Carbon Monoxide:      30.829 pounds
Hydrocarbons:          5.521 pounds
Nitrogen Oxides:       1.057 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline NP PM

Intersection #33:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0  1120     0   750     0 1700   410     0 1540   900
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  1120     0   750     0 1700   410     0 1540   900
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:     0     0     0  1120     0   750     0 1700     0     0 1540     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:    0     0     0  1120     0   750     0 1700     0     0 1540     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:     0     0     0  1120     0   750     0 1700     0     0 1540     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.90 1.00  0.83  1.00 0.89  0.88  1.00 0.89  0.88
Lanes:       0.00 0.00  0.00  2.00 0.00  1.00  0.00 3.00  2.00  0.00 3.00  2.00
Final Sat.:     0     0     0  3432     0  1583     0 5083  3344     0 5083  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.33 0.00  0.47  0.00 0.33  0.00  0.00 0.30  0.00
Crit Moves:                                ****        ****        ****
Green/Cycle: 0.00 0.00  0.00  0.54 0.00  0.54  0.00 0.38  0.00  0.00 0.38  0.00
Volume/Cap:  0.00 0.00  0.00  0.61 0.00  0.88  0.00 0.88  0.00  0.00 0.80  0.00
Delay/Veh:    0.0  0.0   0.0  16.3  0.0  30.5   0.0 33.8   0.0   0.0 29.9   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  16.3  0.0  30.5   0.0 33.8   0.0   0.0 29.9   0.0
LOS by Move:    A    A     A     B    A     C     A    C     A     A    C     A
HCM2kAvgQ:      0    0     0    12    0    23     0   21     0     0   17     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  0    2  0  0  0  1    0  0  3  0  2    0  0  3  0  2
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R   xxxx   T     R   xxxx   T     R
#LnsInGrps:     0     0     0     2     0     1     0    3     2     0    3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx  0.98  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  0.93 1.00  0.83  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  0.97 1.00  1.00  1.00 0.91  0.88  1.00 0.91  0.88
Fnl Sat Adj: 1.00 1.00  1.00  0.90 1.00  0.83  1.00 0.89  0.88  1.00 0.89  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #33
```

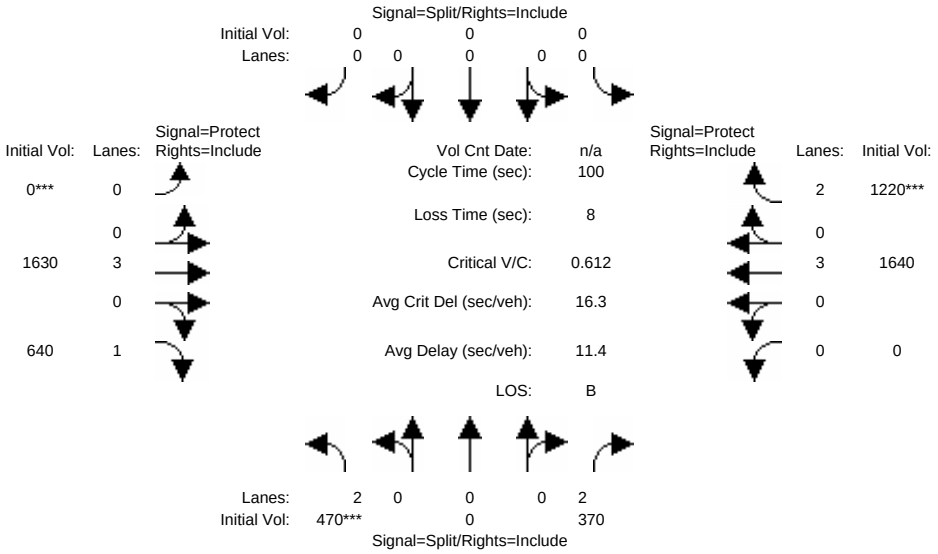


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.54 0.00  0.54  0.00 0.38  0.00  0.00 0.38  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0  11.0  0.0  18.2   0.0 16.1   0.0   0.0 13.9   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   1.5  0.0   5.2   0.0  5.0   0.0   0.0  3.3   0.0
HCM2KQueue:   0.0  0.0   0.0  12.5  0.0  23.4   0.0 21.1   0.0   0.0 17.2   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.17 1.20  1.16  1.20 1.16  1.20  1.20 1.17  1.20
70th%HCM2kQ:  0.0  0.0   0.0  14.6  0.0  27.1   0.0 24.4   0.0   0.0 20.1   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.50 1.60  1.44  1.60 1.45  1.60  1.60 1.47  1.60
85th%HCM2kQ:  0.0  0.0   0.0  18.7  0.0  33.7   0.0 30.5   0.0   0.0 25.3   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.61 1.80  1.52  1.80 1.54  1.80  1.80 1.57  1.80
90th%HCM2kQ:  0.0  0.0   0.0  20.1  0.0  35.7   0.0 32.4   0.0   0.0 27.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.80 2.10  1.66  2.10 1.69  2.10  2.10 1.73  2.10
95th%HCM2kQ:  0.0  0.0   0.0  22.4  0.0  38.9   0.0 35.5   0.0   0.0 29.8   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.08 2.70  1.87  2.70 1.90  2.70  2.70 1.97  2.70
98th%HCM2kQ:  0.0  0.0   0.0  25.9  0.0  43.7   0.0 40.0   0.0   0.0 33.9   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #33
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 191.5  0.0 164.2   0.0  395   0.0   0.0  342   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    165.043 pounds
                      26.737 gallons
Carbon Dioxide:      514.936 pounds
Carbon Monoxide:      40.865 pounds
Hydrocarbons:          7.572 pounds
Nitrogen Oxides:       1.460 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    155.566 pounds
                      25.202 gallons
Carbon Dioxide:      485.367 pounds
Carbon Monoxide:      40.118 pounds
Hydrocarbons:          7.422 pounds
Nitrogen Oxides:       1.308 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP AM

Intersection #34:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     470     0   370     0     0     0     0 1630   640     0 1640  1220
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:  470     0   370     0     0     0     0 1630   640     0 1640  1220
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:   470     0   370     0     0     0     0 1630   640     0 1640  1220
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:  470     0   370     0     0     0     0 1630   640     0 1640  1220
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
Final Vol.:   470     0   370     0     0     0     0 1630   640     0 1640  1220
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.75  1.00 1.00  1.00  1.00 0.91  0.85  1.00 0.91  0.75
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  2.00
Final Sat.:  3502    0  2842     0    0     0     0 5187  1615     0 5187  2842
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13 0.00  0.13  0.00 0.00  0.00  0.00 0.31  0.40  0.00 0.32  0.43
Crit Moves:  ****                                 ****                     ****
Green/Cycle: 0.22 0.00  0.22  0.00 0.00  0.00  0.00 0.70  0.70  0.00 0.70  0.70
Volume/Cap:  0.61 0.00  0.59  0.00 0.00  0.00  0.00 0.45  0.57  0.00 0.45  0.61
Delay/Veh:   36.7  0.0  36.6   0.0  0.0   0.0   0.0  6.6   8.1   0.0  6.6   8.4
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  36.7  0.0  36.6   0.0  0.0   0.0   0.0  6.6   8.1   0.0  6.6   8.4
LOS by Move:   D    A     D     A    A     A     A    A     A     A    A     A
HCM2kAvgQ:     8    0     7     0    0     0     0    8    10     0    8    12
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       2  0  0  0  2    0  0  0  0  0    0  0  3  0  1    0  0  3  0  2
Lane Group:    L  xxxx    R   xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:    2     0     2     0    0     0     0    3     1     0    3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
Hev Veh Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.95 1.00  0.85  1.00 1.00  1.00  1.00 1.00  0.85  1.00 1.00  0.85
Usr Sat Adj: 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 Sat Adj: 0.97 1.00  0.88  1.00 1.00  1.00  1.00 0.91  1.00  1.00 0.91  0.88
Fnl Sat Adj: 0.92 1.00  0.75  1.00 1.00  1.00  1.00 0.91  0.85  1.00 0.91  0.75
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  1.00  0.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #34
```

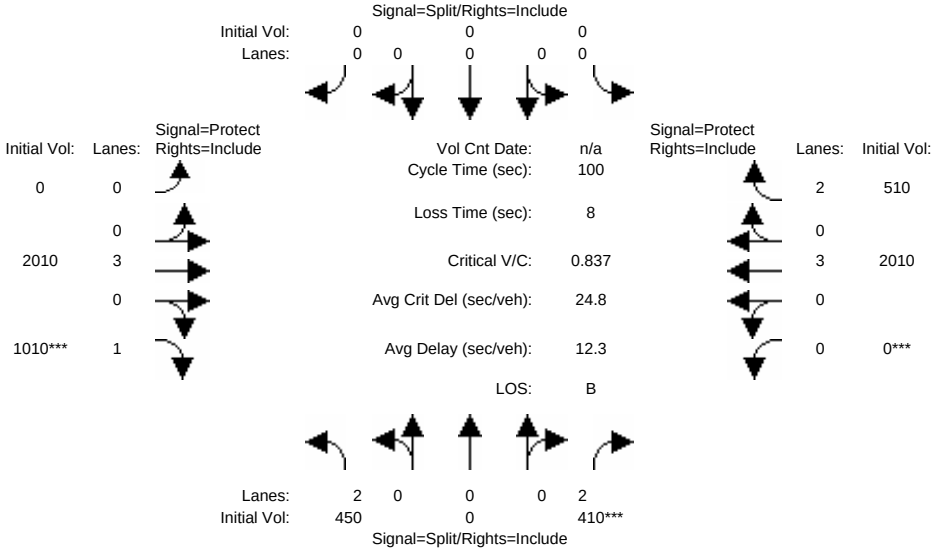


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.22 0.00  0.22  0.00 0.00  0.00  0.00 0.70  0.70  0.00 0.70  0.70
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.1  0.0   5.2   0.0  0.0   0.0   0.0  7.2   8.8   0.0  7.3  10.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  1.00  0.00 1.00  1.00
Q2:           1.5  0.0   1.4   0.0  0.0   0.0   0.0  0.8   1.3   0.0  0.8   1.5
HCM2KQueue:   7.5  0.0   6.6   0.0  0.0   0.0   0.0  8.0  10.1   0.0  8.1  11.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.18  1.20 1.20  1.20  1.20 1.18  1.18  1.20 1.18  1.17
70th%HCM2kQ:  8.9  0.0   7.8   0.0  0.0   0.0   0.0  9.5  11.9   0.0  9.6  13.7
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.60  1.54  1.60 1.60  1.60  1.60 1.53  1.51  1.60 1.53  1.50
85th%HCM2kQ: 11.6  0.0  10.2   0.0  0.0   0.0   0.0 12.3  15.3   0.0 12.4  17.5
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.67 1.80  1.69  1.80 1.80  1.80  1.80 1.67  1.64  1.80 1.67  1.62
90th%HCM2kQ: 12.6  0.0  11.1   0.0  0.0   0.0   0.0 13.4  16.6   0.0 13.5  18.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.89 2.10  1.92  2.10 2.10  2.10  2.10 1.88  1.84  2.10 1.88  1.81
95th%HCM2kQ: 14.3  0.0  12.6   0.0  0.0   0.0   0.0 15.1  18.6   0.0 15.3  21.1
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.26 2.70  2.30  2.70 2.70  2.70  2.70 2.24  2.16  2.70 2.24  2.11
98th%HCM2kQ: 17.0  0.0  15.2   0.0  0.0   0.0   0.0 18.0  21.8   0.0 18.1  24.5
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #34
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 106.0  0.0  83.0   0.0  0.0   0.0   0.0  178  79.3   0.0  179 159.9
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    116.932 pounds
                      18.943 gallons
Carbon Dioxide:      364.829 pounds
Carbon Monoxide:      26.452 pounds
Hydrocarbons:          4.184 pounds
Nitrogen Oxides:       1.150 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    106.783 pounds
                      17.299 gallons
Carbon Dioxide:      333.164 pounds
Carbon Monoxide:      25.671 pounds
Hydrocarbons:          4.022 pounds
Nitrogen Oxides:       1.007 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline NP PM

Intersection #34:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     450     0   410     0     0     0     0  2010  1010     0  2010   510
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:  450     0   410     0     0     0     0  2010  1010     0  2010   510
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:   450     0   410     0     0     0     0  2010  1010     0  2010   510
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  450     0   410     0     0     0     0  2010  1010     0  2010   510
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
Final Vol.:   450     0   410     0     0     0     0  2010  1010     0  2010   510
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.92  1.00  0.75  1.00  1.00  1.00  1.00  0.91  0.85  1.00  0.91  0.75
Lanes:       2.00  0.00  2.00  0.00  0.00  0.00  0.00  3.00  1.00  0.00  3.00  2.00
Final Sat.:  3502     0  2842     0     0     0     0  5187  1615     0  5187  2842
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.13  0.00  0.14  0.00  0.00  0.00  0.00  0.39  0.63  0.00  0.39  0.18
Crit Moves:              ****                                  ****  ****
Green/Cycle: 0.17  0.00  0.17  0.00  0.00  0.00  0.00  0.75  0.75  0.00  0.75  0.75
Volume/Cap:  0.75  0.00  0.84  0.00  0.00  0.00  0.00  0.52  0.84  0.00  0.52  0.24
Delay/Veh:   44.3   0.0  52.0   0.0   0.0   0.0   0.0   5.3  13.8   0.0   5.3   3.9
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  44.3   0.0  52.0   0.0   0.0   0.0   0.0   5.3  13.8   0.0   5.3   3.9
LOS by Move:    D     A     D     A     A     A     A     A     B     A     A     A
HCM2kAvgQ:      8     0    10     0     0     0     0     9    23     0     9     3
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        2  0  0  0  2    0  0  0  0  0    0  0  3  0  1    0  0  3  0  2
Lane Group:    L  xxxx    R   xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:     2     0     2     0     0     0     0     3     1     0     3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
Hev Veh Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00  1.00  xxxx 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.95  1.00  0.85  1.00 1.00  1.00  1.00 1.00  0.85  1.00 1.00  0.85
Usr Sat Adj: 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 Sat Adj: 0.97  1.00  0.88  1.00 1.00  1.00  1.00 0.91  1.00  1.00 0.91  0.88
Fnl Sat Adj: 0.92  1.00  0.75  1.00 1.00  1.00  1.00 0.91  0.85  1.00 0.91  0.75
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  1.00  0.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                           2000 HCM Operations Method
                             Base Volume Alternative
********************************************************************************
Intersection #34
```



```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.17 0.00  0.17  0.00 0.00  0.00  0.00 0.75  0.75  0.00 0.75  0.75
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.1  0.0   6.3   0.0  0.0   0.0   0.0  8.4  18.9   0.0  8.4   2.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  1.00  0.00 1.00  1.00
Q2:           2.4  0.0   3.3   0.0  0.0   0.0   0.0  1.1   4.4   0.0  1.1   0.3
HCM2KQueue:   8.5  0.0   9.5   0.0  0.0   0.0   0.0  9.5  23.3   0.0  9.5   2.8
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.18  1.20 1.20  1.20  1.20 1.18  1.16  1.20 1.18  1.19
70th%HCM2kQ: 10.0  0.0  11.2   0.0  0.0   0.0   0.0 11.2  26.9   0.0 11.2   3.3
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.60  1.52  1.60 1.60  1.60  1.60 1.52  1.44  1.60 1.52  1.57
85th%HCM2kQ: 12.9  0.0  14.4   0.0  0.0   0.0   0.0 14.4  33.4   0.0 14.4   4.4
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.66 1.80  1.65  1.80 1.80  1.80  1.80 1.65  1.53  1.80 1.65  1.75
90th%HCM2kQ: 14.1  0.0  15.7   0.0  0.0   0.0   0.0 15.7  35.5   0.0 15.7   4.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.87 2.10  1.85  2.10 2.10  2.10  2.10 1.85  1.66  2.10 1.85  2.01
95th%HCM2kQ: 15.9  0.0  17.6   0.0  0.0   0.0   0.0 17.6  38.7   0.0 17.6   5.6
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.22 2.70  2.18  2.70 2.70  2.70  2.70 2.18  1.87  2.70 2.18  2.51
98th%HCM2kQ: 18.8  0.0  20.7   0.0  0.0   0.0   0.0 20.7  43.4   0.0 20.7   7.0
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #34
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 106.8  0.0  99.1   0.0  0.0   0.0   0.0  207 170.1   0.0  207  39.2
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    129.196 pounds
                      20.930 gallons
Carbon Dioxide:      403.091 pounds
Carbon Monoxide:      29.458 pounds
Hydrocarbons:          4.746 pounds
Nitrogen Oxides:       1.246 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    118.339 pounds
                      19.171 gallons
Carbon Dioxide:      369.217 pounds
Carbon Monoxide:      28.624 pounds
Hydrocarbons:          4.572 pounds
Nitrogen Oxides:       1.095 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #1: Pocket Road/I-5 SB Ramps

Signal=Split/Rights=Ignore

Initial Vol: 150 0 420***

Lanes: 1 0 0 0 2

Initial Vol:	Lanes:	Signal=Protect Rights=Ignore			Signal=Protect Rights=Ignore	Lanes:	Initial Vol:
			Vol Cnt Date:	n/a			
			Cycle Time (sec):	100			
0	0					1	60
			Loss Time (sec):	8			
	0					0	
920***	2		Critical V/C:	0.416		2	680
	0		Avg Crit Del (sec/veh):	15.6		0	
440	1		Avg Delay (sec/veh):	13.3		0	0***
			LOS:	B			

Lanes: 0 0 0 0 0

Initial Vol: 0 0 0

Signal=Split/Rights=Include

```
Approach:      North Bound       South Bound       East Bound        West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:    0    0     0     0    7     0     0    7     0     0    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      0    0     0   420    0   150     0  920   440     0  680    60
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   420    0   150     0  920   440     0  680    60
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:    0    0     0   420    0     0     0  920     0     0  680     0
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0    0     0   420    0     0     0  920     0     0  680     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:    0    0     0   420    0     0     0  920     0     0  680     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.90 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
Lanes:       0.00 0.00  0.00  2.00 0.00  1.00  0.00 2.00  1.00  0.00 2.00  1.00
Final Sat.:    0    0     0  3432    0  1900     0 3538  1900     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.12 0.00  0.00  0.00 0.26  0.00  0.00 0.19  0.00
Crit Moves:                   ****                  ****        ****
Green/Cycle: 0.00 0.00  0.00  0.29 0.00  0.00  0.00 0.63  0.00  0.00 0.63  0.00
Volume/Cap:  0.00 0.00  0.00  0.42 0.00  0.00  0.00 0.42  0.00  0.00 0.31  0.00
Delay/Veh:    0.0  0.0   0.0  28.6  0.0   0.0   0.0  9.6   0.0   0.0  8.8   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  28.6  0.0   0.0   0.0  9.6   0.0   0.0  8.8   0.0
LOS by Move:   A    A     A     C    A     A     A    A     A     A    A     A
HCM2kAvgQ:     0    0     0     6    0     0     0    8     0     0    5     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  0  0  0    2  0  0  0  1    0  0  2  0  1    0  0  2  0  1
Lane Group:  xxxx xxxx  xxxx     L  xxxx    R  xxxx    T     R  xxxx    T     R
#LnsInGrps:    0    0     0     2    0     1     0    2     1     0    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid        8                 8                 8                 8
% Hev Veh:          2                 2                 2                 2
Grade:             0%                0%                0%                0%
Parking/Hr:        No                No                No                No
Bus Stp/Hr:         0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:        0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:         0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  0.93 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  0.97 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 1.00 1.00  1.00  0.90 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
********************************************************************************
```


Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Green/Cycle:	0.00	0.00	0.00		0.29	0.00	0.00		0.00	0.63	0.00		0.00	0.63	0.00	
ArrivalType:		3				3				3				3		
ProgFactor:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Q1:	0.0	0.0	0.0		4.8	0.0	0.0		0.0	6.8	0.0		0.0	4.6	0.0	
UpstreamVC:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
UpstreamAdj:	0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00		0.00	0.00	0.00	
EarlyArrAdj:	0.00	0.00	0.00		1.00	0.00	0.00		0.00	1.00	0.00		0.00	1.00	0.00	
Q2:	0.0	0.0	0.0		0.7	0.0	0.0		0.0	0.7	0.0		0.0	0.4	0.0	
HCM2KQueue:	0.0	0.0	0.0		5.5	0.0	0.0		0.0	7.5	0.0		0.0	5.0	0.0	
70th%Factor:	1.20	1.20	1.20		1.19	1.20	1.20		1.20	1.18	1.20		1.20	1.19	1.20	
70th%HCM2kQ:	0.0	0.0	0.0		6.6	0.0	0.0		0.0	8.9	0.0		0.0	6.0	0.0	
85th%Factor:	1.60	1.60	1.60		1.55	1.60	1.60		1.60	1.53	1.60		1.60	1.55	1.60	
85th%HCM2kQ:	0.0	0.0	0.0		8.6	0.0	0.0		0.0	11.5	0.0		0.0	7.8	0.0	
90th%Factor:	1.80	1.80	1.80		1.70	1.80	1.80		1.80	1.67	1.80		1.80	1.71	1.80	
90th%HCM2kQ:	0.0	0.0	0.0		9.4	0.0	0.0		0.0	12.6	0.0		0.0	8.6	0.0	
95th%Factor:	2.10	2.10	2.10		1.94	2.10	2.10		2.10	1.90	2.10		2.10	1.95	2.10	
95th%HCM2kQ:	0.0	0.0	0.0		10.7	0.0	0.0		0.0	14.2	0.0		0.0	9.9	0.0	
98th%Factor:	2.70	2.70	2.70		2.35	2.70	2.70		2.70	2.26	2.70		2.70	2.38	2.70	
98th%HCM2kQ:	0.0	0.0	0.0		13.0	0.0	0.0		0.0	17.0	0.0		0.0	12.0	0.0	

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #1 Pocket Road/I-5 SB Ramps

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Run Speed:	30 MPH				30 MPH				30 MPH				30 MPH			
NumOfStops:	0.0	0.0	0.0		84.4	0.0	0.0		0.0	116	0.0		0.0	78.8	0.0	

Name: year 1995 composite fleet
Fuel Consumption: 42.393 pounds
6.868 gallons
Carbon Dioxide: 132.265 pounds
Carbon Monoxide: 9.746 pounds
Hydrocarbons: 1.592 pounds
Nitrogen Oxides: 0.408 pounds

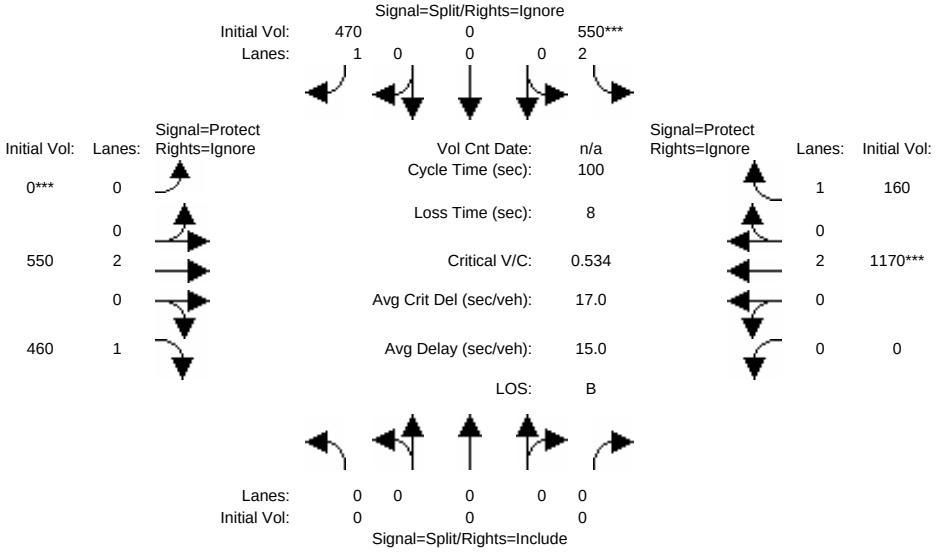
Name: year 2000 composite fleet
Fuel Consumption: 38.933 pounds
6.307 gallons
Carbon Dioxide: 121.470 pounds
Carbon Monoxide: 9.480 pounds
Hydrocarbons: 1.537 pounds
Nitrogen Oxides: 0.359 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Base Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP PM

Intersection #1: Pocket Road/I-5 SB Ramps




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     7     0     0     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   550     0   470     0   550   460     0  1170   160
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   550     0   470     0   550   460     0  1170   160
User Adj:    1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Volume:     0     0     0   550     0     0     0   550     0     0  1170     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0   550     0     0     0   550     0     0  1170     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00  1.00  1.00  0.00
Final Vol.:     0     0     0   550     0     0     0   550     0     0  1170     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.90  1.00  1.00  1.00  0.93  1.00  1.00  0.93  1.00
Lanes:       0.00  0.00  0.00  2.00  0.00  1.00  0.00  2.00  1.00  0.00  2.00  1.00
Final Sat.:     0     0     0  3432     0  1900     0  3538  1900     0  3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.16  0.00  0.00  0.00  0.16  0.00  0.00  0.33  0.00
Crit Moves:                     ****                  ****                  ****
Green/Cycle: 0.00  0.00  0.00  0.30  0.00  0.00  0.00  0.62  0.00  0.00  0.62  0.00
Volume/Cap:  0.00  0.00  0.00  0.53  0.00  0.00  0.00  0.25  0.00  0.00  0.53  0.00
Delay/Veh:    0.0   0.0   0.0  29.7   0.0   0.0   0.0   8.6   0.0   0.0  11.1   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0  29.7   0.0   0.0   0.0   8.6   0.0   0.0  11.1   0.0
LOS by Move:    A     A     A     C     A     A     A     A     A     A     B     A
HCM2kAvgQ:      0     0     0     8     0     0     0     4     0     0    11     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  0  0  0    2  0  0  0  1    0  0  2  0  1    0  0  2  0  1
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R   xxxx   T     R   xxxx   T     R
#LnsInGrps:     0     0     0     2     0     1     0     2     1     0     2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 1.00  1.00  1.00  0.93  1.00  1.00  1.00  0.98  1.00  1.00  0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  0.97  1.00  1.00  1.00  0.95  1.00  1.00  0.95  1.00
Fnl Sat Adj: 1.00  1.00  1.00  0.90  1.00  1.00  1.00  0.93  1.00  1.00  0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
```

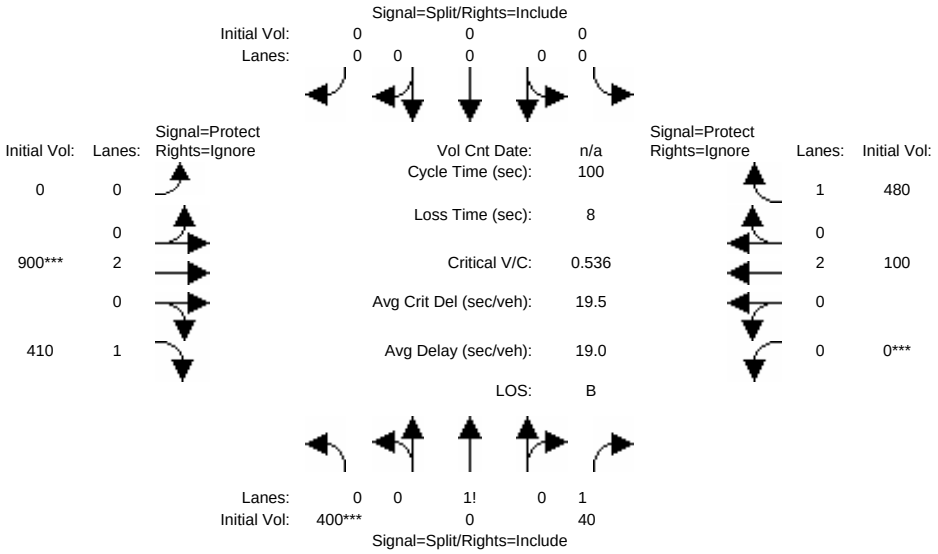


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.30 0.00  0.00  0.00 0.62  0.00  0.00 0.62  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   6.6  0.0   0.0   0.0  3.6   0.0   0.0  9.7   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   1.1  0.0   0.0   0.0  0.3   0.0   0.0  1.1   0.0
HCM2KQueue:   0.0  0.0   0.0   7.7  0.0   0.0   0.0  4.0   0.0   0.0 10.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.20  1.20 1.19  1.20  1.20 1.18  1.20
70th%HCM2kQ:  0.0  0.0   0.0   9.1  0.0   0.0   0.0  4.7   0.0   0.0 12.8   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.53 1.60  1.60  1.60 1.56  1.60  1.60 1.51  1.60
85th%HCM2kQ:  0.0  0.0   0.0  11.7  0.0   0.0   0.0  6.2   0.0   0.0 16.4   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.67 1.80  1.80  1.80 1.73  1.80  1.80 1.63  1.80
90th%HCM2kQ:  0.0  0.0   0.0  12.8  0.0   0.0   0.0  6.8   0.0   0.0 17.7   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.89 2.10  2.10  2.10 1.98  2.10  2.10 1.83  2.10
95th%HCM2kQ:  0.0  0.0   0.0  14.5  0.0   0.0   0.0  7.8   0.0   0.0 19.8   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.25 2.70  2.70  2.70 2.44  2.70  2.70 2.13  2.70
98th%HCM2kQ:  0.0  0.0   0.0  17.3  0.0   0.0   0.0  9.6   0.0   0.0 23.1   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 114.6  0.0   0.0   0.0 61.9   0.0   0.0  166   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     50.677 pounds
                       8.210 gallons
Carbon Dioxide:      158.113 pounds
Carbon Monoxide:      11.799 pounds
Hydrocarbons:          1.970 pounds
Nitrogen Oxides:       0.484 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     46.736 pounds
                       7.571 gallons
Carbon Dioxide:      145.815 pounds
Carbon Monoxide:      11.494 pounds
Hydrocarbons:          1.907 pounds
Nitrogen Oxides:       0.427 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #2: Meadowview Road/I-5 NB Ramps




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     7     0     0     0     0     0     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     400     0    40     0     0     0     0   900   410     0   100   480
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:  400     0    40     0     0     0     0   900   410     0   100   480
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   400     0    40     0     0     0     0   900     0     0   100     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  400     0    40     0     0     0     0   900     0     0   100     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   400     0    40     0     0     0     0   900     0     0   100     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.92  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
Lanes:       0.95 0.00  1.05  0.00 0.00  0.00  0.00 2.00  1.00  0.00 2.00  1.00
Final Sat.:  1673    0  1841     0    0     0     0 3538  1900     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.24 0.00  0.02  0.00 0.00  0.00  0.00 0.25  0.00  0.00 0.03  0.00
Crit Moves:  ****                                    ****        ****
Green/Cycle: 0.45 0.00  0.45  0.00 0.00  0.00  0.00 0.47  0.00  0.00 0.47  0.00
Volume/Cap:  0.54 0.00  0.05  0.00 0.00  0.00  0.00 0.54  0.00  0.00 0.06  0.00
Delay/Veh:   20.9  0.0  15.7   0.0  0.0   0.0   0.0 18.9   0.0   0.0 14.2   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  20.9  0.0  15.7   0.0  0.0   0.0   0.0 18.9   0.0   0.0 14.2   0.0
LOS by Move:   C    A     B     A    A     A     A    B     A     A    B     A
HCM2kAvgQ:    10    0     1     0    0     0     0   10     0     0    1     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  1    0  0  0  0  0    0  0  2  0  1    0  0  2  0  1
Lane Group:   LTR  LTR   LTR  xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:     1    1     2     0    0     0     0    2     1     0    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     4 xxxx     4  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      0.99 xxxx  0.99  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.96 xxxx  0.96  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.92 1.00  0.92  1.00 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 0.92 1.00  0.92  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
```

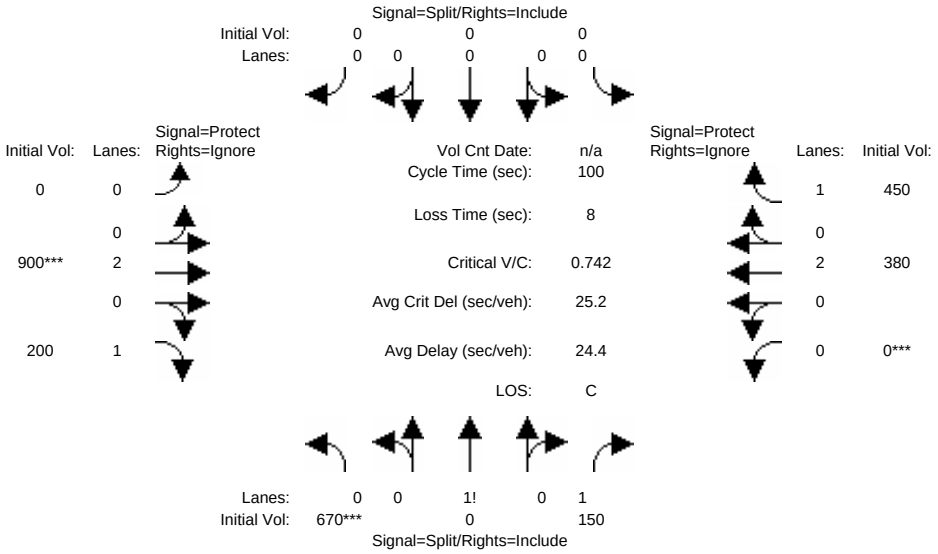


```
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.45 0.00  0.45  0.00 0.00  0.00  0.00 0.47  0.00  0.00 0.47  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           8.5  0.0   0.6   0.0  0.0   0.0   0.0  9.3   0.0   0.0  0.8   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           1.1  0.0   0.1   0.0  0.0   0.0   0.0  1.1   0.0   0.0  0.1   0.0
HCM2KQueue:   9.6  0.0   0.7   0.0  0.0   0.0   0.0 10.4   0.0   0.0  0.9   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.20  1.20 1.20  1.20  1.20 1.18  1.20  1.20 1.20  1.20
70th%HCM2kQ: 11.3  0.0   0.8   0.0  0.0   0.0   0.0 12.3   0.0   0.0  1.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.60  1.59  1.60 1.60  1.60  1.60 1.51  1.60  1.60 1.59  1.60
85th%HCM2kQ: 14.6  0.0   1.0   0.0  0.0   0.0   0.0 15.7   0.0   0.0  1.4   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.65 1.80  1.79  1.80 1.80  1.80  1.80 1.64  1.80  1.80 1.78  1.80
90th%HCM2kQ: 15.9  0.0   1.2   0.0  0.0   0.0   0.0 17.0   0.0   0.0  1.5   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.85 2.10  2.08  2.10 2.10  2.10  2.10 1.84  2.10  2.10 2.07  2.10
95th%HCM2kQ: 17.8  0.0   1.4   0.0  0.0   0.0   0.0 19.1   0.0   0.0  1.8   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.18 2.70  2.65  2.70 2.70  2.70  2.70 2.15  2.70  2.70 2.64  2.70
98th%HCM2kQ: 21.0  0.0   1.7   0.0  0.0   0.0   0.0 22.4   0.0   0.0  2.3   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  72.8  0.0   5.7   0.0  0.0   0.0   0.0  159   0.0   0.0 13.5   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     36.577 pounds
                       5.926 gallons
Carbon Dioxide:      114.121 pounds
Carbon Monoxide:       8.725 pounds
Hydrocarbons:          1.519 pounds
Nitrogen Oxides:       0.341 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     34.014 pounds
                       5.510 gallons
Carbon Dioxide:      106.125 pounds
Carbon Monoxide:       8.525 pounds
Hydrocarbons:          1.478 pounds
Nitrogen Oxides:       0.303 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP PM

Intersection #2: Meadowview Road/I-5 NB Ramps




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     7     0     0     0     0     0     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     670     0   150     0     0     0     0   900   200     0   380   450
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:  670     0   150     0     0     0     0   900   200     0   380   450
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Volume:   670     0   150     0     0     0     0   900     0     0   380     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  670     0   150     0     0     0     0   900     0     0   380     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
Final Vol.:   670     0   150     0     0     0     0   900     0     0   380     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.92  1.00  0.92  1.00  1.00  1.00  1.00  0.93  1.00  1.00  0.93  1.00
Lanes:       0.90  0.00  1.10  0.00  0.00  0.00  0.00  2.00  1.00  0.00  2.00  1.00
Final Sat.:  1566     0  1916     0     0     0     0  3538  1900     0  3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.43  0.00  0.08  0.00  0.00  0.00  0.00  0.25  0.00  0.00  0.11  0.00
Crit Moves:  ****                                     ****        ****
Green/Cycle: 0.58  0.00  0.58  0.00  0.00  0.00  0.00  0.34  0.00  0.00  0.34  0.00
Volume/Cap:  0.74  0.00  0.14  0.00  0.00  0.00  0.00  0.74  0.00  0.00  0.31  0.00
Delay/Veh:   18.4   0.0   9.7   0.0   0.0   0.0   0.0  31.4   0.0   0.0  24.3   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  18.4   0.0   9.7   0.0   0.0   0.0   0.0  31.4   0.0   0.0  24.3   0.0
LOS by Move:    B     A     A     A     A     A     A     C     A     A     C     A
HCM2kAvgQ:     18     0     2     0     0     0     0    14     0     0     5     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  1    0  0  0  0  0    0  0  2  0  1    0  0  2  0  1
Lane Group:   LTR  LTR   LTR  xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:     1    1     2     0     0     0     0    2     1     0    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid          8                8                8                8
% Hev Veh:            2                2                2                2
Grade:               0%               0%               0%               0%
Parking/Hr:          No               No               No               No
Bus Stp/Hr:           0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:           0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     4 xxxx     4  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      0.97 xxxx  0.97  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.96 xxxx  0.96  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.92  1.00  0.92  1.00 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 0.92  1.00  0.92  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
```

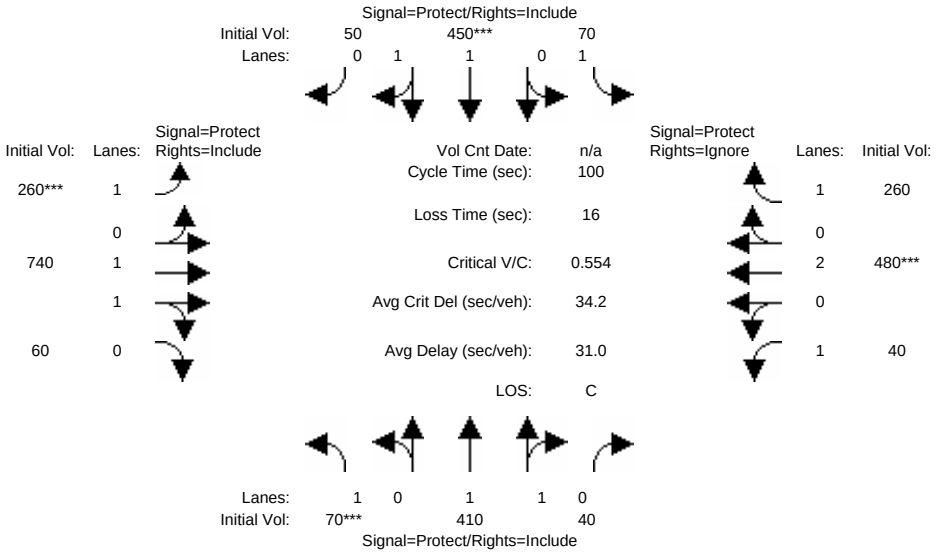


```
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.58 0.00  0.58  0.00 0.00  0.00  0.00 0.34  0.00  0.00 0.34  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:         15.3  0.0   1.7   0.0  0.0   0.0   0.0 11.6   0.0   0.0  4.1   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           2.7  0.0   0.2   0.0  0.0   0.0   0.0  2.6   0.0   0.0  0.5   0.0
HCM2KQueue:  18.0  0.0   1.9   0.0  0.0   0.0   0.0 14.1   0.0   0.0  4.5   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.16 1.20  1.20  1.20 1.20  1.20  1.20 1.17  1.20  1.20 1.19  1.20
70th%HCM2kQ: 20.9  0.0   2.3   0.0  0.0   0.0   0.0 16.6   0.0   0.0  5.4   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.46 1.60  1.58  1.60 1.60  1.60  1.60 1.49  1.60  1.60 1.56  1.60
85th%HCM2kQ: 26.3  0.0   3.0   0.0  0.0   0.0   0.0 21.0   0.0   0.0  7.1   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.56 1.80  1.76  1.80 1.80  1.80  1.80 1.60  1.80  1.80 1.72  1.80
90th%HCM2kQ: 28.1  0.0   3.3   0.0  0.0   0.0   0.0 22.6   0.0   0.0  7.8   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.72 2.10  2.04  2.10 2.10  2.10  2.10 1.77  2.10  2.10 1.97  2.10
95th%HCM2kQ: 30.9  0.0   3.9   0.0  0.0   0.0   0.0 25.1   0.0   0.0  8.9   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 1.95 2.70  2.56  2.70 2.70  2.70  2.70 2.04  2.70  2.70 2.41  2.70
98th%HCM2kQ: 35.0  0.0   4.9   0.0  0.0   0.0   0.0 28.8   0.0   0.0 10.9   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 123.9  0.0  17.2   0.0  0.0   0.0   0.0  198   0.0   0.0 69.9   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     61.711 pounds
                       9.997 gallons
Carbon Dioxide:      192.537 pounds
Carbon Monoxide:      15.078 pounds
Hydrocarbons:          2.736 pounds
Nitrogen Oxides:       0.555 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     57.891 pounds
                       9.378 gallons
Carbon Dioxide:      180.620 pounds
Carbon Monoxide:      14.779 pounds
Hydrocarbons:          2.676 pounds
Nitrogen Oxides:       0.495 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP AM

Intersection #3: Meadowview Road/Freeport Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	70	410	40	70	450	50	260	740	60	40	480	260
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:	70	410	40	70	450	50	260	740	60	40	480	260
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	70	410	40	70	450	50	260	740	60	40	480	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	410	40	70	450	50	260	740	60	40	480	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	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Vol.:	70	410	40	70	450	50	260	740	60	40	480	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.92	0.93	0.92	0.92	0.93	0.92	0.92	0.93	0.93	1.00
Lanes:	1.00	1.82	0.18	1.00	1.80	0.20	1.00	1.85	0.15	1.00	2.00	1.00
Final Sat.:	1769	3181	310	1769	3136	348	1769	3236	262	1769	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.13	0.04	0.14	0.14	0.15	0.23	0.23	0.02	0.14	0.00
Crit Moves:	****				****		****				****	
Green/Cycle:	0.07	0.24	0.24	0.09	0.26	0.26	0.27	0.42	0.42	0.09	0.24	0.00
Volume/Cap:	0.55	0.54	0.54	0.43	0.55	0.55	0.55	0.55	0.55	0.25	0.55	0.00
Delay/Veh:	50.2	34.1	34.1	44.7	32.8	32.8	33.1	22.4	22.4	43.0	33.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.2	34.1	34.1	44.7	32.8	32.8	33.1	22.4	22.4	43.0	33.8	0.0
LOS by Move:	D	C	C	D	C	C	C	C	C	D	C	A
HCM2kAvgQ:	3	7	7	3	8	8	7	10	10	1	7	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0	1	0	2	0	1
Lane Group:	L	RT		RT		L	RT		RT		L	RT		RT		L	T		R	
#LnsInGrps:	1	2		2		1	2		2		1	2		2		1	2		1	
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	0.99	0.99	xxxx	0.99	0.99	xxxx	0.99	0.99	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.97	0.97	0.93	0.97	0.97	0.93	0.97	0.97	0.93	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.92	0.92	0.93	0.92	0.92	0.93	0.92	0.92	0.93	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

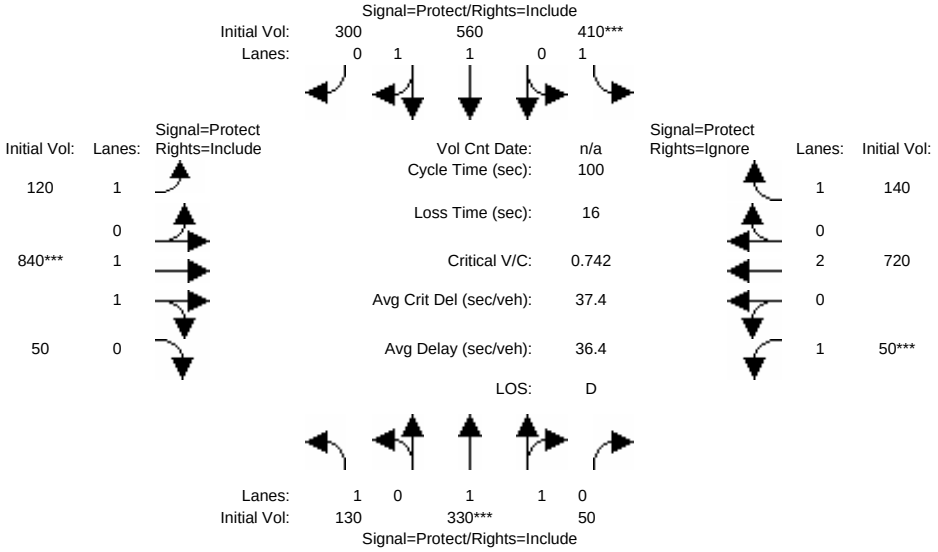
Intersection #3 Meadowview Road/Freeport Boulevard


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.07 0.24  0.24  0.09 0.26  0.26  0.27 0.42  0.42  0.09 0.24  0.00
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.9  5.8   5.8   1.8  6.3   6.3   6.2  8.8   8.8   1.0  6.1   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Q2:           1.1  1.1   1.1   0.7  1.2   1.2   1.2  1.2   1.2   0.3  1.2   0.0
HCM2KQueue:   3.0  6.9   6.9   2.5  7.5   7.5   7.4 10.0  10.0   1.4  7.3   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.18  1.18  1.19 1.18  1.18  1.18 1.18  1.18  1.20 1.18  1.20
70th%HCM2kQ:  3.5  8.2   8.2   3.0  8.9   8.9   8.8 11.8  11.8   1.6  8.7   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.57 1.54  1.54  1.58 1.53  1.53  1.53 1.52  1.52  1.59 1.54  1.60
85th%HCM2kQ:  4.7 10.6  10.6   4.0 11.5  11.5  11.4 15.1  15.1   2.1 11.2   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.74 1.68  1.68  1.75 1.67  1.67  1.68 1.64  1.64  1.77 1.68  1.80
90th%HCM2kQ:  5.2 11.6  11.6   4.5 12.6  12.6  12.4 16.4  16.4   2.4 12.3   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.01 1.91  1.91  2.02 1.90  1.90  1.90 1.84  1.84  2.06 1.90  2.10
95th%HCM2kQ:  5.9 13.1  13.1   5.1 14.2  14.2  14.1 18.4  18.4   2.8 13.9   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.50 2.29  2.29  2.52 2.26  2.26  2.27 2.16  2.16  2.60 2.27  2.70
98th%HCM2kQ:  7.4 15.8  15.8   6.4 17.0  17.0  16.8 21.6  21.6   3.5 16.6   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  16.9 89.7   8.7  16.5 97.4  10.8  56.0  140  11.3   9.3  105   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     91.092 pounds
                      14.757 gallons
Carbon Dioxide:      284.208 pounds
Carbon Monoxide:      22.741 pounds
Hydrocarbons:          4.282 pounds
Nitrogen Oxides:       0.782 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     86.160 pounds
                      13.958 gallons
Carbon Dioxide:      268.818 pounds
Carbon Monoxide:      22.352 pounds
Hydrocarbons:          4.204 pounds
Nitrogen Oxides:       0.703 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP PM

Intersection #3: Meadowview Road/Freeport Boulevard




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     130  330    50   410  560   300   120  840    50    50  720   140
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:  130  330    50   410  560   300   120  840    50    50  720   140
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Volume:   130  330    50   410  560   300   120  840    50    50  720     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  130  330    50   410  560   300   120  840    50    50  720     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  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Final Vol.:   130  330    50   410  560   300   120  840    50    50  720     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.91  0.91  0.93 0.88  0.88  0.93 0.92  0.92  0.93 0.93  1.00
Lanes:       1.00 1.74  0.26  1.00 1.30  0.70  1.00 1.89  0.11  1.00 2.00  1.00
Final Sat.:  1769 3011   456  1769 2184  1170  1769 3312   197  1769 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07 0.11  0.11  0.23 0.26  0.26  0.07 0.25  0.25  0.03 0.20  0.00
Crit Moves:       ****        ****                 ****        ****
Green/Cycle: 0.10 0.15  0.15  0.31 0.35  0.35  0.10 0.34  0.34  0.05 0.29  0.00
Volume/Cap:  0.73 0.75  0.75  0.75 0.73  0.73  0.70 0.75  0.75  0.57 0.70  0.00
Delay/Veh:   57.6 47.3  47.3  37.1 30.5  30.5  56.1 32.3  32.3  54.7 33.8   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  57.6 47.3  47.3  37.1 30.5  30.5  56.1 32.3  32.3  54.7 33.8   0.0
LOS by Move:   E    D     D     D    C     C     E    C     C     D    C     A
HCM2kAvgQ:     6    8     8    13   13    13     5   14    14     2   12     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       1  0  1  1  0    1  0  1  1  0    1  0  1  1  0    1  0  2  0  1
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L    T     R
#LnsInGrps:    1    2     2     1    2     2     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98 xxxxx
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx xxxx xxxxx
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx xxxx xxxxx
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00 xxxxx
RT Adj:      xxxx 0.98  0.98  xxxx 0.95  0.95  xxxx 0.99  0.99  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.96  0.96  0.93 0.93  0.93  0.93 0.97  0.97  0.93 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.93 0.91  0.91  0.93 0.88  0.88  0.93 0.92  0.92  0.93 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
```



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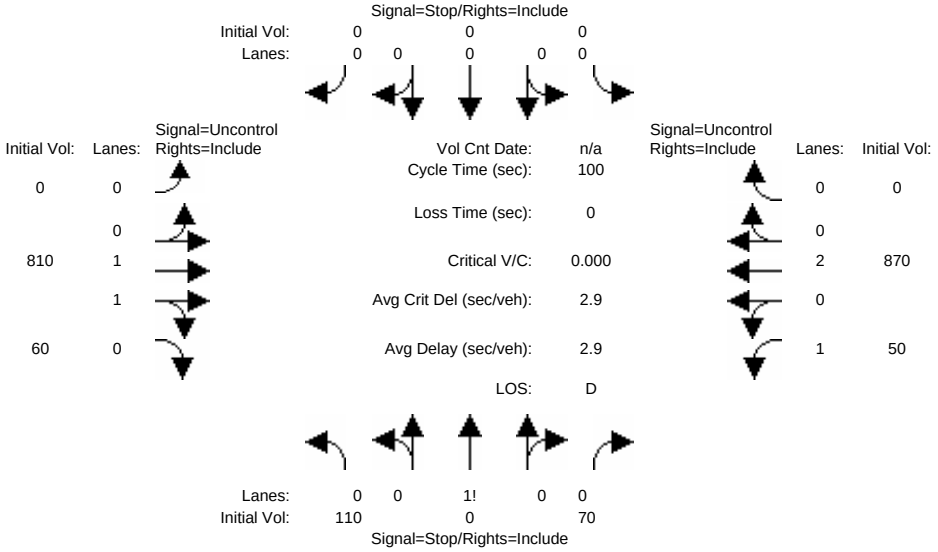
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.10 0.15  0.15  0.31 0.35  0.35  0.10 0.34  0.34  0.05 0.29  0.00
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.5  5.3   5.3  10.3 11.0  11.0   3.2 11.6  11.6   1.4  9.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Q2:           2.0  2.4   2.4   2.6  2.4   2.4   1.8  2.7   2.7   1.1  2.1   0.0
HCM2KQueue:   5.5  7.7   7.7  12.9 13.4  13.4   5.1 14.2  14.2   2.4 11.5   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.18  1.18  1.17 1.17  1.17  1.19 1.17  1.17  1.19 1.17  1.20
70th%HCM2kQ:  6.5  9.1   9.1  15.1 15.6  15.6   6.0 16.7  16.7   2.9 13.5   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.53  1.53  1.50 1.49  1.49  1.55 1.49  1.49  1.58 1.50  1.60
85th%HCM2kQ:  8.5 11.8  11.8  19.3 19.9  19.9   7.9 21.2  21.2   3.8 17.3   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.70 1.67  1.67  1.61 1.61  1.61  1.71 1.60  1.60  1.75 1.62  1.80
90th%HCM2kQ:  9.4 12.9  12.9  20.8 21.4  21.4   8.7 22.7  22.7   4.2 18.7   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.94 1.89  1.89  1.79 1.79  1.79  1.95 1.77  1.77  2.02 1.82  2.10
95th%HCM2kQ: 10.7 14.6  14.6  23.1 23.8  23.8   9.9 25.2  25.2   4.9 20.9   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.35 2.25  2.25  2.07 2.06  2.06  2.38 2.03  2.03  2.53 2.11  2.70
98th%HCM2kQ: 13.0 17.3  17.3  26.7 27.5  27.5  12.0 29.0  29.0   6.1 24.3   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  31.5 79.2  12.0  92.4  122  65.3  29.1  187  11.1  12.2  160   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    135.231 pounds
                      21.907 gallons
Carbon Dioxide:      421.922 pounds
Carbon Monoxide:      34.208 pounds
Hydrocarbons:          6.579 pounds
Nitrogen Oxides:       1.130 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    128.554 pounds
                      20.826 gallons
Carbon Dioxide:      401.087 pounds
Carbon Monoxide:      33.680 pounds
Hydrocarbons:          6.474 pounds
Nitrogen Oxides:       1.021 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline WP AM

Intersection #4: Meadowview Road/Manorside Drive




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     110    0    70     0    0     0     0  810    60    50  870     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:  110    0    70     0    0     0     0  810    60    50  870     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:   110    0    70     0    0     0     0  810    60    50  870     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:   110    0    70     0    0     0     0  810    60    50  870     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8 xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1375 xxxx   435  xxxx xxxx xxxxx  xxxx xxxx xxxxx   870 xxxx xxxxx
Potent Cap.:  136 xxxx   569  xxxx xxxx xxxxx  xxxx xxxx xxxxx   770 xxxx xxxxx
Move Cap.:    130 xxxx   569  xxxx xxxx xxxxx  xxxx xxxx xxxxx   770 xxxx xxxxx
Total Cap:    258    0 xxxxx     0    0 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  0.43 xxxx  0.12  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.06 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  10.0 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  328 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  3.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 28.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    D     *     *    *     *     *    *     *     *    *     *
ApproachDel:      28.6           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       D              *                *                *
-----------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance [Median Type: TWLTL][Median Storage: 1 car]
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage One Module:
Cnflict Vol: 840     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 384   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   384   900 xxxxx  842   842 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage Two Module:
Cnflict Vol: 535     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 551   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   516   842 xxxxx  789   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:  110    0    70     0    0     0     0  810    60    50  870     0
ApproachDel:      28.6           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.4]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=180]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1970]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Meadowview Road/Manorside Drive

****

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	1 0	1	0 2	0 0
Initial Vol:	110	0	70	0	0	0	0	810	60	50	870	0

Major Street Volume: 1790
Minor Approach Volume: 180
Minor Approach Volume Threshold: 84 [less than minimum of 100]

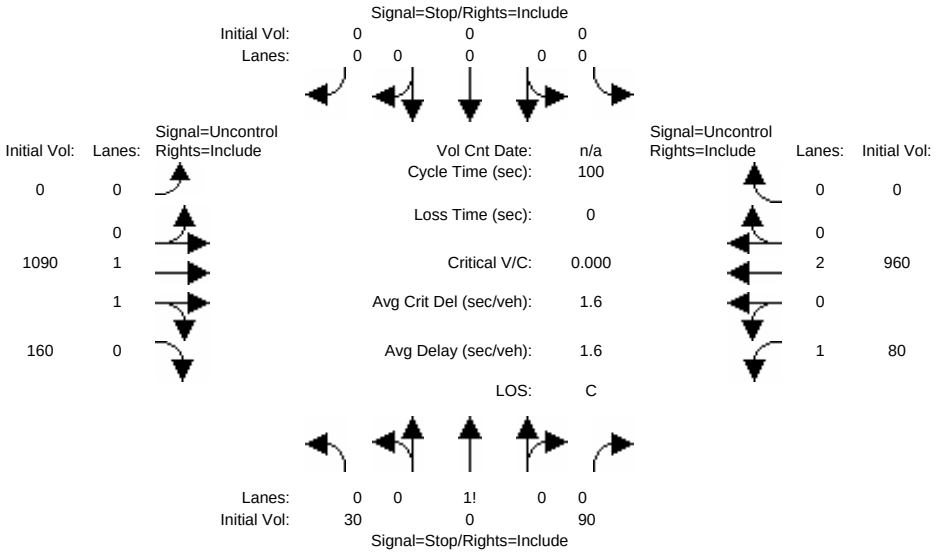
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline WP PM

Intersection #4: Meadowview Road/Manorside Drive




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      30    0    90     0    0     0     0 1090   160    80  960     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:   30    0    90     0    0     0     0 1090   160    80  960     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:    30    0    90     0    0     0     0 1090   160    80  960     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    30    0    90     0    0     0     0 1090   160    80  960     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8 xxxx   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1810 xxxx   625  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1250 xxxx xxxxx
Potent Cap.:   70 xxxx   428  xxxx xxxx xxxxx  xxxx xxxx xxxxx   553 xxxx xxxxx
Move Cap.:     62 xxxx   428  xxxx xxxx xxxxx  xxxx xxxx xxxxx   553 xxxx xxxxx
Total Cap:    172    0 xxxxx     0    0 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  0.17 xxxx  0.21  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.14 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.5 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  12.6 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     B    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  312 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  1.8 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 23.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    C     *     *    *     *     *    *     *     *    *     *
ApproachDel:      23.6           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       C              *                *                *
------------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
------------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance [Median Type: TWLTL][Median Storage: 1 car]
------------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage One Module:
Cnflict Vol:1170     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 257   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   257   900 xxxxx  770   770 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
------------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage Two Module:
Cnflict Vol: 640     0 xxxxx    0     0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 487   900 xxxxx  900   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   417   770 xxxxx  711   900 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:   30    0    90     0    0     0     0 1090   160    80  960     0
ApproachDel:      23.6           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.8]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=120]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2410]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #4 Meadowview Road/Manorside Drive

****

Base Volume Alternative: Peak Hour Warrant Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0	0	0 0	0	0	0 1	1 0	1	0 2	0 0
Initial Vol:	30	0	90	0	0	0	0	1090	160	80	960	0

Major Street Volume: 2290
Minor Approach Volume: 120
Minor Approach Volume Threshold: -1 [less than minimum of 100]

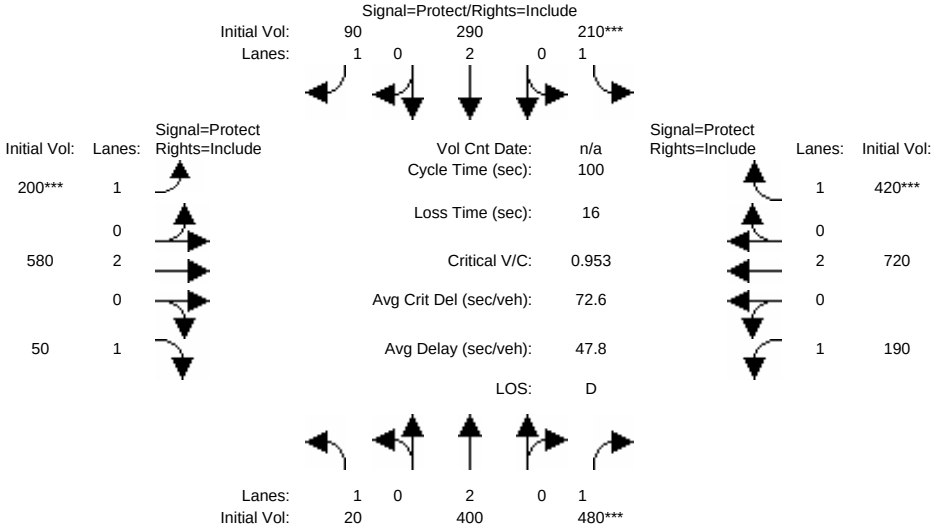
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #5: Meadowview Road/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	20	400	480	210	290	90	200	580	50	190	720	420
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:	20	400	480	210	290	90	200	580	50	190	720	420
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:	20	400	480	210	290	90	200	580	50	190	720	420
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	400	480	210	290	90	200	580	50	190	720	420
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
Final Vol.:	20	400	480	210	290	90	200	580	50	190	720	420
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	1769	3538	1583	1769	3538	1583	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.01	0.11	0.30	0.12	0.08	0.06	0.11	0.16	0.03	0.11	0.20	0.27
Crit Moves:			****	****			****					****
Green/Cycle:	0.17	0.32	0.32	0.12	0.28	0.28	0.12	0.24	0.24	0.16	0.28	0.28
Volume/Cap:	0.07	0.36	0.95	0.95	0.30	0.21	0.95	0.68	0.13	0.68	0.73	0.95
Delay/Veh:	35.1	26.4	61.9	90.8	28.8	28.1	92.5	36.9	30.0	46.6	35.5	66.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.1	26.4	61.9	90.8	28.8	28.1	92.5	36.9	30.0	46.6	35.5	66.4
LOS by Move:	D	C	E	F	C	C	F	D	C	D	D	E
HCM2kAvgQ:	1	5	19	10	4	2	10	10	1	7	12	18
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0 2	0 1	1	0 2	0 1	1	0 2	0 1	1	0 2	0 1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	1	2	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #5 Meadowview Road/24th Street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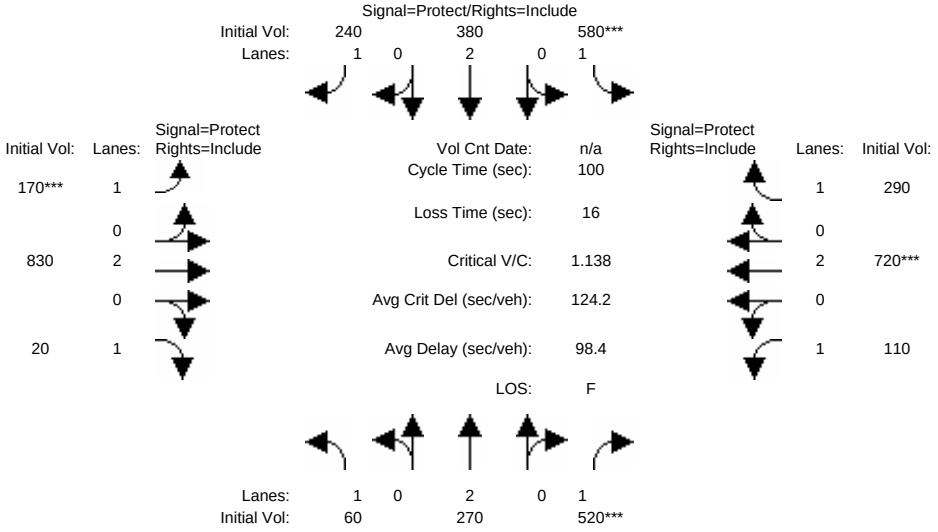
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.17 0.32  0.32  0.12 0.28  0.28  0.12 0.24  0.24  0.16 0.28  0.28
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.5  4.5  13.0   5.8  3.3   1.9   5.5  7.7   1.1   5.0  9.5  11.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.1  0.5   6.4   4.5  0.4   0.3   4.4  1.9   0.2   1.8  2.4   6.1
HCM2KQueue:   0.5  5.0  19.5  10.3  3.8   2.2   9.9  9.7   1.2   6.8 11.9  17.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.16  1.18 1.19  1.19  1.18 1.18  1.20  1.18 1.17  1.16
70th%HCM2kQ:  0.6  6.0  22.6  12.1  4.5   2.6  11.7 11.4   1.5   8.1 14.0  20.4
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.59 1.55  1.46  1.51 1.56  1.58  1.52 1.52  1.59  1.54 1.50  1.47
85th%HCM2kQ:  0.9  7.8  28.3  15.6  5.9   3.4  15.1 14.6   2.0  10.5 17.9  25.7
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.79 1.71  1.55  1.64 1.73  1.76  1.64 1.65  1.78  1.68 1.62  1.57
90th%HCM2kQ:  1.0  8.6  30.2  16.9  6.5   3.8  16.3 15.9   2.2  11.5 19.3  27.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.08 1.95  1.70  1.84 1.99  2.03  1.85 1.85  2.06  1.91 1.81  1.73
95th%HCM2kQ:  1.1  9.8  33.1  19.0  7.5   4.4  18.3 17.9   2.6  13.1 21.6  30.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.66 2.38  1.92  2.15 2.45  2.55  2.17 2.18  2.61  2.29 2.10  1.96
98th%HCM2kQ:  1.4 12.0  37.4  22.2  9.2   5.6  21.5 21.0   3.2  15.7 25.0  34.3
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #5 Meadowview Road/24th Street
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   4.2 76.9 117.4  52.2 57.3  17.3  49.7  132   9.8  44.9  163 103.1
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    167.509 pounds
                      27.136 gallons
Carbon Dioxide:      522.629 pounds
Carbon Monoxide:      43.283 pounds
Hydrocarbons:          8.638 pounds
Nitrogen Oxides:       1.299 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    160.652 pounds
                      26.026 gallons
Carbon Dioxide:      501.235 pounds
Carbon Monoxide:      42.741 pounds
Hydrocarbons:          8.530 pounds
Nitrogen Oxides:       1.187 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP PM

Intersection #5: Meadowview Road/24th Street




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      60   270   520   580   380   240   170   830    20   110   720   290
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:   60   270   520   580   380   240   170   830    20   110   720   290
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:    60   270   520   580   380   240   170   830    20   110   720   290
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   60   270   520   580   380   240   170   830    20   110   720   290
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
Final Vol.:    60   270   520   580   380   240   170   830    20   110   720   290
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.93  0.93  0.83  0.93  0.93  0.83  0.93  0.93  0.83  0.93  0.93  0.83
Lanes:       1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00  1.00  2.00  1.00
Final Sat.:  1769  3538  1583  1769  3538  1583  1769  3538  1583  1769  3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03  0.08  0.33  0.33  0.11  0.15  0.10  0.23  0.01  0.06  0.20  0.18
Crit Moves:              ****  ****              ****                    ****
Green/Cycle: 0.14  0.29  0.29  0.29  0.43  0.43  0.08  0.21  0.21  0.06  0.18  0.18
Volume/Cap:  0.24  0.26  1.14  1.14  0.25  0.35  1.14  1.13  0.06  1.13  1.14  1.02
Delay/Veh:   38.5  27.5 121.3 119.4  18.0  19.2 161.4   114  31.8 176.8   121 101.1
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  38.5  27.5 121.3 119.4  18.0  19.2 161.4   114  31.8 176.8   121 101.1
LOS by Move:    D     C     F     F     B     B     F     F     C     F     F     F
HCM2kAvgQ:      2     3    27    30     4     5    11    23     1     8    21    15
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       1  0  2  0  1    1  0  2  0  1    1  0  2  0  1    1  0  2  0  1
Lane Group:    L     T     R     L     T     R     L     T     R     L     T     R
#LnsInGrps:    1     2     1     1     2     1     1     2     1     1     2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:    Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Hev Veh Adj: 0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98
Grade Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Parking Adj: xxxx  xxxx  1.00  xxxx  xxxx  1.00  xxxx  xxxx  1.00  xxxx  xxxx  1.00
Bus Stp Adj: xxxx  xxxx  1.00  xxxx  xxxx  1.00  xxxx  xxxx  1.00  xxxx  xxxx  1.00
Area Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
RT Adj:      xxxx  xxxx  0.85  xxxx  xxxx  0.85  xxxx  xxxx  0.85  xxxx  xxxx  0.85
LT Adj:      0.95  xxxx  xxxxx 0.95  xxxx  xxxxx 0.95  xxxx  xxxxx 0.95  xxxx  xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 0.93  0.98  0.83  0.93  0.98  0.83  0.93  0.98  0.83  0.93  0.98  0.83
Usr Sat Adj: 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 Sat Adj: 1.00  0.95  1.00  1.00  0.95  1.00  1.00  0.95  1.00  1.00  0.95  1.00
Fnl Sat Adj: 0.93  0.93  0.83  0.93  0.93  0.83  0.93  0.93  0.83  0.93  0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > > >
DelAdjFctr:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #5 Meadowview Road/24th Street
```



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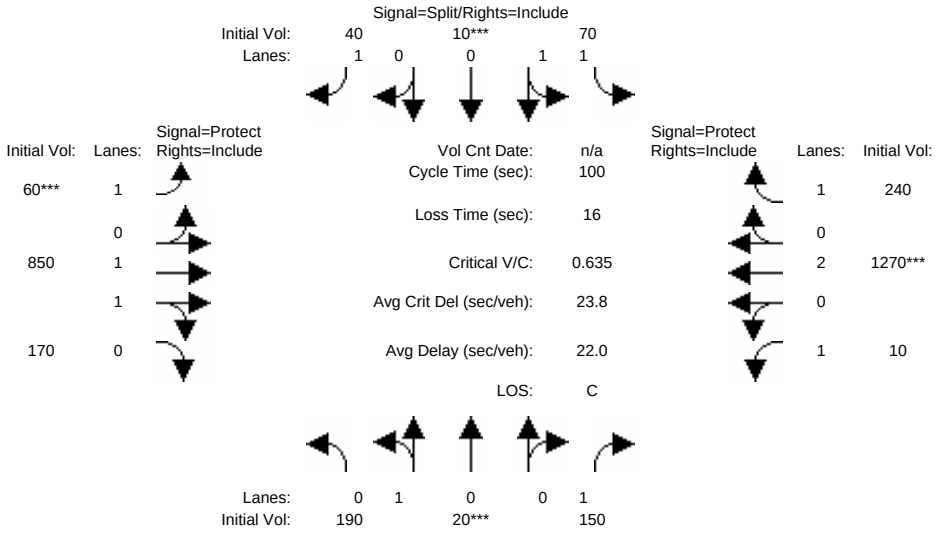
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.14 0.29  0.29  0.29 0.43  0.43  0.08 0.21  0.21  0.06 0.18  0.18
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.5  3.0  14.4  16.1  3.5   4.4   4.7 12.1   0.4   3.1 10.5   8.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.3  0.4  12.9  14.0  0.3   0.5   6.1 11.1   0.1   4.6 10.3   6.5
HCM2KQueue:   1.8  3.4  27.4  30.1  3.9   5.0  10.8 23.2   0.5   7.6 20.9  14.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.15  1.15 1.19  1.19  1.18 1.16  1.20  1.18 1.16  1.17
70th%HCM2kQ:  2.1  4.0  31.5  34.5  4.6   5.9  12.7 26.9   0.6   9.0 24.2  17.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.58 1.57  1.42  1.41 1.56  1.55  1.51 1.44  1.59  1.53 1.45  1.48
85th%HCM2kQ:  2.8  5.3  38.9  42.4  6.0   7.7  16.3 33.4   0.8  11.7 30.2  21.6
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.77 1.74  1.50  1.49 1.73  1.71  1.63 1.53  1.79  1.67 1.54  1.59
90th%HCM2kQ:  3.2  5.9  41.1  44.8  6.7   8.5  17.6 35.4   0.9  12.8 32.1  23.2
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.04 2.00  1.63  1.61 1.98  1.95  1.83 1.67  2.08  1.89 1.69  1.77
95th%HCM2kQ:  3.6  6.8  44.6  48.5  7.6   9.7  19.8 38.7   1.1  14.4 35.2  25.7
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.57 2.47  1.82  1.80 2.44  2.38  2.14 1.87  2.66  2.26 1.90  2.03
98th%HCM2kQ:  4.6  8.4  49.9  54.1  9.4  11.9  23.1 43.4   1.4  17.2 39.7  29.5
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #5 Meadowview Road/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  13.3 52.0 137.7 153.6 60.3  40.0  43.0  215   4.0  27.7  186  72.9
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    338.591 pounds
                      54.852 gallons
Carbon Dioxide:     1056.403 pounds
Carbon Monoxide:      91.291 pounds
Hydrocarbons:         19.493 pounds
Nitrogen Oxides:       2.216 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    330.616 pounds
                      53.560 gallons
Carbon Dioxide:     1031.523 pounds
Carbon Monoxide:      90.658 pounds
Hydrocarbons:         19.367 pounds
Nitrogen Oxides:       2.084 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP AM

Intersection #6: Meadowview Road/Detroit Boulevard




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     7     0     0     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     190   20   150    70   10    40    60  850   170    10 1270   240
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:  190   20   150    70   10    40    60  850   170    10 1270   240
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:   190   20   150    70   10    40    60  850   170    10 1270   240
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  190   20   150    70   10    40    60  850   170    10 1270   240
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
Final Vol.:   190   20   150    70   10    40    60  850   170    10 1270   240
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.94 0.94  0.83  0.94 0.94  0.83  0.93 0.91  0.91  0.93 0.93  0.83
Lanes:       0.90 0.10  1.00  1.75 0.25  1.00  1.00 1.67  0.33  1.00 2.00  1.00
Final Sat.:  1612  170  1583  3122  446  1583  1769 2874   575  1769 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.12 0.12  0.09  0.02 0.02  0.03  0.03 0.30  0.30  0.01 0.36  0.15
Crit Moves:       ****               ****        ****               ****
Green/Cycle: 0.18 0.18  0.18  0.07 0.07  0.07  0.05 0.51  0.51  0.09 0.54  0.54
Volume/Cap:  0.66 0.66  0.53  0.32 0.32  0.36  0.66 0.58  0.58  0.07 0.66  0.28
Delay/Veh:   43.5 43.5  39.3  45.0 45.0  46.4  63.6 17.8  17.8  42.2 17.3  12.6
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  43.5 43.5  39.3  45.0 45.0  46.4  63.6 17.8  17.8  42.2 17.3  12.6
LOS by Move:    D    D     D     D    D     D     E    B     B     D    B     B
HCM2kAvgQ:      7    7     5     2    2     2     3   12    12     0   15     4
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  1  0  0  1    1  1  0  0  1    1  0  1  1  0    1  0  2  0  1
Lane Group:   LT   LT     R    LT   LT     R     L   RT     RT    L    T     R
#LnsInGrps:    1    1     1     2    2     1     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      4    4  xxxx     4    4  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx 0.98  0.98  xxxx xxxx  0.85
LT Adj:      0.96 0.96 xxxxx  0.96 0.96 xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.94 0.94  0.83  0.94 0.94  0.83  0.93 0.96  0.96  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.94 0.94  0.83  0.94 0.94  0.83  0.93 0.91  0.91  0.93 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
```

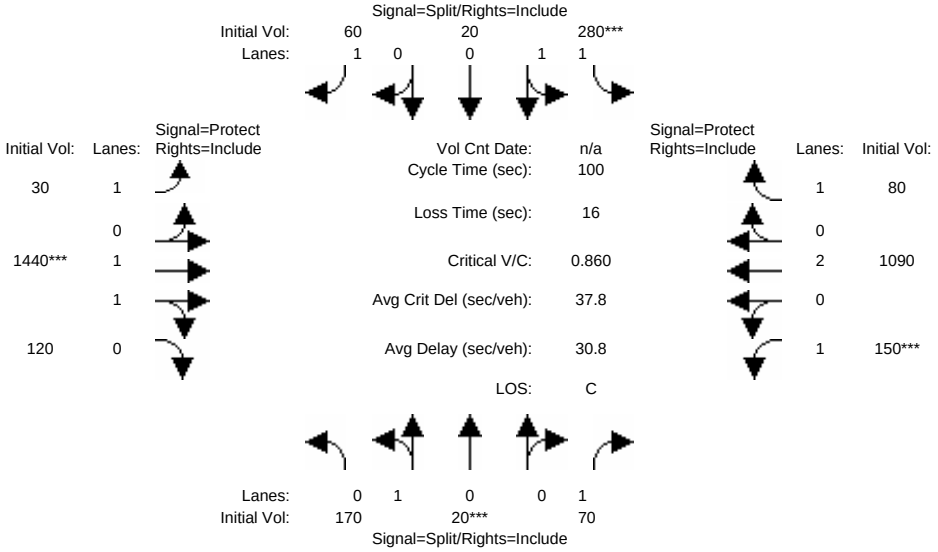


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.18 0.18  0.18  0.07 0.07  0.07  0.05 0.51  0.51  0.09 0.54  0.54
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           5.4  5.4   3.8   1.1  1.1   1.1   1.6 10.4  10.4   0.3 13.3   3.6
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.7  1.7   1.1   0.5  0.5   0.5   1.4  1.4   1.4   0.1  1.9   0.4
HCM2KQueue:   7.2  7.2   4.9   1.5  1.5   1.6   3.1 11.8  11.8   0.3 15.2   4.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.18  1.19  1.20 1.20  1.20  1.19 1.17  1.17  1.20 1.17  1.19
70th%HCM2kQ:  8.5  8.5   5.8   1.8  1.8   1.9   3.7 13.9  13.9   0.4 17.7   4.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.54  1.56  1.59 1.59  1.58  1.57 1.50  1.50  1.60 1.48  1.56
85th%HCM2kQ: 11.0 11.0   7.6   2.4  2.4   2.5   4.8 17.7  17.7   0.5 22.5   6.2
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.68 1.68  1.71  1.77 1.77  1.77  1.74 1.62  1.62  1.79 1.59  1.73
90th%HCM2kQ: 12.1 12.1   8.3   2.7  2.7   2.8   5.3 19.1  19.1   0.6 24.1   6.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.90 1.90  1.96  2.05 2.05  2.05  2.01 1.81  1.81  2.09 1.76  1.98
95th%HCM2kQ: 13.7 13.7   9.5   3.1  3.1   3.3   6.2 21.4  21.4   0.7 26.7   7.9
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.28 2.28  2.39  2.59 2.59  2.58  2.49 2.10  2.10  2.68 2.01  2.44
98th%HCM2kQ: 16.3 16.3  11.6   3.9  3.9   4.1   7.6 24.8  24.8   0.9 30.5   9.7
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  44.3  4.7  34.1  16.6  2.4   9.5  14.7  149  29.8   2.3  227  32.4
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     85.011 pounds
                      13.772 gallons
Carbon Dioxide:      265.233 pounds
Carbon Monoxide:      20.571 pounds
Hydrocarbons:          3.674 pounds
Nitrogen Oxides:       0.775 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     79.471 pounds
                      12.874 gallons
Carbon Dioxide:      247.949 pounds
Carbon Monoxide:      20.138 pounds
Hydrocarbons:          3.586 pounds
Nitrogen Oxides:       0.690 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP PM

Intersection #6: Meadowview Road/Detroit Boulevard




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     7     0     0     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     170   20    70   280   20    60    30 1440   120   150 1090    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:  170   20    70   280   20    60    30 1440   120   150 1090    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:   170   20    70   280   20    60    30 1440   120   150 1090    80
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  170   20    70   280   20    60    30 1440   120   150 1090    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
Final Vol.:   170   20    70   280   20    60    30 1440   120   150 1090    80
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.94 0.94  0.83  0.94 0.94  0.83  0.93 0.92  0.92  0.93 0.93  0.83
Lanes:       0.89 0.11  1.00  1.87 0.13  1.00  1.00 1.85  0.15  1.00 2.00  1.00
Final Sat.:  1594  188  1583  3319  237  1583  1769 3226   269  1769 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.11  0.04  0.08 0.08  0.04  0.02 0.45  0.45  0.08 0.31  0.05
Crit Moves:       ****        ****              ****        ****
Green/Cycle: 0.12 0.12  0.12  0.10 0.10  0.10  0.09 0.52  0.52  0.10 0.53  0.53
Volume/Cap:  0.86 0.86  0.36  0.86 0.86  0.39  0.20 0.86  0.86  0.86 0.58  0.10
Delay/Veh:   70.0 70.0  41.3  63.3 63.3  43.9  43.1 25.3  25.3  76.8 16.3  11.6
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  70.0 70.0  41.3  63.3 63.3  43.9  43.1 25.3  25.3  76.8 16.3  11.6
LOS by Move:   E    E     D     E    E     D     D    C     C     E    B     B
HCM2kAvgQ:     8    8     2     7    7     2     1   25    25     7   12     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:         0  1  0  0  1    1  1  0  0  1    1  0  1  1  0    1  0  2  0  1
Lane Group:   LT   LT     R    LT   LT     R     L   RT     RT    L    T     R
#LnsInGrps:    1    1     1     2    2     1     1    2     2     1    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid          8                8                8                8
% Hev Veh:            2                2                2                2
Grade:               0%               0%               0%               0%
Parking/Hr:          No               No               No               No
Bus Stp/Hr:           0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:           0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     4    4  xxxx     4    4  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx 0.99  0.99  xxxx xxxx  0.85
LT Adj:      0.96 0.96 xxxxx  0.96 0.96 xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.94 0.94  0.83  0.94 0.94  0.83  0.93 0.97  0.97  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  0.95  1.00 0.95  1.00
Fnl Sat Adj: 0.94 0.94  0.83  0.94 0.94  0.83  0.93 0.92  0.92  0.93 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
```



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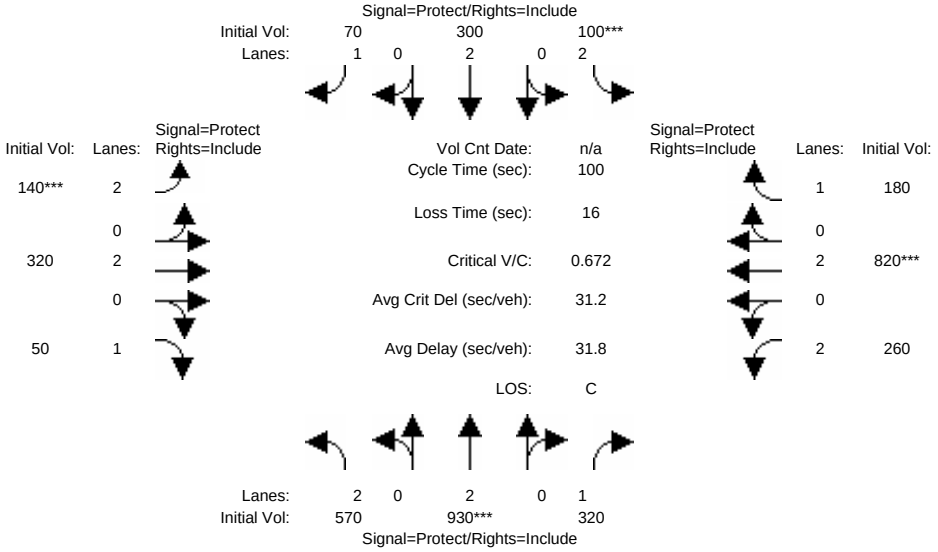
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.12 0.12  0.12  0.10 0.10  0.10  0.09 0.52  0.52  0.10 0.53  0.53
ArrivalType:         3              3              3                    3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           5.2  5.2   1.8   4.1  4.1   1.6   0.8 19.8  19.8   4.1 10.8   1.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           3.3  3.3   0.5   3.1  3.1   0.6   0.2  4.8   4.8   3.1  1.3   0.1
HCM2KQueue:   8.5  8.5   2.3   7.2  7.2   2.2   1.0 24.6  24.6   7.2 12.1   1.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.18  1.19  1.18 1.18  1.19  1.20 1.15  1.15  1.18 1.17  1.20
70th%HCM2kQ: 10.0 10.0   2.8   8.5  8.5   2.6   1.2 28.4  28.4   8.5 14.2   1.4
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.53  1.58  1.54 1.54  1.58  1.59 1.43  1.43  1.54 1.50  1.59
85th%HCM2kQ: 12.9 12.9   3.7  11.0 11.0   3.4   1.6 35.2  35.2  11.0 18.2   1.9
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.66 1.66  1.76  1.68 1.68  1.76  1.78 1.52  1.52  1.68 1.62  1.78
90th%HCM2kQ: 14.1 14.1   4.1  12.0 12.0   3.8   1.8 37.3  37.3  12.0 19.6   2.1
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.87 1.87  2.03  1.90 1.90  2.03  2.07 1.65  1.65  1.90 1.81  2.06
95th%HCM2kQ: 15.9 15.9   4.7  13.6 13.6   4.4   2.1 40.6  40.6  13.6 21.9   2.5
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.22 2.22  2.54  2.28 2.28  2.55  2.62 1.85  1.85  2.28 2.09  2.61
98th%HCM2kQ: 18.8 18.8   5.9  16.3 16.3   5.5   2.7 45.5  45.5  16.3 25.4   3.1
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  41.7  4.9  16.0  68.9  4.9  14.1   7.0  313  26.1  36.9  184   9.9
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    119.732 pounds
                      19.397 gallons
Carbon Dioxide:      373.563 pounds
Carbon Monoxide:      29.875 pounds
Hydrocarbons:          5.625 pounds
Nitrogen Oxides:       1.025 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    113.237 pounds
                      18.344 gallons
Carbon Dioxide:      353.299 pounds
Carbon Monoxide:      29.364 pounds
Hydrocarbons:          5.522 pounds
Nitrogen Oxides:       0.922 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #7: Mack Road/Franklin Boulevard




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     570  930   320   100  300    70   140  320    50   260  820   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:  570  930   320   100  300    70   140  320    50   260  820   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:   570  930   320   100  300    70   140  320    50   260  820   180
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  570  930   320   100  300    70   140  320    50   260  820   180
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
Final Vol.:   570  930   320   100  300    70   140  320    50   260  820   180
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  3432 3538  1583  3432 3538  1583  3432 3538  1583  3432 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.17 0.26  0.20  0.03 0.08  0.04  0.04 0.09  0.03  0.08 0.23  0.11
Crit Moves:       ****        ****             ****                   ****
Green/Cycle: 0.29 0.39  0.39  0.05 0.15  0.15  0.06 0.22  0.22  0.18 0.34  0.34
Volume/Cap:  0.57 0.68  0.52  0.58 0.57  0.30  0.68 0.41  0.14  0.41 0.68  0.33
Delay/Veh:   31.1 26.8  24.3  51.5 41.2  38.7  54.8 33.9  31.7  36.5 29.7  24.8
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  31.1 26.8  24.3  51.5 41.2  38.7  54.8 33.9  31.7  36.5 29.7  24.8
LOS by Move:   C    C     C     D    D     D     D    C     C     D    C     C
HCM2kAvgQ:     8   13     8     3    5     2     4    5     1     4   12     4
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       2  0  2  0  1    2  0  2  0  1    2  0  2  0  1    2  0  2  0  1
Lane Group:    L     T     R     L     T     R     L     T     R     L     T     R
#LnsInGrps:    2     2     1     2     2     1     2     2     1     2     2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid         8                 8                 8                 8
% Hev Veh:           2                 2                 2                 2
Grade:              0%                0%                0%                0%
Parking/Hr:         No                No                No                No
Bus Stp/Hr:          0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:          0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 0.97 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00
Fnl Sat Adj: 0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
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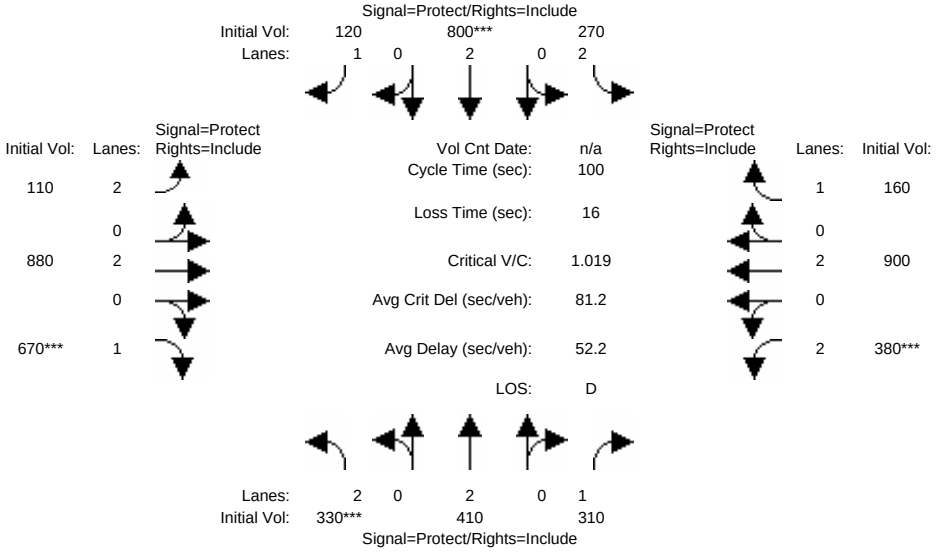
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.29 0.39  0.39  0.05 0.15  0.15  0.06 0.22  0.22  0.18 0.34  0.34
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           7.0 11.3   6.8   1.4  4.1   1.7   2.0  4.0   1.1   3.3 10.3   3.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.3  2.0   1.1   1.1  1.2   0.4   1.5  0.7   0.2   0.7  2.0   0.5
HCM2KQueue:   8.2 13.3   7.9   2.5  5.3   2.2   3.5  4.7   1.3   4.0 12.2   4.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.17  1.18  1.19 1.19  1.19  1.19 1.19  1.20  1.19 1.17  1.19
70th%HCM2kQ:  9.7 15.5   9.3   3.0  6.3   2.6   4.2  5.6   1.5   4.7 14.3   5.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.49  1.53  1.58 1.55  1.58  1.57 1.56  1.59  1.56 1.50  1.56
85th%HCM2kQ: 12.6 19.8  12.1   4.0  8.3   3.4   5.5  7.3   2.0   6.2 18.3   6.6
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.67 1.61  1.67  1.75 1.71  1.76  1.74 1.72  1.78  1.73 1.62  1.72
90th%HCM2kQ: 13.7 21.3  13.2   4.4  9.1   3.8   6.1  8.1   2.3   6.9 19.8   7.3
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.88 1.79  1.89  2.02 1.95  2.03  1.99 1.96  2.06  1.98 1.80  1.97
95th%HCM2kQ: 15.5 23.7  14.9   5.1 10.4   4.4   7.0  9.2   2.7   7.9 22.1   8.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.23 2.06  2.25  2.52 2.36  2.55  2.46 2.40  2.61  2.44 2.09  2.42
98th%HCM2kQ: 18.4 27.3  17.7   6.4 12.6   5.5   8.6 11.3   3.4   9.7 25.6  10.2
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 121.4  193  61.4  24.5 69.8  15.6  34.3 68.7  10.1  57.4  176  33.4
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    140.811 pounds
                      22.811 gallons
Carbon Dioxide:      439.332 pounds
Carbon Monoxide:      35.225 pounds
Hydrocarbons:          6.654 pounds
Nitrogen Oxides:       1.205 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    133.288 pounds
                      21.593 gallons
Carbon Dioxide:      415.859 pounds
Carbon Monoxide:      34.633 pounds
Hydrocarbons:          6.535 pounds
Nitrogen Oxides:       1.085 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP PM

Intersection #7: Mack Road/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	330	410	310	270	800	120	110	880	670	380	900	160
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:	330	410	310	270	800	120	110	880	670	380	900	160
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:	330	410	310	270	800	120	110	880	670	380	900	160
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	330	410	310	270	800	120	110	880	670	380	900	160
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
Final Vol.:	330	410	310	270	800	120	110	880	670	380	900	160
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3432	3538	1583	3432	3538	1583	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.10	0.12	0.20	0.08	0.23	0.08	0.03	0.25	0.42	0.11	0.25	0.10
Crit Moves:	****				****				****	****		
Green/Cycle:	0.09	0.23	0.23	0.09	0.22	0.22	0.09	0.42	0.42	0.11	0.44	0.44
Volume/Cap:	1.02	0.51	0.87	0.87	1.02	0.34	0.37	0.60	1.02	1.02	0.58	0.23
Delay/Veh:	100.4	34.5	57.0	66.9	76.0	33.3	43.9	23.4	69.3	96.2	21.8	17.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	100.4	34.5	57.0	66.9	76.0	33.3	43.9	23.4	69.3	96.2	21.8	17.8
LOS by Move:	F	C	E	E	E	C	D	C	E	F	C	B
HCM2kAvgQ:	10	6	12	7	19	3	2	11	29	11	11	3
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #7 Mack Road/Franklin Boulevard


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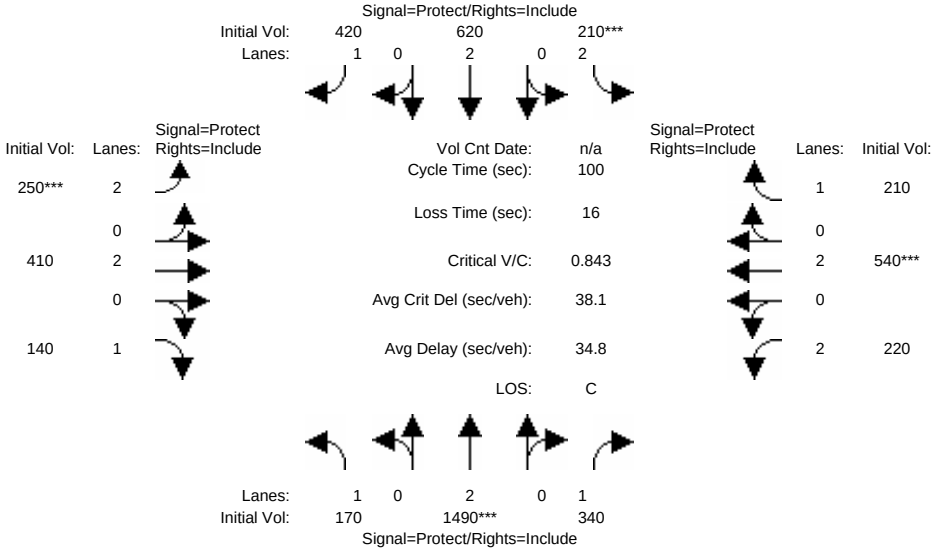
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.09 0.23  0.23  0.09 0.22  0.22  0.09 0.42  0.42  0.11 0.44  0.44
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.7  5.3   8.3   3.8 11.7   2.8   1.5 10.0  18.6   5.4  9.9   2.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           4.8  1.0   3.9   3.1  7.8   0.5   0.6  1.4  10.0   5.2  1.3   0.3
HCM2KQueue:   9.5  6.3  12.2   6.9 19.5   3.3   2.1 11.5  28.6  10.6 11.3   3.1
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.19  1.17  1.18 1.16  1.19  1.19 1.18  1.15  1.18 1.18  1.19
70th%HCM2kQ: 11.2  7.4  14.4   8.1 22.6   4.0   2.5 13.5  32.9  12.5 13.2   3.7
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.54  1.50  1.54 1.46  1.57  1.58 1.50  1.42  1.51 1.51  1.57
85th%HCM2kQ: 14.5  9.7  18.4  10.6 28.4   5.2   3.2 17.2  40.5  16.1 17.0   4.8
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.65 1.69  1.62  1.68 1.55  1.74  1.76 1.63  1.50  1.64 1.63  1.74
90th%HCM2kQ: 15.7 10.6  19.8  11.6 30.2   5.8   3.6 18.6  42.8  17.4 18.3   5.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.85 1.92  1.80  1.91 1.70  2.00  2.04 1.82  1.62  1.83 1.82  2.01
95th%HCM2kQ: 17.7 12.1  22.1  13.1 33.2   6.6   4.2 20.8  46.4  19.5 20.5   6.2
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.18 2.32  2.09  2.29 1.92  2.47  2.55 2.11  1.81  2.14 2.12  2.49
98th%HCM2kQ: 20.8 14.5  25.6  15.7 37.5   8.2   5.2 24.2  51.8  22.8 23.9   7.7
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  82.7 89.8  74.6  66.6  201  25.3  26.0  171 169.8  95.2  170  25.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    260.914 pounds
                      42.268 gallons
Carbon Dioxide:      814.052 pounds
Carbon Monoxide:      67.842 pounds
Hydrocarbons:         13.688 pounds
Nitrogen Oxides:       1.972 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    250.908 pounds
                      40.647 gallons
Carbon Dioxide:      782.833 pounds
Carbon Monoxide:      67.051 pounds
Hydrocarbons:         13.530 pounds
Nitrogen Oxides:       1.809 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #8: Cosumnes River Boulevard/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	170	1490	340	210	620	420	250	410	140	220	540	210
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:	170	1490	340	210	620	420	250	410	140	220	540	210
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:	170	1490	340	210	620	420	250	410	140	220	540	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	170	1490	340	210	620	420	250	410	140	220	540	210
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
Final Vol.:	170	1490	340	210	620	420	250	410	140	220	540	210
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
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.:	1769	3538	1583	3432	3538	1583	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.10	0.42	0.21	0.06	0.18	0.27	0.07	0.12	0.09	0.06	0.15	0.13
Crit Moves:		****		****			****				****	
Green/Cycle:	0.15	0.50	0.50	0.07	0.42	0.42	0.09	0.17	0.17	0.10	0.18	0.18
Volume/Cap:	0.63	0.84	0.43	0.84	0.42	0.63	0.84	0.67	0.51	0.67	0.84	0.73
Delay/Veh:	44.6	25.5	16.3	67.9	20.6	24.9	64.1	41.7	39.2	49.1	49.4	48.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.6	25.5	16.3	67.9	20.6	24.9	64.1	41.7	39.2	49.1	49.4	48.0
LOS by Move:	D	C	B	E	C	C	E	D	D	D	D	D
HCM2kAvgQ:	6	23	7	6	7	11	6	7	5	5	11	8
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0 2	0 1	2	0 2	0 1	2	0 2	0 1	2	0 2	0 1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #8 Cosumnes River Boulevard/Franklin Boulevard

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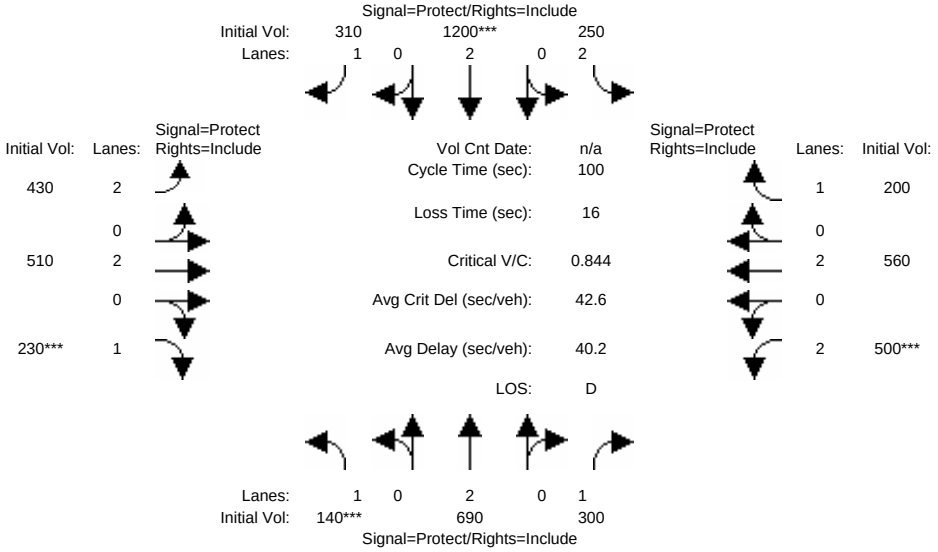
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.15 0.50  0.50  0.07 0.42  0.42  0.09 0.17  0.17  0.10 0.18  0.18
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.4 18.8   6.0   3.0  6.4   9.2   3.5  5.6   3.5   3.0  7.6   5.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.5  4.3   0.7   2.6  0.7   1.6   2.8  1.8   1.0   1.7  3.5   2.2
HCM2KQueue:   6.0 23.2   6.8   5.6  7.1  10.8   6.3  7.4   4.5   4.7 11.1   7.7
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.16  1.18  1.19 1.18  1.18  1.19 1.18  1.19  1.19 1.18  1.18
70th%HCM2kQ:  7.1 26.8   8.0   6.6  8.4  12.7   7.5  8.8   5.4   5.6 13.1   9.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.44  1.54  1.55 1.54  1.51  1.54 1.53  1.56  1.56 1.51  1.53
85th%HCM2kQ:  9.2 33.3  10.4   8.7 10.9  16.4   9.7 11.4   7.1   7.3 16.8  11.8
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.70 1.53  1.69  1.70 1.68  1.63  1.69 1.68  1.72  1.72 1.63  1.67
90th%HCM2kQ: 10.1 35.3  11.4   9.5 11.9  17.7  10.7 12.4   7.8   8.1 18.1  12.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.93 1.67  1.91  1.94 1.90  1.83  1.92 1.90  1.97  1.96 1.82  1.89
95th%HCM2kQ: 11.5 38.6  12.9  10.9 13.5  19.8  12.1 14.1   8.9   9.2 20.3  14.6
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.33 1.87  2.29  2.35 2.28  2.13  2.32 2.27  2.41  2.40 2.12  2.25
98th%HCM2kQ: 13.9 43.3  15.5  13.2 16.1  23.1  14.6 16.8  10.9  11.3 23.7  17.4
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  39.9  322  54.2  51.9  109  82.9  61.6 96.0  31.8  53.2  130  49.6
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    184.697 pounds
                      29.921 gallons
Carbon Dioxide:      576.255 pounds
Carbon Monoxide:      46.561 pounds
Hydrocarbons:          8.916 pounds
Nitrogen Oxides:       1.546 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    175.372 pounds
                      28.410 gallons
Carbon Dioxide:      547.159 pounds
Carbon Monoxide:      45.826 pounds
Hydrocarbons:          8.768 pounds
Nitrogen Oxides:       1.396 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP PM

Intersection #8: Cosumnes River Boulevard/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	140	690	300	250	1200	310	430	510	230	500	560	200
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:	140	690	300	250	1200	310	430	510	230	500	560	200
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:	140	690	300	250	1200	310	430	510	230	500	560	200
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	140	690	300	250	1200	310	430	510	230	500	560	200
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
Final Vol.:	140	690	300	250	1200	310	430	510	230	500	560	200
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
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.:	1769	3538	1583	3432	3538	1583	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.08	0.20	0.19	0.07	0.34	0.20	0.13	0.14	0.15	0.15	0.16	0.13
Crit Moves:	****				****				****	****		
Green/Cycle:	0.09	0.36	0.36	0.13	0.40	0.40	0.15	0.17	0.17	0.17	0.19	0.19
Volume/Cap:	0.84	0.54	0.53	0.54	0.84	0.49	0.82	0.84	0.84	0.84	0.82	0.66
Delay/Veh:	75.4	25.9	26.1	41.7	31.9	22.9	51.3	50.0	60.9	50.8	46.8	42.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	75.4	25.9	26.1	41.7	31.9	22.9	51.3	50.0	60.9	50.8	46.8	42.5
LOS by Move:	E	C	C	D	C	C	D	D	E	D	D	D
HCM2kAvgQ:	7	9	8	4	20	7	9	11	10	10	11	7
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	2 0	1	2 0	2 0	1	2 0	2 0	1	2 0	2 0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #8 Cosumnes River Boulevard/Franklin Boulevard


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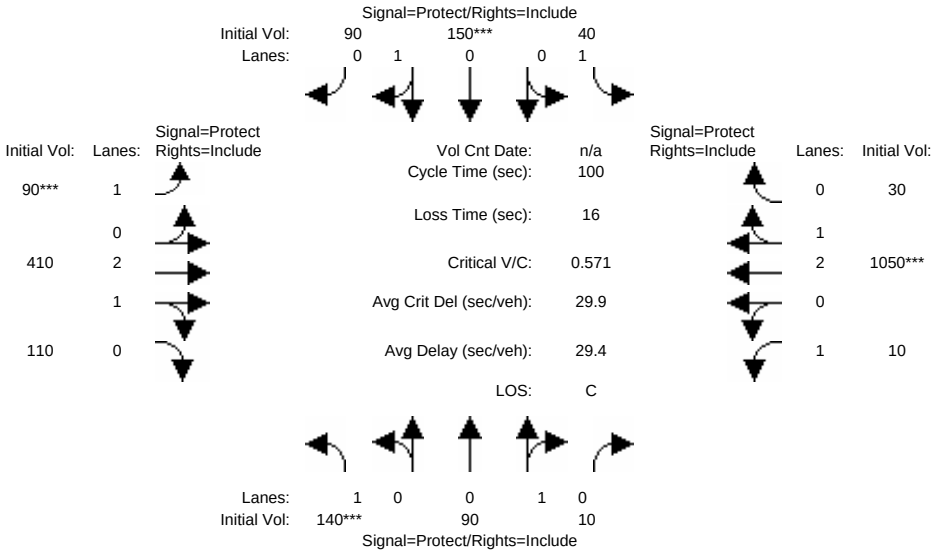
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.09 0.36  0.36  0.13 0.40  0.40  0.15 0.17  0.17  0.17 0.19  0.19
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.8  8.0   6.6   3.3 15.9   6.4   6.0  7.2   6.2   6.9  7.9   5.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           2.9  1.1   1.1   1.1  4.2   0.9   3.1  3.4   3.3   3.4  3.3   1.7
HCM2KQueue:   6.7  9.2   7.6   4.4 20.1   7.3   9.0 10.6   9.5  10.4 11.1   6.8
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.18  1.18  1.19 1.16  1.18  1.18 1.18  1.18  1.18 1.18  1.18
70th%HCM2kQ:  7.9 10.8   9.0   5.3 23.3   8.7  10.7 12.5  11.2  12.2 13.1   8.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.52  1.53  1.56 1.45  1.53  1.52 1.51  1.52  1.51 1.51  1.54
85th%HCM2kQ: 10.3 13.9  11.7   6.9 29.2  11.3  13.8 16.0  14.5  15.7 16.8  10.5
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.69 1.65  1.67  1.72 1.55  1.68  1.65 1.64  1.65  1.64 1.63  1.68
90th%HCM2kQ: 11.3 15.1  12.8   7.6 31.1  12.3  14.9 17.3  15.7  17.0 18.2  11.5
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.91 1.86  1.89  1.97 1.70  1.90  1.86 1.83  1.85  1.84 1.82  1.91
95th%HCM2kQ: 12.8 17.0  14.5   8.7 34.1  13.9  16.8 19.4  17.6  19.1 20.3  13.1
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.30 2.19  2.26  2.41 1.91  2.27  2.20 2.14  2.18  2.15 2.12  2.29
98th%HCM2kQ: 15.4 20.1  17.2  10.7 38.4  16.6  19.9 22.7  20.8  22.3 23.7  15.7
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  34.4  137  59.2  58.3  272  57.7 104.2  123  55.7 121.1  134  46.2
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    216.047 pounds
                      35.000 gallons
Carbon Dioxide:      674.068 pounds
Carbon Monoxide:      55.090 pounds
Hydrocarbons:         10.746 pounds
Nitrogen Oxides:       1.758 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    206.059 pounds
                      33.382 gallons
Carbon Dioxide:      642.904 pounds
Carbon Monoxide:      54.300 pounds
Hydrocarbons:         10.588 pounds
Nitrogen Oxides:       1.595 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP AM

Intersection #14: Cosumnes River Boulevard/Street A



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	140	90	10	40	150	90	90	410	110	10	1050	30
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:	140	90	10	40	150	90	90	410	110	10	1050	30
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:	140	90	10	40	150	90	90	410	110	10	1050	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	140	90	10	40	150	90	90	410	110	10	1050	30
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
Final Vol.:	140	90	10	40	150	90	90	410	110	10	1050	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.97	0.97	0.93	0.93	0.93	0.93	0.86	0.86	0.93	0.89	0.89
Lanes:	1.00	0.90	0.10	1.00	0.62	0.38	1.00	2.37	0.63	1.00	2.92	0.08
Final Sat.:	1769	1651	183	1769	1099	659	1769	3880	1041	1769	4922	141
Capacity Analysis Module:												
Vol/Sat:	0.08	0.05	0.05	0.02	0.14	0.14	0.05	0.11	0.11	0.01	0.21	0.21
Crit Moves:	****				****		****				****	
Green/Cycle:	0.14	0.22	0.22	0.16	0.24	0.24	0.09	0.31	0.31	0.15	0.37	0.37
Volume/Cap:	0.57	0.25	0.25	0.14	0.57	0.57	0.57	0.34	0.34	0.04	0.57	0.57
Delay/Veh:	43.5	32.5	32.5	36.6	35.4	35.4	48.7	26.4	26.4	36.5	25.4	25.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.5	32.5	32.5	36.6	35.4	35.4	48.7	26.4	26.4	36.5	25.4	25.4
LOS by Move:	D	C	C	D	D	D	D	C	C	D	C	C
HCM2kAvgQ:	5	3	3	1	7	7	4	5	5	0	10	10
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	2	1	0	1	0	2	1	0
Lane Group:	L	RT		RT		L	RT		RT		L	RT		RT		L	RT		RT	
#LnsInGrps:	1	1		1		1	1		1		3	3		1		3	3		3	
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.99	0.99	xxxx	0.94	0.94	xxxx	0.97	0.97	xxxx	1.00	1.00
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.97	0.97	0.93	0.93	0.93	0.93	0.95	0.95	0.93	0.98	0.98
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Fnl Sat Adj:	0.93	0.97	0.97	0.93	0.93	0.93	0.93	0.86	0.86	0.93	0.89	0.89
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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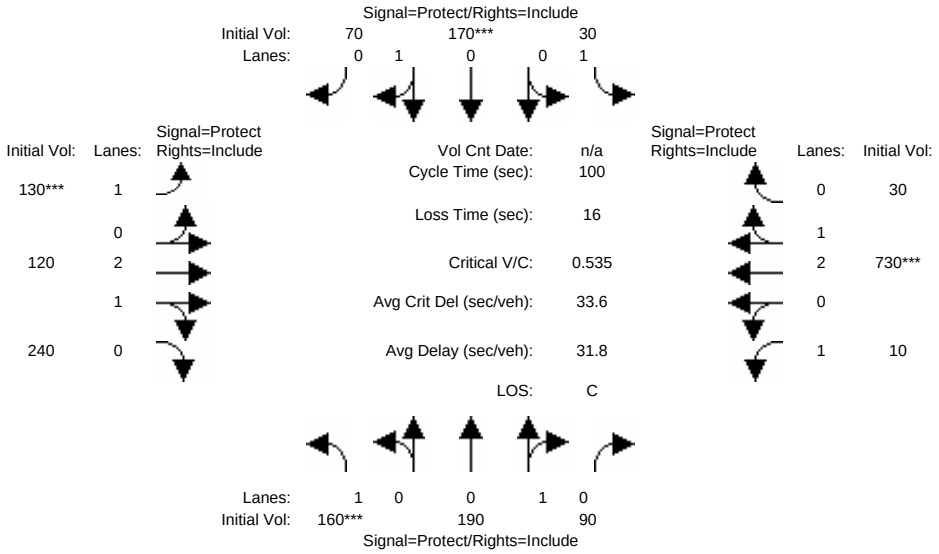
Intersection #14 Cosumnes River Boulevard/Street A


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.14 0.22  0.22  0.16 0.24  0.24  0.09 0.31  0.31  0.15 0.37  0.37
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.6  2.3   2.3   1.0  5.9   5.9   2.4  4.1   4.1   0.2  8.8   8.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.2  0.3   0.3   0.2  1.3   1.3   1.2  0.5   0.5   0.0  1.3   1.3
HCM2KQueue:   4.9  2.6   2.6   1.1  7.1   7.1   3.6  4.6   4.6   0.3 10.0  10.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.20 1.18  1.18  1.19 1.19  1.19  1.20 1.18  1.18
70th%HCM2kQ:  5.8  3.1   3.1   1.3  8.4   8.4   4.3  5.4   5.4   0.3 11.8  11.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.56 1.57  1.57  1.59 1.54  1.54  1.57 1.56  1.56  1.60 1.51  1.51
85th%HCM2kQ:  7.6  4.1   4.1   1.8 11.0  11.0   5.6  7.1   7.1   0.4 15.2  15.2
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.71 1.75  1.75  1.78 1.68  1.68  1.73 1.72  1.72  1.79 1.64  1.64
90th%HCM2kQ:  8.3  4.6   4.6   2.0 12.0  12.0   6.2  7.8   7.8   0.5 16.5  16.5
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.96 2.02  2.02  2.06 1.90  1.90  1.99 1.97  1.97  2.09 1.84  1.84
95th%HCM2kQ:  9.5  5.3   5.3   2.3 13.6  13.6   7.1  9.0   9.0   0.6 18.5  18.5
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.39 2.52  2.52  2.62 2.28  2.28  2.46 2.40  2.40  2.68 2.16  2.16
98th%HCM2kQ: 11.6  6.6   6.6   2.9 16.3  16.3   8.8 11.0  11.0   0.7 21.7  21.7
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #14 Cosumnes River Boulevard/Street A
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  32.7 18.6   2.1   8.6 33.0  19.8  21.6 78.6  21.1   2.1  209   6.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     73.052 pounds
                      11.834 gallons
Carbon Dioxide:      227.922 pounds
Carbon Monoxide:      18.151 pounds
Hydrocarbons:          3.392 pounds
Nitrogen Oxides:       0.632 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     68.975 pounds
                      11.174 gallons
Carbon Dioxide:      215.202 pounds
Carbon Monoxide:      17.831 pounds
Hydrocarbons:          3.328 pounds
Nitrogen Oxides:       0.568 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP PM

Intersection #14: Cosumnes River Boulevard/Street A



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	160	190	90	30	170	70	130	120	240	10	730	30
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	190	90	30	170	70	130	120	240	10	730	30
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	190	90	30	170	70	130	120	240	10	730	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	190	90	30	170	70	130	120	240	10	730	30
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
Final Vol.:	160	190	90	30	170	70	130	120	240	10	730	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.93	0.94	0.94	0.93	0.80	0.80	0.93	0.89	0.89
Lanes:	1.00	0.68	0.32	1.00	0.71	0.29	1.00	2.00	1.00	1.00	2.88	0.12
Final Sat.:	1769	1203	570	1769	1261	519	1769	3050	1525	1769	4853	199
Capacity Analysis Module:												
Vol/Sat:	0.09	0.16	0.16	0.02	0.13	0.13	0.07	0.04	0.16	0.01	0.15	0.15
Crit Moves:	****				****		****				****	
Green/Cycle:	0.17	0.32	0.32	0.10	0.25	0.25	0.14	0.32	0.32	0.10	0.28	0.28
Volume/Cap:	0.53	0.49	0.49	0.17	0.53	0.53	0.53	0.12	0.50	0.06	0.53	0.53
Delay/Veh:	39.8	28.1	28.1	41.5	33.6	33.6	42.5	24.2	28.2	40.8	30.8	30.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.8	28.1	28.1	41.5	33.6	33.6	42.5	24.2	28.2	40.8	30.8	30.8
LOS by Move:	D	C	C	D	C	C	D	C	C	D	C	C
HCM2kAvgQ:	5	7	7	1	7	7	4	1	7	0	8	8
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	2	1	0	1	0	2	1	0
Lane Group:	L	RT		RT		L	RT		RT		L	RT		RT		L	RT		RT	
#LnsInGrps:	1	1		1		1	1		1		1	3		3		1	3		3	
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.95	0.95	xxxx	0.96	0.96	xxxx	0.90	0.90	xxxx	0.99	0.99
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.93	0.93	0.93	0.94	0.94	0.93	0.88	0.88	0.93	0.97	0.97
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	0.91
Fnl Sat Adj:	0.93	0.93	0.93	0.93	0.94	0.94	0.93	0.80	0.80	0.93	0.89	0.89
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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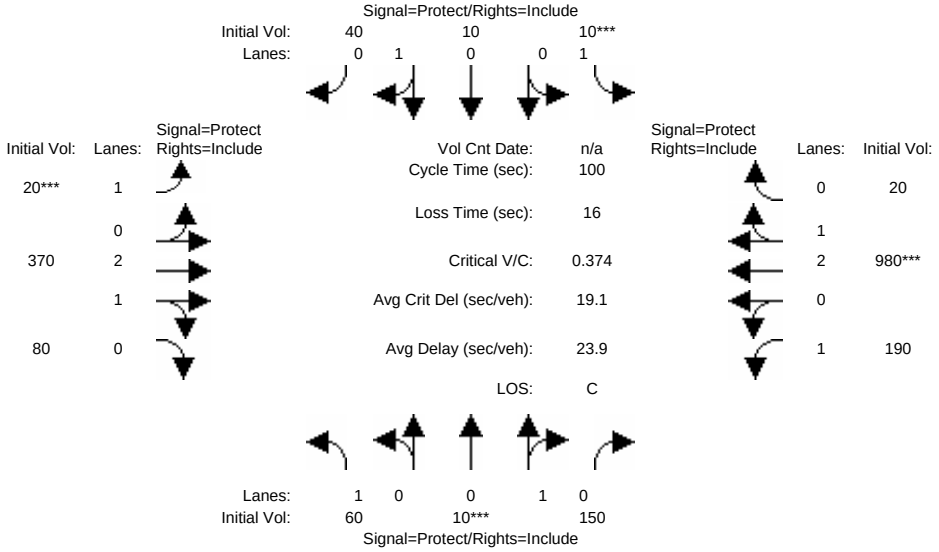
Intersection #14 Cosumnes River Boulevard/Street A


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.17 0.32  0.32  0.10 0.25  0.25  0.14 0.32  0.32  0.10 0.28  0.28
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.1  6.3   6.3   0.8  5.8   5.8   3.4  1.3   5.9   0.3  6.5   6.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.1  0.9   0.9   0.2  1.1   1.1   1.1  0.1   1.0   0.1  1.1   1.1
HCM2KQueue:   5.1  7.2   7.2   1.0  6.9   6.9   4.4  1.4   6.9   0.3  7.7   7.7
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.18  1.18  1.20 1.18  1.18  1.19 1.20  1.18  1.20 1.18  1.18
70th%HCM2kQ:  6.1  8.6   8.6   1.2  8.1   8.1   5.3  1.7   8.2   0.4  9.0   9.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.54  1.54  1.59 1.54  1.54  1.56 1.59  1.54  1.60 1.53  1.53
85th%HCM2kQ:  8.0 11.1  11.1   1.5 10.6  10.6   6.9  2.3  10.6   0.5 11.7  11.7
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.71 1.68  1.68  1.78 1.68  1.68  1.72 1.77  1.68  1.79 1.67  1.67
90th%HCM2kQ:  8.8 12.1  12.1   1.7 11.6  11.6   7.6  2.6  11.6   0.6 12.8  12.8
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.95 1.90  1.90  2.07 1.91  1.91  1.97 2.05  1.91  2.09 1.89  1.89
95th%HCM2kQ: 10.0 13.7  13.7   2.0 13.1  13.1   8.7  3.0  13.1   0.6 14.5  14.5
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.37 2.27  2.27  2.63 2.29  2.29  2.41 2.60  2.29  2.68 2.26  2.26
98th%HCM2kQ: 12.2 16.4  16.4   2.5 15.7  15.7  10.7  3.7  15.8   0.8 17.3  17.3
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #14 Cosumnes River Boulevard/Street A
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  36.5 38.4  18.2   6.9 36.7  15.1  30.3 21.3  48.6   2.3  154   6.3
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     68.218 pounds
                      11.051 gallons
Carbon Dioxide:      212.839 pounds
Carbon Monoxide:      17.065 pounds
Hydrocarbons:          3.225 pounds
Nitrogen Oxides:       0.582 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     64.576 pounds
                      10.461 gallons
Carbon Dioxide:      201.478 pounds
Carbon Monoxide:      16.778 pounds
Hydrocarbons:          3.167 pounds
Nitrogen Oxides:       0.524 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #15: Cosumnes River Boulevard/Street B




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      60   10   150    10   10    40    20  370    80   190  980    20
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:   60   10   150    10   10    40    20  370    80   190  980    20
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:    60   10   150    10   10    40    20  370    80   190  980    20
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   60   10   150    10   10    40    20  370    80   190  980    20
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
Final Vol.:    60   10   150    10   10    40    20  370    80   190  980    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.84  0.84  0.93 0.86  0.86  0.93 0.87  0.87  0.93 0.89  0.89
Lanes:       1.00 0.06  0.94  1.00 0.20  0.80  1.00 2.47  0.53  1.00 2.94  0.06
Final Sat.:  1769  100  1499  1769  328  1311  1769 4067   879  1769 4967   101
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.10  0.10  0.01 0.03  0.03  0.01 0.09  0.09  0.11 0.20  0.20
Crit Moves:       ****        ****             ****                   ****
Green/Cycle: 0.12 0.25  0.25  0.05 0.17  0.17  0.05 0.25  0.25  0.29 0.49  0.49
Volume/Cap:  0.27 0.40  0.40  0.11 0.17  0.17  0.23 0.37  0.37  0.37 0.40  0.40
Delay/Veh:   40.3 32.0  32.0  46.0 35.4  35.4  46.9 31.3  31.3  28.4 16.2  16.2
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  40.3 32.0  32.0  46.0 35.4  35.4  46.9 31.3  31.3  28.4 16.2  16.2
LOS by Move:   D    C     C     D    D     D     D    C     C     C    B     B
HCM2kAvgQ:     2    4     4     0    1     1     1    4     4     5    7     7
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       1  0  0  1  0    1  0  0  1  0    1  0  2  1  0    1  0  2  1  0
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L   RT     RT
#LnsInGrps:    1    1     1     1    1     1     1    3     3     1    3     3
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx 0.86  0.86  xxxx 0.88  0.88  xxxx 0.97  0.97  xxxx 1.00  1.00
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.84  0.84  0.93 0.86  0.86  0.93 0.95  0.95  0.93 0.98  0.98
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.91  0.91  1.00 0.91  0.91
Fnl Sat Adj: 0.93 0.84  0.84  0.93 0.86  0.86  0.93 0.87  0.87  0.93 0.89  0.89
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
```

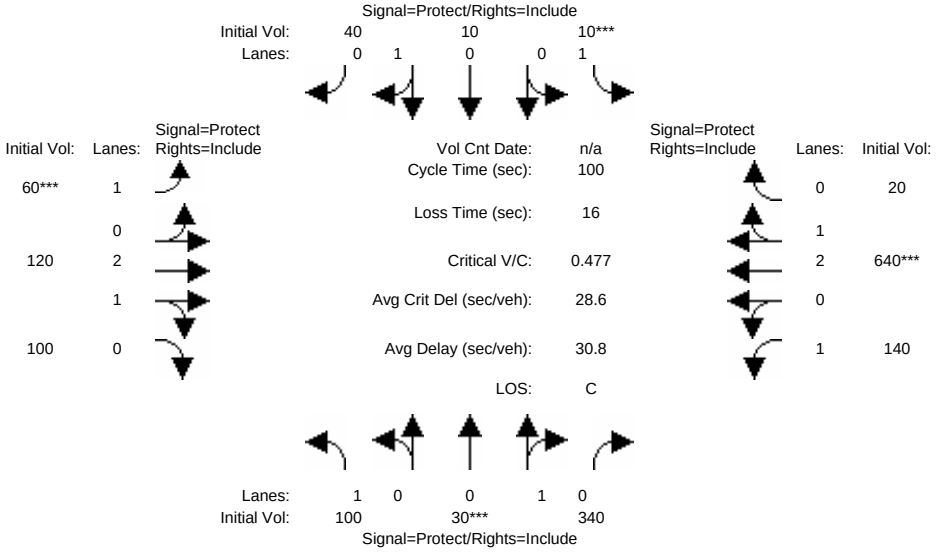


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.12 0.25  0.25  0.05 0.17  0.17  0.05 0.25  0.25  0.29 0.49  0.49
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.5  3.7   3.7   0.3  1.2   1.2   0.5  3.8   3.8   4.2  6.5   6.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.4  0.7   0.7   0.1  0.2   0.2   0.3  0.6   0.6   0.6  0.7   0.7
HCM2KQueue:   1.9  4.4   4.4   0.4  1.4   1.4   0.8  4.4   4.4   4.8  7.1   7.1
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.19  1.20 1.20  1.20  1.20 1.19  1.19  1.19 1.18  1.18
70th%HCM2kQ:  2.2  5.2   5.2   0.5  1.7   1.7   1.0  5.2   5.2   5.6  8.4   8.4
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.58 1.56  1.56  1.60 1.59  1.59  1.59 1.56  1.56  1.56 1.54  1.54
85th%HCM2kQ:  3.0  6.8   6.8   0.6  2.2   2.2   1.3  6.8   6.8   7.4 10.9  10.9
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.76 1.72  1.72  1.79 1.77  1.77  1.78 1.72  1.72  1.72 1.68  1.68
90th%HCM2kQ:  3.3  7.5   7.5   0.7  2.5   2.5   1.5  7.5   7.5   8.2 12.0  12.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.04 1.97  1.97  2.09 2.06  2.06  2.07 1.97  1.97  1.96 1.90  1.90
95th%HCM2kQ:  3.8  8.6   8.6   0.8  2.9   2.9   1.7  8.6   8.6   9.3 13.6  13.6
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.57 2.41  2.41  2.67 2.60  2.60  2.64 2.42  2.42  2.39 2.28  2.28
98th%HCM2kQ:  4.8 10.5  10.5   1.0  3.6   3.6   2.2 10.5  10.5  11.4 16.2  16.2
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  13.6  2.1  31.3   2.4  2.1   8.5   4.8 76.5  16.5  37.6  155   3.2
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     56.039 pounds
                       9.078 gallons
Carbon Dioxide:      174.842 pounds
Carbon Monoxide:      13.669 pounds
Hydrocarbons:          2.480 pounds
Nitrogen Oxides:       0.499 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     52.556 pounds
                       8.514 gallons
Carbon Dioxide:      163.974 pounds
Carbon Monoxide:      13.396 pounds
Hydrocarbons:          2.425 pounds
Nitrogen Oxides:       0.445 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP PM

Intersection #15: Cosumnes River Boulevard/Street B




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     100   30   340    10   10    40    60  120   100   140  640    20
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:  100   30   340    10   10    40    60  120   100   140  640    20
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:   100   30   340    10   10    40    60  120   100   140  640    20
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  100   30   340    10   10    40    60  120   100   140  640    20
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
Final Vol.:   100   30   340    10   10    40    60  120   100   140  640    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.84  0.84  0.93 0.86  0.86  0.93 0.83  0.83  0.93 0.89  0.89
Lanes:       1.00 0.08  0.92  1.00 0.20  0.80  1.00 2.00  1.00  1.00 2.91  0.09
Final Sat.:  1769  130  1475  1769  328  1311  1769 3158  1579  1769 4910   153
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.23  0.23  0.01 0.03  0.03  0.03 0.04  0.06  0.08 0.13  0.13
Crit Moves:       ****        ****             ****                   ****
Green/Cycle: 0.23 0.46  0.46  0.05 0.28  0.28  0.07 0.15  0.15  0.17 0.26  0.26
Volume/Cap:  0.25 0.50  0.50  0.11 0.11  0.11  0.50 0.25  0.41  0.45 0.50  0.50
Delay/Veh:   31.9 19.4  19.4  46.0 26.6  26.6  48.2 37.3  38.7  38.1 31.7  31.7
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  31.9 19.4  19.4  46.0 26.6  26.6  48.2 37.3  38.7  38.1 31.7  31.7
LOS by Move:   C    B     B     D    C     C     D    D     D     D    C     C
HCM2kAvgQ:     3    8     8     0    1     1     3    2     3     4    7     7
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       1  0  0  1  0    1  0  0  1  0    1  0  2  1  0    1  0  2  1  0
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L   RT     RT
#LnsInGrps:    1    1     1     1    1     1     1    3     3     1    3     3
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx 0.86  0.86  xxxx 0.88  0.88  xxxx 0.93  0.93  xxxx 1.00  1.00
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.84  0.84  0.93 0.86  0.86  0.93 0.91  0.91  0.93 0.98  0.98
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.91  0.91  1.00 0.91  0.91
Fnl Sat Adj: 0.93 0.84  0.84  0.93 0.86  0.86  0.93 0.83  0.83  0.93 0.89  0.89
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
```



```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.23 0.46  0.46  0.05 0.28  0.28  0.07 0.15  0.15  0.17 0.26  0.26
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.3  7.2   7.2   0.3  1.0   1.0   1.6  1.6   2.8   3.5  5.7   5.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.3  1.0   1.0   0.1  0.1   0.1   0.9  0.3   0.7   0.8  1.0   1.0
HCM2KQueue:   2.6  8.2   8.2   0.4  1.1   1.1   2.5  1.9   3.4   4.3  6.7   6.7
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.18  1.18  1.20 1.20  1.20  1.19 1.20  1.19  1.19 1.18  1.18
70th%HCM2kQ:  3.1  9.7   9.7   0.5  1.4   1.4   3.0  2.3   4.1   5.1  7.9   7.9
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.58 1.53  1.53  1.60 1.59  1.59  1.58 1.58  1.57  1.56 1.54  1.54
85th%HCM2kQ:  4.1 12.5  12.5   0.6  1.8   1.8   3.9  3.1   5.4   6.7 10.3  10.3
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.75 1.67  1.67  1.79 1.78  1.78  1.75 1.76  1.74  1.72 1.69  1.69
90th%HCM2kQ:  4.5 13.6  13.6   0.7  2.0   2.0   4.4  3.4   6.0   7.4 11.3  11.3
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.02 1.88  1.88  2.09 2.06  2.06  2.02 2.04  2.00  1.97 1.91  1.91
95th%HCM2kQ:  5.2 15.4  15.4   0.8  2.4   2.4   5.1  3.9   6.8   8.5 12.8  12.8
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.52 2.23  2.23  2.67 2.62  2.62  2.52 2.56  2.47  2.42 2.30  2.30
98th%HCM2kQ:  6.5 18.3  18.3   1.0  3.0   3.0   6.3  5.0   8.5  10.4 15.3  15.3
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  20.4  5.3  59.5   2.4  1.8   7.4  14.5 26.4  22.6  31.4  136   4.2
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     54.643 pounds
                       8.852 gallons
Carbon Dioxide:      170.485 pounds
Carbon Monoxide:      13.635 pounds
Hydrocarbons:          2.568 pounds
Nitrogen Oxides:       0.468 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     51.680 pounds
                       8.372 gallons
Carbon Dioxide:      161.242 pounds
Carbon Monoxide:      13.402 pounds
Hydrocarbons:          2.521 pounds
Nitrogen Oxides:       0.421 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #16: Cosumnes River Boulevard/24th Street

Signal=Protect/Rights=Include

Initial Vol: 220*** 60 20
Lanes: 0 1 1 0 1

Initial Vol:	Lanes:	Signal=Protect Rights=Include			Signal=Protect Rights=Include	Lanes:	Initial Vol:
			Vol Cnt Date:	n/a			
			Cycle Time (sec):	100			
0	1					0	50
	0		Loss Time (sec):	16		1	
500***	1		Critical V/C:	0.580		1	900
	1		Avg Crit Del (sec/veh):	34.1		0	
40	0		Avg Delay (sec/veh):	24.7		1	310***
			LOS:	C			

Lanes: 1 0 2 0 1
Initial Vol: 30*** 90 200
Signal=Protect/Rights=Overlap

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5    7     0     5    7     0     5    7     0     5    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      30   90   200    20   60   220     0  500    40   310  900    50
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   90   200    20   60   220     0  500    40   310  900    50
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   90   200    20   60   220     0  500    40   310  900    50
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   30   90   200    20   60   220     0  500    40   310  900    50
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
Final Vol.:    30   90   200    20   60   220     0  500    40   310  900    50
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.93  0.83  0.93 0.82  0.82  1.00 0.92  0.92  0.93 0.92  0.92
Lanes:       1.00 2.00  1.00  1.00 1.00  1.00  1.00 1.85  0.15  1.00 1.89  0.11
Final Sat.:  1769 3538  1583  1769 1560  1560  1900 3240   259  1769 3325   185
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.03  0.13  0.01 0.04  0.14  0.00 0.15  0.15  0.18 0.27  0.27
Crit Moves:  ****                         ****        ****        ****
Green/Cycle: 0.05 0.17  0.46  0.12 0.24  0.24  0.00 0.26  0.26  0.29 0.55  0.55
Volume/Cap:  0.34 0.15  0.27  0.09 0.16  0.60  0.00 0.60  0.60  0.60 0.49  0.49
Delay/Veh:   48.2 35.7  16.8  39.4 30.3  36.0   0.0 33.5  33.5  32.1 13.9  13.9
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  48.2 35.7  16.8  39.4 30.3  36.0   0.0 33.5  33.5  32.1 13.9  13.9
LOS by Move:    D    D     B     D    C     D     A    C     C     C    B     B
HCM2kAvgQ:      1    1     4     1    2     7     0    8     8     9    9     9
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  2  0  1    1  0  1  1  0    1  0  1  1  0    1  0  1  1  0
Lane Group:     L    T     R     L   RT    RT     L   RT    RT     L   RT    RT
#LnsInGrps:     1    2     1     1    2     2     1    2     2     1    2     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  xxxx 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  xxxx 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  xxxx 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  xxxx 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx 0.88  0.88  xxxx 0.99  0.99  xxxx 0.99  0.99
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.83  0.93 0.86  0.86  1.00 0.97  0.97  0.93 0.97  0.97
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  1.00  1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  0.95
Fnl Sat Adj: 0.93 0.93  0.83  0.93 0.82  0.82  1.00 0.92  0.92  0.93 0.92  0.92
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                           2000 HCM Operations Method
                             Base Volume Alternative
*********************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
```



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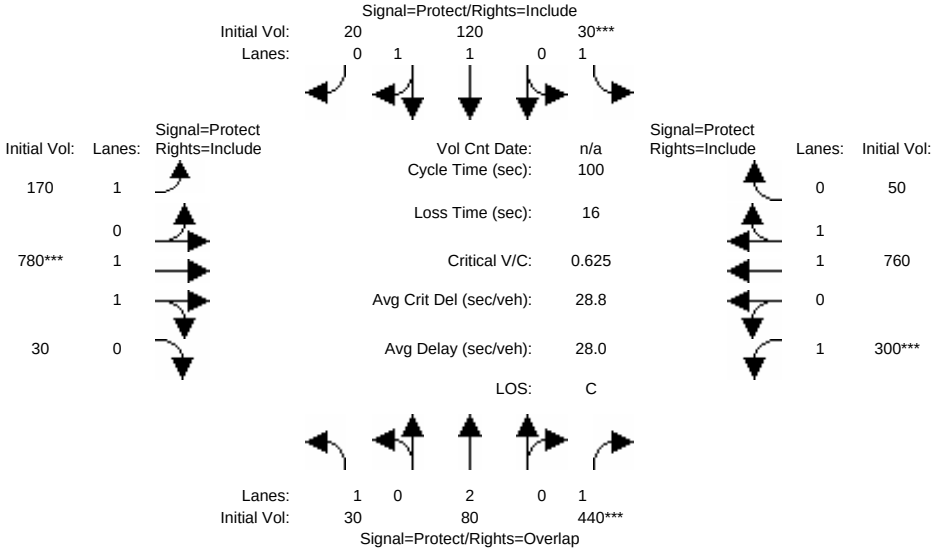
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.05 0.17  0.46  0.12 0.24  0.24  0.00 0.26  0.26  0.29 0.55  0.55
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.8  1.1   3.4   0.5  1.4   5.7   0.0  6.9   6.9   7.4  8.5   8.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  0.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.5  0.2   0.4   0.1  0.2   1.4   0.0  1.4   1.4   1.4  0.9   0.9
HCM2KQueue:   1.3  1.3   3.8   0.6  1.6   7.1   0.0  8.3   8.3   8.8  9.5   9.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.19  1.20 1.20  1.18  1.20 1.18  1.18  1.18 1.18  1.18
70th%HCM2kQ:  1.5  1.6   4.5   0.7  1.9   8.4   0.0  9.8   9.8  10.3 11.1  11.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.59 1.59  1.56  1.59 1.58  1.54  1.60 1.53  1.53  1.52 1.52  1.52
85th%HCM2kQ:  2.0  2.1   5.9   1.0  2.5  10.9   0.0 12.7  12.7  13.4 14.4  14.4
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.78 1.77  1.73  1.79 1.77  1.68  1.80 1.66  1.66  1.66 1.65  1.65
90th%HCM2kQ:  2.3  2.3   6.6   1.1  2.8  11.9   0.0 13.8  13.8  14.5 15.6  15.6
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.06 2.06  1.99  2.08 2.05  1.90  2.10 1.88  1.88  1.87 1.85  1.85
95th%HCM2kQ:  2.6  2.7   7.5   1.2  3.2  13.5   0.0 15.6  15.6  16.4 17.5  17.5
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.61 2.60  2.45  2.65 2.59  2.28  2.70 2.23  2.23  2.21 2.18  2.18
98th%HCM2kQ:  3.4  3.4   9.3   1.6  4.1  16.2   0.0 18.5  18.5  19.4 20.6  20.6
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   7.2 19.2  30.8   4.5 11.9  48.9   0.0  110   8.8  66.3  138   7.7
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     71.327 pounds
                      11.555 gallons
Carbon Dioxide:      222.540 pounds
Carbon Monoxide:      17.448 pounds
Hydrocarbons:          3.180 pounds
Nitrogen Oxides:       0.633 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     66.961 pounds
                      10.848 gallons
Carbon Dioxide:      208.918 pounds
Carbon Monoxide:      17.107 pounds
Hydrocarbons:          3.110 pounds
Nitrogen Oxides:       0.566 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP PM

Intersection #16: Cosumnes River Boulevard/24th Street




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5    7     0     5    7     0     5    7     0     5    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      30   80   440    30  120    20   170  780    30   300  760    50
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   80   440    30  120    20   170  780    30   300  760    50
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   80   440    30  120    20   170  780    30   300  760    50
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   30   80   440    30  120    20   170  780    30   300  760    50
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
Final Vol.:    30   80   440    30  120    20   170  780    30   300  760    50
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.93  0.83  0.93 0.91  0.91  0.93 0.93  0.93  0.93 0.92  0.92
Lanes:       1.00 2.00  1.00  1.00 1.71  0.29  1.00 1.93  0.07  1.00 1.88  0.12
Final Sat.:  1769 3538  1583  1769 2969   495  1769 3386   130  1769 3290   216
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.02  0.28  0.02 0.04  0.04  0.10 0.23  0.23  0.17 0.23  0.23
Crit Moves:             ****  ****                 ****        ****
Green/Cycle: 0.09 0.17  0.43  0.05 0.13  0.13  0.18 0.36  0.36  0.26 0.44  0.44
Volume/Cap:  0.19 0.13  0.64  0.34 0.32  0.32  0.53 0.64  0.64  0.64 0.53  0.53
Delay/Veh:   42.6 35.5  24.4  48.2 40.1  40.1  38.6 27.9  27.9  35.7 20.8  20.8
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  42.6 35.5  24.4  48.2 40.1  40.1  38.6 27.9  27.9  35.7 20.8  20.8
LOS by Move:   D    D     C     D    D     D     D    C     C     D    C     C
HCM2kAvgQ:     1    1    11     1    2     2     5   12    12     9   10    10
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       1  0  2  0  1    1  0  1  1  0    1  0  1  1  0    1  0  1  1  0
Lane Group:    L     T     R     L   RT     RT    L   RT     RT    L   RT     RT
#LnsInGrps:    1     2     1     1    2     2     1    2     2     1    2     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid          8                8                8                8
% Hev Veh:            2                2                2                2
Grade:               0%               0%               0%               0%
Parking/Hr:          No               No               No               No
Bus Stp/Hr:           0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:           0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx 0.98  0.98  xxxx 0.99  0.99  xxxx 0.99  0.99
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.83  0.93 0.96  0.96  0.93 0.97  0.97  0.93 0.97  0.97
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  1.00  1.00 0.95  0.95  1.00 0.95  0.95  1.00 0.95  0.95
Fnl Sat Adj: 0.93 0.93  0.83  0.93 0.91  0.91  0.93 0.93  0.93  0.93 0.92  0.92
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
```

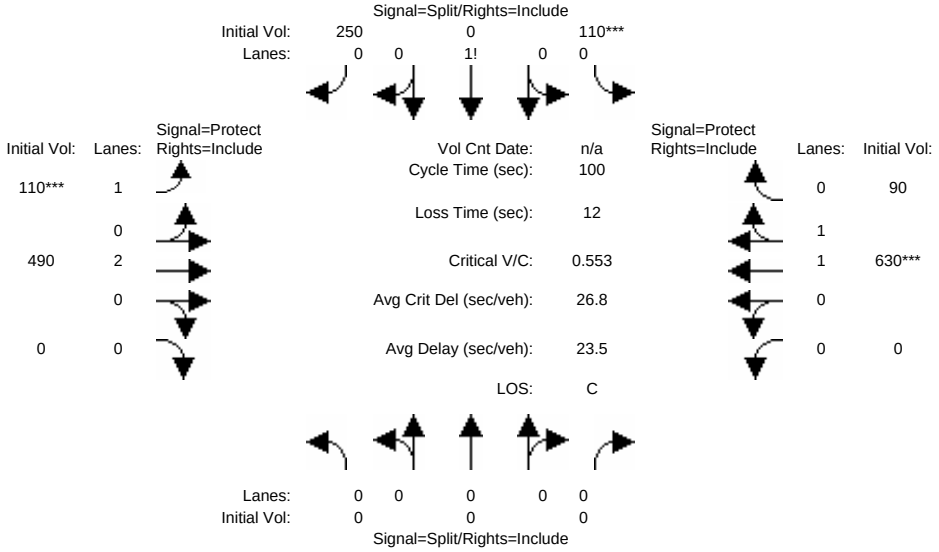


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.09 0.17  0.43  0.05 0.13  0.13  0.18 0.36  0.36  0.26 0.44  0.44
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.8  1.0   9.6   0.8  1.9   1.9   4.3  9.9   9.9   7.4  8.6   8.6
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.2  0.2   1.7   0.5  0.5   0.5   1.1  1.7   1.7   1.7  1.1   1.1
HCM2KQueue:   1.0  1.1  11.3   1.3  2.3   2.3   5.3 11.6  11.6   9.1  9.7   9.7
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.18  1.20 1.19  1.19  1.19 1.17  1.17  1.18 1.18  1.18
70th%HCM2kQ:  1.2  1.4  13.3   1.5  2.8   2.8   6.3 13.6  13.6  10.7 11.5  11.5
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.59 1.59  1.51  1.59 1.58  1.58  1.55 1.50  1.50  1.52 1.52  1.52
85th%HCM2kQ:  1.6  1.8  17.0   2.0  3.7   3.7   8.3 17.4  17.4  13.8 14.8  14.8
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.78 1.78  1.63  1.78 1.76  1.76  1.71 1.62  1.62  1.65 1.65  1.65
90th%HCM2kQ:  1.8  2.0  18.4   2.3  4.1   4.1   9.1 18.8  18.8  15.0 16.0  16.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.07 2.06  1.82  2.06 2.03  2.03  1.95 1.82  1.82  1.86 1.85  1.85
95th%HCM2kQ:  2.1  2.4  20.6   2.6  4.7   4.7  10.4 21.0  21.0  16.9 18.0  18.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.63 2.62  2.12  2.61 2.54  2.54  2.36 2.11  2.11  2.20 2.17  2.17
98th%HCM2kQ:  2.6  3.0  24.0   3.4  5.9   5.9  12.6 24.4  24.4  19.9 21.1  21.1
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   6.9 17.0  86.5   7.2 27.3   4.5  38.4  163   6.3  66.5  139   9.1
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     89.781 pounds
                      14.544 gallons
Carbon Dioxide:      280.115 pounds
Carbon Monoxide:      22.212 pounds
Hydrocarbons:          4.119 pounds
Nitrogen Oxides:       0.786 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     84.625 pounds
                      13.709 gallons
Carbon Dioxide:      264.031 pounds
Carbon Monoxide:      21.807 pounds
Hydrocarbons:          4.038 pounds
Nitrogen Oxides:       0.705 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP AM

Intersection #17: Cosumnes River Boulevard/Stone-Boswell Access West




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     7     0     5     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   110     0   250   110   490     0     0   630    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:    0     0     0   110     0   250   110   490     0     0   630    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:     0     0     0   110     0   250   110   490     0     0   630    90
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0   110     0   250   110   490     0     0   630    90
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
Final Vol.:     0     0     0   110     0   250   110   490     0     0   630    90
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.87  1.00  0.87  0.93  0.93  1.00  1.00  0.91  0.91
Lanes:       0.00  0.00  0.00  0.31  0.00  0.69  1.00  2.00  0.00  0.00  1.75  0.25
Final Sat.:     0     0     0   508     0  1154  1769  3538     0     0  3037   434
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.22  0.00  0.22  0.06  0.14  0.00  0.00  0.21  0.21
Crit Moves:                     ****                ****                ****
Green/Cycle: 0.00  0.00  0.00  0.39  0.00  0.39  0.11  0.49  0.00  0.00  0.38  0.38
Volume/Cap:  0.00  0.00  0.00  0.55  0.00  0.55  0.55  0.28  0.00  0.00  0.55  0.55
Delay/Veh:    0.0   0.0   0.0  24.6   0.0  24.6  45.3  15.3   0.0   0.0  25.1  25.1
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0  24.6   0.0  24.6  45.3  15.3   0.0   0.0  25.1  25.1
LOS by Move:    A     A     A     C     A     C     D     B     A     A     C     C
HCM2kAvgQ:      0     0     0     9     0     9     4     5     0     0     9     9
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
Lane Group:  xxxx xxxx  xxxx   LTR  LTR   LTR    L    T   xxxx  xxxx  RT     RT
#LnsInGrps:     0     0     0     1     1     1     1     2     0     0     2     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid         8                 8                 8                 8
% Hev Veh:           2                 2                 2                 2
Grade:              0%                0%                0%                0%
Parking/Hr:         No                No                No                No
Bus Stp/Hr:          0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:          0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     4 xxxx     4     1 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx  0.98  0.98 0.98 xxxxx  xxxx 0.98  0.98
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Parking Adj: xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Bus Stp Adj: xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
RT Adj:      xxxx xxxx xxxxx  0.91 xxxx  0.91  xxxx xxxx xxxxx  xxxx 0.98  0.98
LT Adj:      xxxx xxxx xxxxx  0.99 xxxx  0.99  0.95 xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 1.00  1.00  1.00  0.87  1.00  0.87  0.93  0.98  1.00  1.00  0.96  0.96
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.95  1.00  1.00  0.95  0.95
Fnl Sat Adj: 1.00  1.00  1.00  0.87  1.00  0.87  0.93  0.93  1.00  1.00  0.91  0.91
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > > >
DelAdjFctr:  0.00  0.00  0.00  1.00  0.00  1.00  1.00  1.00  0.00  0.00  1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
```



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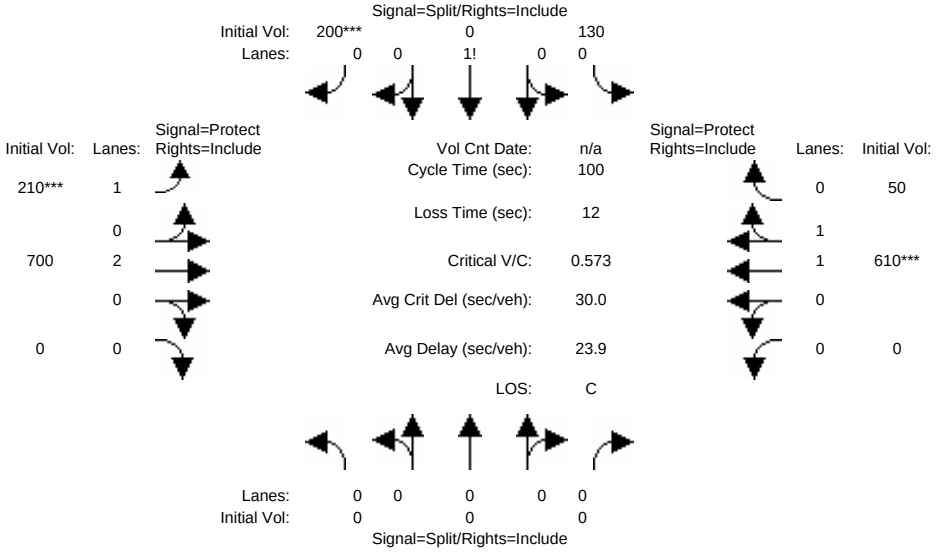
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.39 0.00  0.39  0.11 0.49  0.00  0.00 0.38  0.38
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   7.8  0.0   7.8   2.9  4.3   0.0   0.0  8.3   8.3
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   1.2  0.0   1.2   1.1  0.4   0.0   0.0  1.2   1.2
HCM2KQueue:   0.0  0.0   0.0   9.0  0.0   9.0   4.0  4.7   0.0   0.0  9.5   9.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.18  1.19 1.19  1.20  1.20 1.18  1.18
70th%HCM2kQ:  0.0  0.0   0.0  10.6  0.0  10.6   4.8  5.5   0.0   0.0 11.2  11.2
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.52 1.60  1.52  1.56 1.56  1.60  1.60 1.52  1.52
85th%HCM2kQ:  0.0  0.0   0.0  13.6  0.0  13.6   6.3  7.2   0.0   0.0 14.4  14.4
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.66 1.80  1.66  1.73 1.72  1.80  1.80 1.65  1.65
90th%HCM2kQ:  0.0  0.0   0.0  14.8  0.0  14.8   6.9  8.0   0.0   0.0 15.7  15.7
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.86 2.10  1.86  1.98 1.96  2.10  2.10 1.85  1.85
95th%HCM2kQ:  0.0  0.0   0.0  16.7  0.0  16.7   7.9  9.1   0.0   0.0 17.6  17.6
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.20 2.70  2.20  2.43 2.40  2.70  2.70 2.18  2.18
98th%HCM2kQ:  0.0  0.0   0.0  19.7  0.0  19.7   9.8 11.2   0.0   0.0 20.7  20.7
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  21.3  0.0  48.5  26.0 72.8   0.0   0.0  124  17.7
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     48.052 pounds
                       7.784 gallons
Carbon Dioxide:      149.922 pounds
Carbon Monoxide:      11.698 pounds
Hydrocarbons:          2.114 pounds
Nitrogen Oxides:       0.431 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     45.028 pounds
                       7.295 gallons
Carbon Dioxide:      140.487 pounds
Carbon Monoxide:      11.462 pounds
Hydrocarbons:          2.066 pounds
Nitrogen Oxides:       0.385 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP PM

Intersection #17: Cosumnes River Boulevard/Stone-Boswell Access West




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     7     0     5     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   130     0   200   210   700     0     0   610    50
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   130     0   200   210   700     0     0   610    50
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   130     0   200   210   700     0     0   610    50
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0   130     0   200   210   700     0     0   610    50
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
Final Vol.:     0     0     0   130     0   200   210   700     0     0   610    50
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.88  1.00  0.88  0.93  0.93  1.00  1.00  0.92  0.92
Lanes:       0.00  0.00  0.00  0.39  0.00  0.61  1.00  2.00  0.00  0.00  1.85  0.15
Final Sat.:     0     0     0   661     0  1016  1769  3538     0     0  3234   265
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.20  0.00  0.20  0.12  0.20  0.00  0.00  0.19  0.19
Crit Moves:                                ****  ****                    ****
Green/Cycle: 0.00  0.00  0.00  0.34  0.00  0.34  0.21  0.54  0.00  0.00  0.33  0.33
Volume/Cap:  0.00  0.00  0.00  0.57  0.00  0.57  0.57  0.37  0.00  0.00  0.57  0.57
Delay/Veh:    0.0   0.0   0.0  28.2   0.0  28.2  37.9  13.5   0.0   0.0  28.4  28.4
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0  28.2   0.0  28.2  37.9  13.5   0.0   0.0  28.4  28.4
LOS by Move:    A     A     A     C     A     C     D     B     A     A     C     C
HCM2kAvgQ:      0     0     0     9     0     9     7     6     0     0     9     9
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
Lane Group:  xxxx xxxx  xxxx   LTR  LTR   LTR    L    T   xxxx  xxxx  RT     RT
#LnsInGrps:     0     0     0     1     1     1     1     2     0     0     2     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid         8                 8                 8                 8
% Hev Veh:           2                 2                 2                 2
Grade:              0%                0%                0%                0%
Parking/Hr:         No                No                No                No
Bus Stp/Hr:          0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:          0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     4 xxxx     4     1 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx  0.98  0.98 0.98 xxxxx  xxxx 0.98  0.98
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Parking Adj: xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Bus Stp Adj: xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
RT Adj:      xxxx xxxx xxxxx  0.92 xxxx  0.92  xxxx xxxx xxxxx  xxxx 0.99  0.99
LT Adj:      xxxx xxxx xxxxx  0.98 xxxx  0.98  0.95 xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 1.00  1.00  1.00  0.88  1.00  0.88  0.93  0.98  1.00  1.00  0.97  0.97
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.95  1.00  1.00  0.95  0.95
Fnl Sat Adj: 1.00  1.00  1.00  0.88  1.00  0.88  0.93  0.93  1.00  1.00  0.92  0.92
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00  0.00  0.00  1.00  0.00  1.00  1.00  1.00  0.00  0.00  1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
```

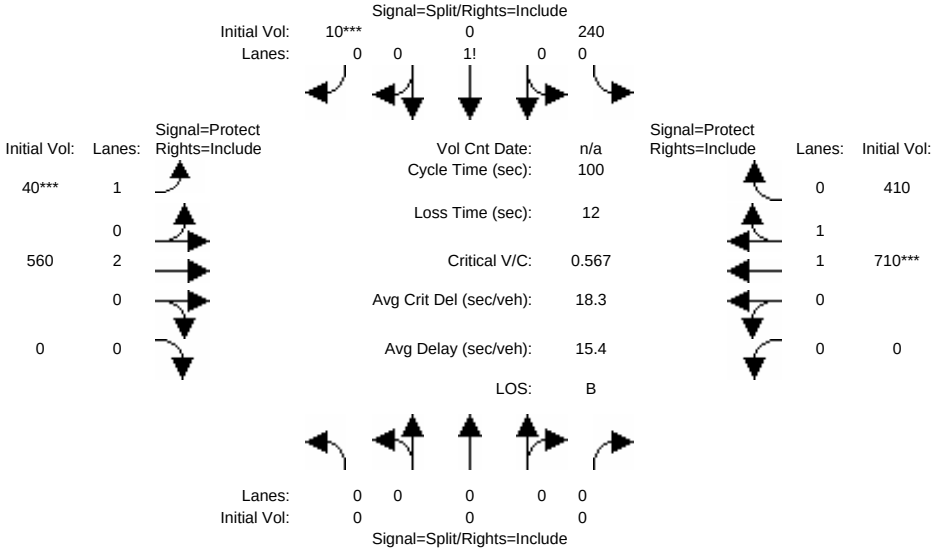


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.34 0.00  0.34  0.21 0.54  0.00  0.00 0.33  0.33
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   7.5  0.0   7.5   5.2  5.9   0.0   0.0  8.0   8.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   1.3  0.0   1.3   1.3  0.6   0.0   0.0  1.3   1.3
HCM2KQueue:   0.0  0.0   0.0   8.8  0.0   8.8   6.5  6.5   0.0   0.0  9.3   9.3
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.18  1.18 1.19  1.20  1.20 1.18  1.18
70th%HCM2kQ:  0.0  0.0   0.0  10.4  0.0  10.4   7.7  7.7   0.0   0.0 10.9  10.9
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.52 1.60  1.52  1.54 1.54  1.60  1.60 1.52  1.52
85th%HCM2kQ:  0.0  0.0   0.0  13.4  0.0  13.4  10.0 10.0   0.0   0.0 14.1  14.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.66 1.80  1.66  1.69 1.69  1.80  1.80 1.65  1.65
90th%HCM2kQ:  0.0  0.0   0.0  14.6  0.0  14.6  11.0 11.0   0.0   0.0 15.3  15.3
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.87 2.10  1.87  1.92 1.92  2.10  2.10 1.86  1.86
95th%HCM2kQ:  0.0  0.0   0.0  16.4  0.0  16.4  12.5 12.5   0.0   0.0 17.2  17.2
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.21 2.70  2.21  2.31 2.31  2.70  2.70 2.19  2.19
98th%HCM2kQ:  0.0  0.0   0.0  19.4  0.0  19.4  15.0 15.0   0.0   0.0 20.3  20.3
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  26.6  0.0  40.9  47.2  101   0.0   0.0  126  10.3
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     54.960 pounds
                       8.903 gallons
Carbon Dioxide:      171.474 pounds
Carbon Monoxide:      13.405 pounds
Hydrocarbons:          2.430 pounds
Nitrogen Oxides:       0.491 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     51.538 pounds
                       8.349 gallons
Carbon Dioxide:      160.797 pounds
Carbon Monoxide:      13.137 pounds
Hydrocarbons:          2.376 pounds
Nitrogen Oxides:       0.438 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #18: Cosumnes River Boulevard/Stone-Boswell Access East




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     7     0     5     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   240     0    10    40   560     0     0   710   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:    0     0     0   240     0    10    40   560     0     0   710   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:     0     0     0   240     0    10    40   560     0     0   710   410
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0   240     0    10    40   560     0     0   710   410
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
Final Vol.:     0     0     0   240     0    10    40   560     0     0   710   410
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.93  1.00  0.93  0.93  0.93  1.00  1.00  0.88  0.88
Lanes:       0.00  0.00  0.00  0.96  0.00  0.04  1.00  2.00  0.00  0.00  1.27  0.73
Final Sat.:     0     0     0  1697     0    71  1769  3538     0     0  2119  1224
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.14  0.00  0.14  0.02  0.16  0.00  0.00  0.34  0.34
Crit Moves:                                ****  ****                    ****
Green/Cycle: 0.00  0.00  0.00  0.25  0.00  0.25  0.05  0.63  0.00  0.00  0.58  0.58
Volume/Cap:  0.00  0.00  0.00  0.57  0.00  0.57  0.45  0.25  0.00  0.00  0.57  0.57
Delay/Veh:    0.0   0.0   0.0  34.9   0.0  34.9  49.8   8.0   0.0   0.0  13.5  13.5
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0  34.9   0.0  34.9  49.8   8.0   0.0   0.0  13.5  13.5
LOS by Move:    A     A     A     C     A     C     D     A     A     A     B     B
HCM2kAvgQ:      0     0     0     7     0     7     2     4     0     0    12    12
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
Lane Group:  xxxx xxxx  xxxx   LTR  LTR   LTR    L    T   xxxx  xxxx  RT     RT
#LnsInGrps:     0     0     0     1     1     1     1     2     0     0     2     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     4 xxxx     4     1 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx  0.98  0.98 0.98 xxxxx  xxxx 0.98  0.98
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Parking Adj: xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Bus Stp Adj: xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
RT Adj:      xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 0.95  0.95
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx  0.95  0.95 xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 1.00  1.00  1.00  0.93  1.00  0.93  0.93  0.98  1.00  1.00  0.93  0.93
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.95  1.00  1.00  0.95  0.95
Fnl Sat Adj: 1.00  1.00  1.00  0.93  1.00  0.93  0.93  0.93  1.00  1.00  0.88  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
```



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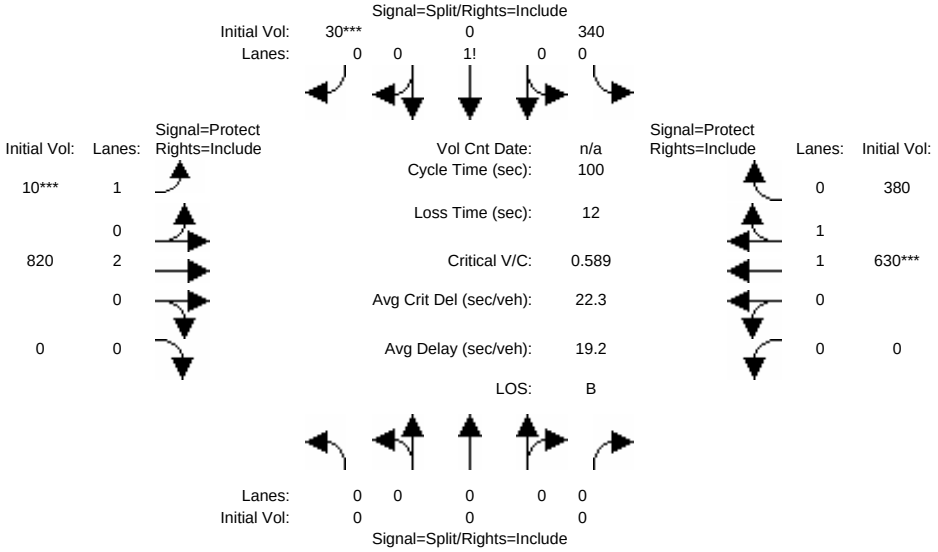
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.25 0.00  0.25  0.05 0.63  0.00  0.00 0.58  0.58
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   6.1  0.0   6.1   1.1  3.6   0.0   0.0 10.3  10.3
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   1.3  0.0   1.3   0.7  0.3   0.0   0.0  1.3   1.3
HCM2KQueue:   0.0  0.0   0.0   7.4  0.0   7.4   1.8  3.9   0.0   0.0 11.6  11.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.18  1.20 1.19  1.20  1.20 1.17  1.17
70th%HCM2kQ:  0.0  0.0   0.0   8.7  0.0   8.7   2.2  4.6   0.0   0.0 13.6  13.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.53 1.60  1.53  1.58 1.56  1.60  1.60 1.50  1.50
85th%HCM2kQ:  0.0  0.0   0.0  11.3  0.0  11.3   2.9  6.1   0.0   0.0 17.4  17.4
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.68 1.80  1.68  1.77 1.73  1.80  1.80 1.62  1.62
90th%HCM2kQ:  0.0  0.0   0.0  12.4  0.0  12.4   3.2  6.7   0.0   0.0 18.8  18.8
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.90 2.10  1.90  2.04 1.98  2.10  2.10 1.82  1.82
95th%HCM2kQ:  0.0  0.0   0.0  14.0  0.0  14.0   3.7  7.7   0.0   0.0 21.0  21.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.27 2.70  2.27  2.57 2.44  2.70  2.70 2.11  2.11
98th%HCM2kQ:  0.0  0.0   0.0  16.7  0.0  16.7   4.7  9.5   0.0   0.0 24.4  24.4
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  52.7  0.0   2.2   9.7 60.9   0.0   0.0  111  64.2
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     44.558 pounds
                       7.218 gallons
Carbon Dioxide:      139.019 pounds
Carbon Monoxide:      10.402 pounds
Hydrocarbons:          1.746 pounds
Nitrogen Oxides:       0.424 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     41.130 pounds
                       6.663 gallons
Carbon Dioxide:      128.326 pounds
Carbon Monoxide:      10.137 pounds
Hydrocarbons:          1.691 pounds
Nitrogen Oxides:       0.374 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP PM

Intersection #18: Cosumnes River Boulevard/Stone-Boswell Access East




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     7     0     5     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   340     0    30    10   820     0     0   630   380
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   340     0    30    10   820     0     0   630   380
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   340     0    30    10   820     0     0   630   380
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0     0     0   340     0    30    10   820     0     0   630   380
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
Final Vol.:     0     0     0   340     0    30    10   820     0     0   630   380
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  1.00  1.00  1.00  0.93  1.00  0.93  0.93  0.93  1.00  1.00  0.88  0.88
Lanes:       0.00  0.00  0.00  0.92  0.00  0.08  1.00  2.00  0.00  0.00  1.25  0.75
Final Sat.:     0     0     0  1618     0   143  1769  3538     0     0  2083  1257
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00  0.00  0.00  0.21  0.00  0.21  0.01  0.23  0.00  0.00  0.30  0.30
Crit Moves:                                ****  ****                    ****
Green/Cycle: 0.00  0.00  0.00  0.34  0.00  0.34  0.05  0.54  0.00  0.00  0.49  0.49
Volume/Cap:  0.00  0.00  0.00  0.62  0.00  0.62  0.11  0.43  0.00  0.00  0.62  0.62
Delay/Veh:    0.0   0.0   0.0  29.5   0.0  29.5  46.0  13.9   0.0   0.0  19.4  19.4
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0   0.0   0.0  29.5   0.0  29.5  46.0  13.9   0.0   0.0  19.4  19.4
LOS by Move:    A     A     A     C     A     C     D     B     A     A     B     B
HCM2kAvgQ:      0     0     0    10     0    10     0     8     0     0    12    12
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  2  0  0    0  0  1  1  0
Lane Group:  xxxx xxxx  xxxx   LTR  LTR   LTR    L    T   xxxx  xxxx  RT     RT
#LnsInGrps:     0     0     0     1     1     1     1     2     0     0     2     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     4 xxxx     4     1 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx  0.98  0.98 0.98 xxxxx  xxxx 0.98  0.98
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Parking Adj: xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Bus Stp Adj: xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
RT Adj:      xxxx xxxx xxxxx  0.99 xxxx  0.99  xxxx xxxx xxxxx  xxxx 0.94  0.94
LT Adj:      xxxx xxxx xxxxx  0.96 xxxx  0.96  0.95 xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 1.00  1.00  1.00  0.93  1.00  0.93  0.93  0.98  1.00  1.00  0.93  0.93
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.95  1.00  1.00  0.95  0.95
Fnl Sat Adj: 1.00  1.00  1.00  0.93  1.00  0.93  0.93  0.93  1.00  1.00  0.88  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
```

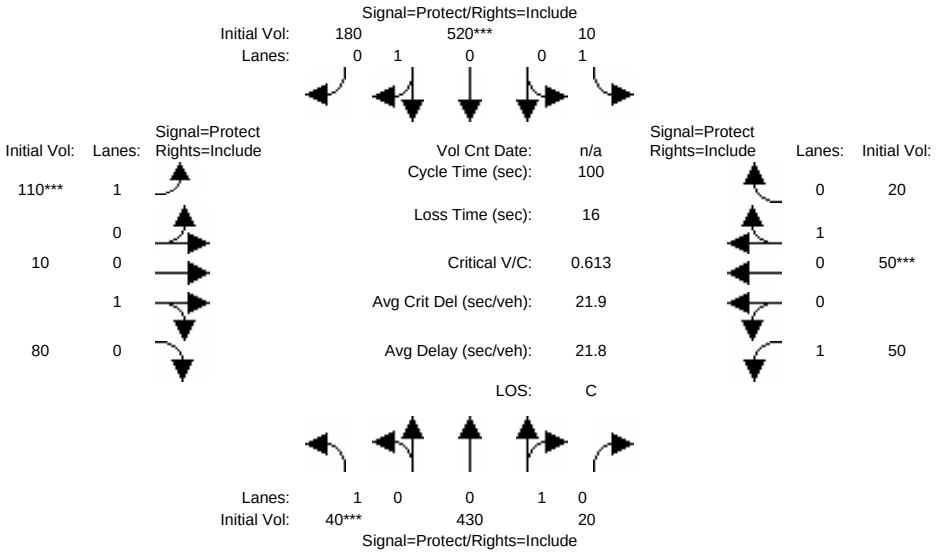


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.34 0.00  0.34  0.05 0.54  0.00  0.00 0.49  0.49
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   8.6  0.0   8.6   0.3  7.2   0.0   0.0 10.8  10.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   1.5  0.0   1.5   0.1  0.7   0.0   0.0  1.6   1.6
HCM2KQueue:   0.0  0.0   0.0  10.1  0.0  10.1   0.4  7.9   0.0   0.0 12.4  12.4
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.18  1.20 1.18  1.20  1.20 1.17  1.17
70th%HCM2kQ:  0.0  0.0   0.0  11.9  0.0  11.9   0.5  9.4   0.0   0.0 14.5  14.5
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.51 1.60  1.51  1.60 1.53  1.60  1.60 1.50  1.50
85th%HCM2kQ:  0.0  0.0   0.0  15.3  0.0  15.3   0.6 12.1   0.0   0.0 18.5  18.5
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.64 1.80  1.64  1.79 1.67  1.80  1.80 1.62  1.62
90th%HCM2kQ:  0.0  0.0   0.0  16.6  0.0  16.6   0.7 13.2   0.0   0.0 20.0  20.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.84 2.10  1.84  2.09 1.89  2.10  2.10 1.80  1.80
95th%HCM2kQ:  0.0  0.0   0.0  18.6  0.0  18.6   0.8 15.0   0.0   0.0 22.3  22.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.16 2.70  2.16  2.67 2.24  2.70  2.70 2.09  2.09
98th%HCM2kQ:  0.0  0.0   0.0  21.8  0.0  21.8   1.0 17.8   0.0   0.0 25.8  25.8
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  71.0  0.0   6.3   2.4  123   0.0   0.0  115  69.5
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     56.407 pounds
                       9.138 gallons
Carbon Dioxide:      175.991 pounds
Carbon Monoxide:      13.466 pounds
Hydrocarbons:          2.347 pounds
Nitrogen Oxides:       0.526 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     52.469 pounds
                       8.500 gallons
Carbon Dioxide:      163.704 pounds
Carbon Monoxide:      13.159 pounds
Hydrocarbons:          2.285 pounds
Nitrogen Oxides:       0.467 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #20: Delta Shores Circle/Street C




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      40  430    20    10  520   180   110   10    80    50   50    20
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:   40  430    20    10  520   180   110   10    80    50   50    20
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:    40  430    20    10  520   180   110   10    80    50   50    20
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   40  430    20    10  520   180   110   10    80    50   50    20
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
Final Vol.:    40  430    20    10  520   180   110   10    80    50   50    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.97  0.97  0.93 0.94  0.94  0.93 0.85  0.85  0.93 0.94  0.94
Lanes:       1.00 0.96  0.04  1.00 0.74  0.26  1.00 0.11  0.89  1.00 0.71  0.29
Final Sat.:  1769 1767    82  1769 1329   460  1769  179  1435  1769 1273   509
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02 0.24  0.24  0.01 0.39  0.39  0.06 0.06  0.06  0.03 0.04  0.04
Crit Moves:  ****                ****        ****                ****
Green/Cycle: 0.05 0.56  0.56  0.11 0.62  0.62  0.10 0.10  0.10  0.07 0.07  0.07
Volume/Cap:  0.45 0.44  0.44  0.05 0.63  0.63  0.63 0.57  0.57  0.40 0.56  0.56
Delay/Veh:   49.8 13.3  13.3  39.5 13.0  13.0  50.5 47.8  47.8  46.6 50.7  50.7
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  49.8 13.3  13.3  39.5 13.0  13.0  50.5 47.8  47.8  46.6 50.7  50.7
LOS by Move:   D    B     B     D    B     B     D    D     D     D    D     D
HCM2kAvgQ:     2    8     8     0   14    14     4    4     4     2    3     3
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       1  0  0  1  0    1  0  0  1  0    1  0  0  1  0    1  0  0  1  0
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L   RT     RT
#LnsInGrps:    1    1     1     1    1     1     1    1     1     1    1     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8               8               8               8
% Hev Veh:           2               2               2               2
Grade:              0%              0%              0%              0%
Parking/Hr:         No              No              No              No
Bus Stp/Hr:          0               0               0               0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0               0               0               0
ExclusiveRT:     Include         Include         Include         Include
% RT Prtct:          0               0               0               0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx 0.99  0.99  xxxx 0.96  0.96  xxxx 0.87  0.87  xxxx 0.96  0.96
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.97  0.97  0.93 0.94  0.94  0.93 0.85  0.85  0.93 0.94  0.94
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 0.93 0.97  0.97  0.93 0.94  0.94  0.93 0.85  0.85  0.93 0.94  0.94
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #20 Delta Shores Circle/Street C
```

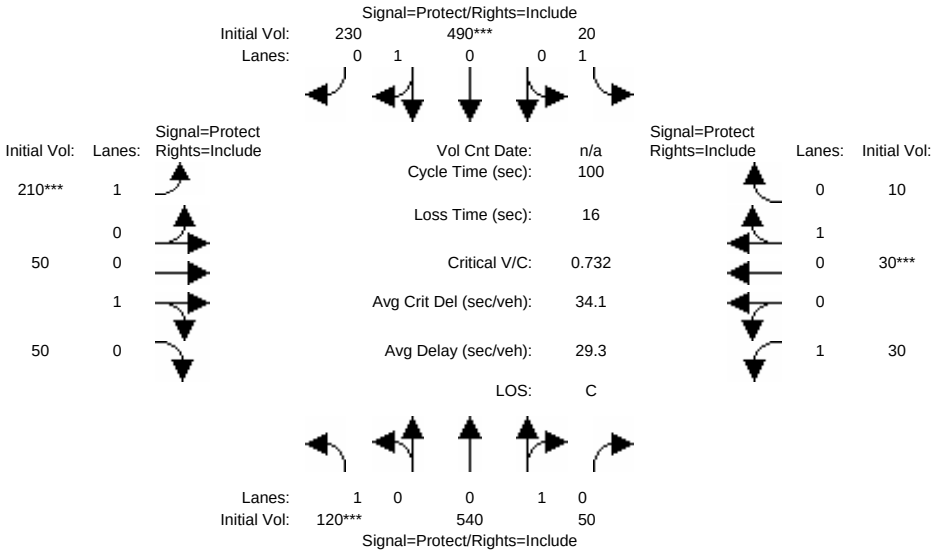


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.05 0.56  0.56  0.11 0.62  0.62  0.10 0.10  0.10  0.07 0.07  0.07
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.1  7.3   7.3   0.2 12.1  12.1   2.9  2.4   2.4   1.3  1.9   1.9
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.7  0.8   0.8   0.1  1.6   1.6   1.4  1.2   1.2   0.6  1.1   1.1
HCM2KQueue:   1.8  8.1   8.1   0.3 13.7  13.7   4.4  3.5   3.5   2.0  3.0   3.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.18  1.18  1.20 1.17  1.17  1.19 1.19  1.19  1.20 1.19  1.19
70th%HCM2kQ:  2.2  9.6   9.6   0.4 16.1  16.1   5.2  4.2   4.2   2.3  3.6   3.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.58 1.53  1.53  1.60 1.49  1.49  1.56 1.57  1.57  1.58 1.57  1.57
85th%HCM2kQ:  2.9 12.4  12.4   0.5 20.5  20.5   6.8  5.5   5.5   3.1  4.7   4.7
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.77 1.67  1.67  1.79 1.60  1.60  1.72 1.74  1.74  1.76 1.74  1.74
90th%HCM2kQ:  3.2 13.5  13.5   0.5 22.0  22.0   7.5  6.1   6.1   3.5  5.2   5.2
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.04 1.88  1.88  2.09 1.78  1.78  1.97 1.99  1.99  2.04 2.01  2.01
95th%HCM2kQ:  3.7 15.2  15.2   0.6 24.5  24.5   8.6  7.1   7.1   4.0  6.0   6.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.57 2.24  2.24  2.68 2.05  2.05  2.41 2.46  2.46  2.56 2.49  2.49
98th%HCM2kQ:  4.7 18.1  18.1   0.8 28.1  28.1  10.6  8.7   8.7   5.0  7.4   7.4
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #20 Delta Shores Circle/Street C
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   9.7 63.0   2.9   2.2 80.9  28.0  26.4  2.4  19.1  12.0 12.1   4.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     41.511 pounds
                       6.725 gallons
Carbon Dioxide:      129.515 pounds
Carbon Monoxide:      10.036 pounds
Hydrocarbons:          1.795 pounds
Nitrogen Oxides:       0.374 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     38.808 pounds
                       6.287 gallons
Carbon Dioxide:      121.080 pounds
Carbon Monoxide:       9.826 pounds
Hydrocarbons:          1.752 pounds
Nitrogen Oxides:       0.333 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP PM

Intersection #20: Delta Shores Circle/Street C




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     120   540    50    20   490   230   210    50    30    30    10
Growth Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Initial Bse:  120   540    50    20   490   230   210    50    30    30    10
User Adj:    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
PHF Volume:   120   540    50    20   490   230   210    50    30    30    10
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  120   540    50    20   490   230   210    50    30    30    10
PCE Adj:     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
Final Vol.:   120   540    50    20   490   230   210    50    30    30    10
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.93  0.97  0.97  0.93  0.93  0.93  0.93  0.91  0.91  0.93  0.94
Lanes:       1.00  0.92  0.08  1.00  0.68  0.32  1.00  0.50  0.50  1.00  0.75
Final Sat.:  1769  1682   156  1769  1206   566  1769   861   861  1769  1345
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.07  0.32  0.32  0.01  0.41  0.41  0.12  0.06  0.06  0.02  0.02
Crit Moves:  ****                  ****        ****                    ****
Green/Cycle: 0.09  0.53  0.53  0.08  0.53  0.53  0.15  0.13  0.13  0.09  0.07
Volume/Cap:  0.77  0.60  0.60  0.14  0.77  0.77  0.77  0.44  0.44  0.18  0.32
Delay/Veh:   65.1  17.1  17.1  43.0  22.7  22.7  53.1  41.5  41.5  42.3  45.7
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  65.1  17.1  17.1  43.0  22.7  22.7  53.1  41.5  41.5  42.3  45.7
LOS by Move:    E     B     B     D     C     C     D     D     D     D     D
HCM2kAvgQ:      5    13    13     1    19    19     8     3     3     1     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       1  0  0  1  0    1  0  0  1  0    1  0  0  1  0    1  0  0  1  0
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L   RT     RT
#LnsInGrps:    1    1      1    1    1      1    1    1      1    1    1      1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12     12   12   12     12   12   12     12   12   12     12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Hev Veh Adj: 0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98
Grade Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Parking Adj: xxxx  1.00  1.00  xxxx  1.00  1.00  xxxx  1.00  1.00  xxxx  1.00  1.00
Bus Stp Adj: xxxx  1.00  1.00  xxxx  1.00  1.00  xxxx  1.00  1.00  xxxx  1.00  1.00
Area Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
RT Adj:      xxxx  0.99  0.99  xxxx  0.95  0.95  xxxx  0.93  0.93  xxxx  0.96  0.96
LT Adj:      0.95  xxxx  xxxxx  0.95  xxxx  xxxxx  0.95  xxxx  xxxxx  0.95  xxxx  xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 0.93  0.97  0.97  0.93  0.93  0.93  0.93  0.91  0.91  0.93  0.94  0.94
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Fnl Sat Adj: 0.93  0.97  0.97  0.93  0.93  0.93  0.93  0.91  0.91  0.93  0.94  0.94
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <     Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #20 Delta Shores Circle/Street C
```

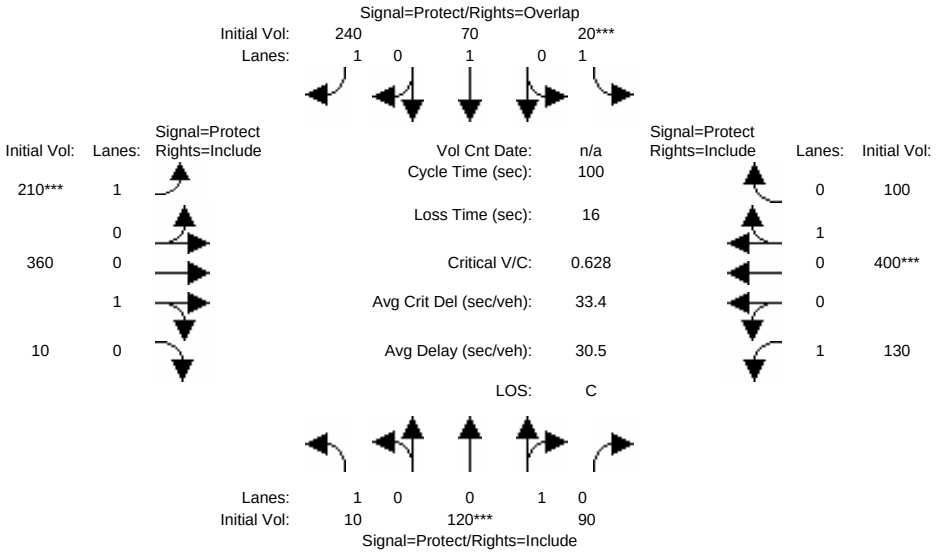


```
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.09 0.53  0.53  0.08 0.53  0.53  0.15 0.13  0.13  0.09 0.07  0.07
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.3 11.3  11.3   0.5 15.9  15.9   5.6  2.6   2.6   0.8  1.1   1.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           2.2  1.5   1.5   0.2  3.0   3.0   2.5  0.8   0.8   0.2  0.4   0.4
HCM2KQueue:   5.5 12.7  12.7   0.7 18.9  18.9   8.1  3.3   3.3   1.0  1.5   1.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.17  1.17  1.20 1.16  1.16  1.18 1.19  1.19  1.20 1.20  1.20
70th%HCM2kQ:  6.5 15.0  15.0   0.8 22.0  22.0   9.6  4.0   4.0   1.2  1.8   1.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.50  1.50  1.59 1.46  1.46  1.53 1.57  1.57  1.59 1.59  1.59
85th%HCM2kQ:  8.5 19.1  19.1   1.1 27.6  27.6  12.4  5.2   5.2   1.6  2.4   2.4
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.70 1.61  1.61  1.79 1.56  1.56  1.67 1.74  1.74  1.78 1.77  1.77
90th%HCM2kQ:  9.4 20.5  20.5   1.2 29.4  29.4  13.5  5.8   5.8   1.8  2.7   2.7
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.94 1.80  1.80  2.08 1.71  1.71  1.88 2.00  2.00  2.07 2.05  2.05
95th%HCM2kQ: 10.7 22.9  22.9   1.4 32.3  32.3  15.3  6.6   6.6   2.0  3.1   3.1
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.36 2.08  2.08  2.65 1.93  1.93  2.24 2.47  2.47  2.63 2.59  2.59
98th%HCM2kQ: 12.9 26.5  26.5   1.8 36.6  36.6  18.2  8.2   8.2   2.6  3.9   3.9
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
********************************************************************************
Intersection #20 Delta Shores Circle/Street C
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  29.3 92.9   8.6   4.6 97.4  45.7  50.4 11.5  11.5   6.9  7.1   2.4
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     60.023 pounds
                       9.724 gallons
Carbon Dioxide:      187.272 pounds
Carbon Monoxide:      14.910 pounds
Hydrocarbons:          2.787 pounds
Nitrogen Oxides:       0.518 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     56.672 pounds
                       9.181 gallons
Carbon Dioxide:      176.817 pounds
Carbon Monoxide:      14.647 pounds
Hydrocarbons:          2.734 pounds
Nitrogen Oxides:       0.465 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP AM

Intersection #21: Delta Shores Circle/Street A



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	10	120	90	20	70	240	210	360	10	130	400	100
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:	10	120	90	20	70	240	210	360	10	130	400	100
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:	10	120	90	20	70	240	210	360	10	130	400	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	120	90	20	70	240	210	360	10	130	400	100
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
Final Vol.:	10	120	90	20	70	240	210	360	10	130	400	100
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.92	0.93	0.98	0.83	0.93	0.98	0.98	0.93	0.95	0.95
Lanes:	1.00	0.57	0.43	1.00	1.00	1.00	1.00	0.97	0.03	1.00	0.80	0.20
Final Sat.:	1769	996	747	1769	1862	1583	1769	1804	50	1769	1445	361
Capacity Analysis Module:												
Vol/Sat:	0.01	0.12	0.12	0.01	0.04	0.15	0.12	0.20	0.20	0.07	0.28	0.28
Crit Moves:		****			****			****			****	
Green/Cycle:	0.10	0.18	0.18	0.05	0.14	0.32	0.18	0.44	0.44	0.16	0.42	0.42
Volume/Cap:	0.06	0.65	0.65	0.23	0.27	0.48	0.65	0.45	0.45	0.45	0.65	0.65
Delay/Veh:	41.1	42.6	42.6	46.9	39.3	28.1	42.7	19.8	19.8	38.9	25.0	25.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.1	42.6	42.6	46.9	39.3	28.1	42.7	19.8	19.8	38.9	25.0	25.0
LOS by Move:	D	D	D	D	D	C	D	B	B	D	C	C
HCM2kAvgQ:	0	7	7	1	2	6	7	8	8	4	13	13
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0
Lane Group:	L	RT		RT		L	T		R	L	RT		RT		L	RT		RT						
#LnsInGrps:	1	1		1		1	1		1	1	1		1		1	1		1						
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.94	0.94	xxxx	xxxx	0.85	xxxx	1.00	1.00	xxxx	0.97	0.97
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.92	0.92	0.93	0.98	0.83	0.93	0.98	0.98	0.93	0.95	0.95
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.92	0.92	0.93	0.98	0.83	0.93	0.98	0.98	0.93	0.95	0.95
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

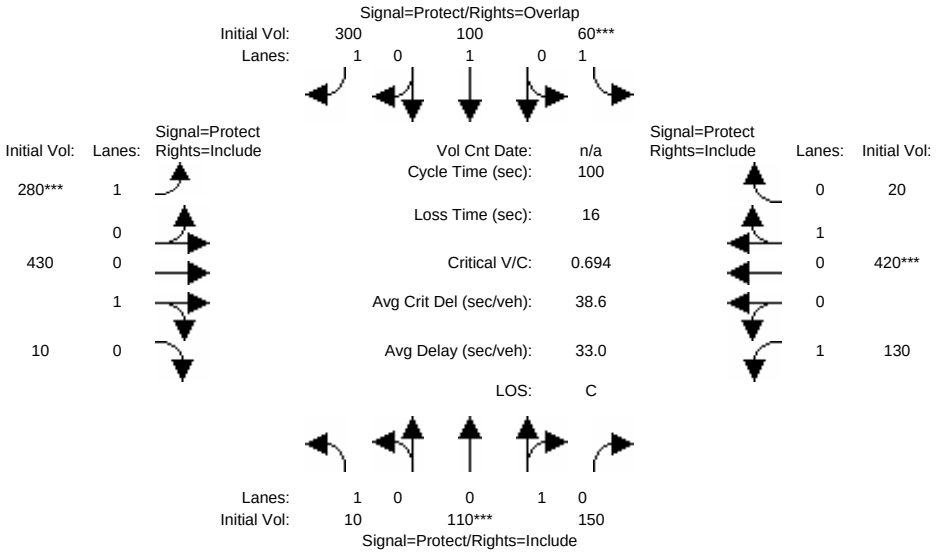
Intersection #21 Delta Shores Circle/Street A


```
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.10 0.18  0.18  0.05 0.14  0.32  0.18 0.44  0.44  0.16 0.42  0.42
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.3  5.4   5.4   0.5  1.7   5.4   5.4  7.2   7.2   3.3 11.1  11.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.1  1.7   1.7   0.3  0.4   0.9   1.7  0.8   0.8   0.8  1.8   1.8
HCM2KQueue:   0.3  7.1   7.1   0.8  2.1   6.2   7.1  8.0   8.0   4.1 12.9  12.9
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.18  1.18  1.20 1.19  1.19  1.18 1.18  1.18  1.19 1.17  1.17
70th%HCM2kQ:  0.4  8.4   8.4   1.0  2.5   7.4   8.4  9.4   9.4   4.8 15.1  15.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.54  1.54  1.59 1.58  1.54  1.54 1.53  1.53  1.56 1.50  1.50
85th%HCM2kQ:  0.5 10.9  10.9   1.3  3.3   9.6  10.9 12.2  12.2   6.3 19.2  19.2
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.79 1.68  1.68  1.78 1.76  1.69  1.68 1.67  1.67  1.73 1.61  1.61
90th%HCM2kQ:  0.6 11.9  11.9   1.5  3.7  10.6  11.9 13.3  13.3   7.0 20.7  20.7
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.09 1.90  1.90  2.07 2.03  1.92  1.90 1.89  1.89  1.98 1.79  1.79
95th%HCM2kQ:  0.7 13.5  13.5   1.7  4.3  12.0  13.5 15.0  15.0   8.0 23.1  23.1
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.68 2.28  2.28  2.64 2.55  2.32  2.28 2.24  2.24  2.43 2.07  2.07
98th%HCM2kQ:  0.8 16.2  16.2   2.2  5.4  14.5  16.2 17.9  17.9   9.9 26.6  26.6
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #21 Delta Shores Circle/Street A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   2.3 27.8  20.9   4.8 15.7  48.2  48.7 62.7   1.7  29.4 79.7  19.9
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     59.283 pounds
                       9.604 gallons
Carbon Dioxide:      184.961 pounds
Carbon Monoxide:      14.778 pounds
Hydrocarbons:          2.778 pounds
Nitrogen Oxides:       0.509 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     56.046 pounds
                       9.079 gallons
Carbon Dioxide:      174.864 pounds
Carbon Monoxide:      14.523 pounds
Hydrocarbons:          2.727 pounds
Nitrogen Oxides:       0.457 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP PM

Intersection #21: Delta Shores Circle/Street A




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      10   110   150    60   100   300   280   430    10   130   420    20
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:   10   110   150    60   100   300   280   430    10   130   420    20
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:    10   110   150    60   100   300   280   430    10   130   420    20
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   10   110   150    60   100   300   280   430    10   130   420    20
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
Final Vol.:    10   110   150    60   100   300   280   430    10   130   420    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.93  0.89  0.89  0.93  0.98  0.83  0.93  0.98  0.98  0.93  0.97  0.97
Lanes:       1.00  0.42  0.58  1.00  1.00  1.00  1.00  0.98  0.02  1.00  0.95  0.05
Final Sat.:  1769   719   981  1769  1862  1583  1769  1814    42  1769  1765    84
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01  0.15  0.15  0.03  0.05  0.19  0.16  0.24  0.24  0.07  0.24  0.24
Crit Moves:        ****        ****              ****                    ****
Green/Cycle: 0.11  0.22  0.22  0.05  0.16  0.39  0.23  0.44  0.44  0.13  0.34  0.34
Volume/Cap:  0.05  0.70  0.70  0.68  0.34  0.49  0.70  0.54  0.54  0.54  0.70  0.70
Delay/Veh:   39.7  41.5  41.5  65.9  38.2  23.9  40.7  21.7  21.7  43.0  31.8  31.8
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  39.7  41.5  41.5  65.9  38.2  23.9  40.7  21.7  21.7  43.0  31.8  31.8
LOS by Move:    D     D     D     E     D     C     D     C     C     D     C     C
HCM2kAvgQ:      0     9     9     3     3     7     9    10    10     4    13    13
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       1  0  0  1  0    1  0  1  0  1    1  0  0  1  0    1  0  0  1  0
Lane Group:    L   RT     RT    L    T     R     L   RT     RT    L   RT     RT
#LnsInGrps:    1    1     1     1    1     1     1    1     1     1    1     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:    Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:    1 xxxx  xxxx    1 xxxx  xxxx    1 xxxx  xxxx    1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Hev Veh Adj: 0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98  0.98
Grade Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Parking Adj: xxxx  1.00  1.00  xxxx  xxxx  1.00  xxxx  1.00  1.00  xxxx  1.00  1.00
Bus Stp Adj: xxxx  1.00  1.00  xxxx  xxxx  1.00  xxxx  1.00  1.00  xxxx  1.00  1.00
Area Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
RT Adj:      xxxx  0.91  0.91  xxxx  xxxx  0.85  xxxx  1.00  1.00  xxxx  0.99  0.99
LT Adj:      0.95  xxxx  xxxxx  0.95  xxxx  xxxxx  0.95  xxxx  xxxxx  0.95  xxxx  xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 0.93  0.89  0.89  0.93  0.98  0.83  0.93  0.98  0.98  0.93  0.97  0.97
Usr Sat Adj: 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 Sat Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Fnl Sat Adj: 0.93  0.89  0.89  0.93  0.98  0.83  0.93  0.98  0.98  0.93  0.97  0.97
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #21 Delta Shores Circle/Street A
```

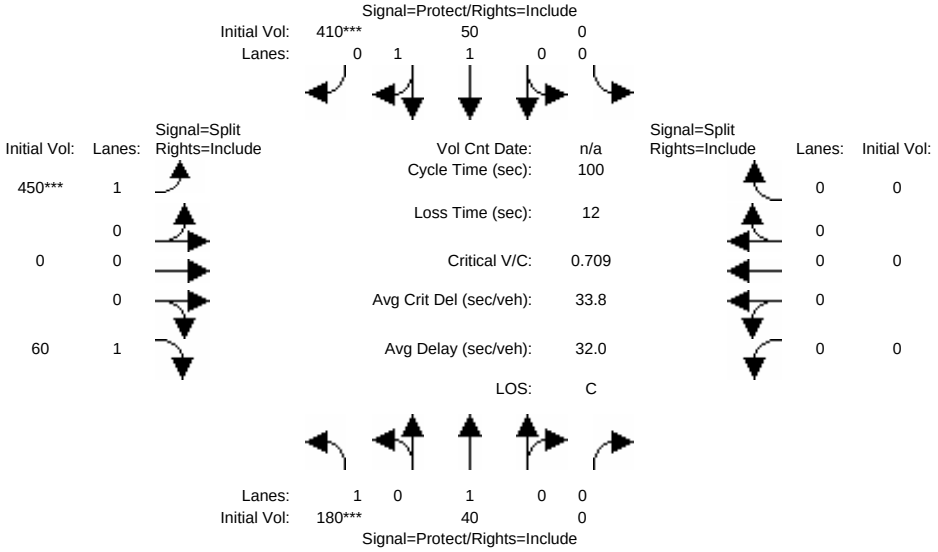


```
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.11 0.22  0.22  0.05 0.16  0.39  0.23 0.44  0.44  0.13 0.34  0.34
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.2  6.7   6.7   1.6  2.5   6.3   7.1  9.0   9.0   3.4 10.5  10.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.1  2.0   2.0   1.5  0.5   0.9   2.0  1.2   1.2   1.1  2.1   2.1
HCM2KQueue:   0.3  8.7   8.7   3.1  3.0   7.3   9.2 10.2  10.2   4.5 12.6  12.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.18  1.18  1.19 1.19  1.18  1.18 1.18  1.18  1.19 1.17  1.17
70th%HCM2kQ:  0.4 10.2  10.2   3.7  3.6   8.6  10.8 12.0  12.0   5.3 14.8  14.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.52  1.52  1.57 1.57  1.54  1.52 1.51  1.51  1.56 1.50  1.50
85th%HCM2kQ:  0.5 13.2  13.2   4.9  4.7  11.2  13.9 15.5  15.5   7.0 18.9  18.9
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.79 1.66  1.66  1.74 1.74  1.68  1.65 1.64  1.64  1.72 1.61  1.61
90th%HCM2kQ:  0.5 14.4  14.4   5.4  5.2  12.2  15.1 16.8  16.8   7.7 20.4  20.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.09 1.87  1.87  2.00 2.01  1.90  1.86 1.84  1.84  1.97 1.80  1.80
95th%HCM2kQ:  0.6 16.2  16.2   6.3  6.0  13.8  17.0 18.8  18.8   8.8 22.7  22.7
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.68 2.21  2.21  2.49 2.50  2.27  2.19 2.16  2.16  2.41 2.08  2.08
98th%HCM2kQ:  0.8 19.2  19.2   7.8  7.4  16.5  20.1 22.0  22.0  10.8 26.3  26.3
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #21 Delta Shores Circle/Street A
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   2.2 25.3  34.5  14.8 22.3  56.9  64.2 79.6   1.9  30.3 90.6   4.3
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     71.678 pounds
                      11.612 gallons
Carbon Dioxide:      223.636 pounds
Carbon Monoxide:      17.989 pounds
Hydrocarbons:          3.420 pounds
Nitrogen Oxides:       0.606 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     67.942 pounds
                      11.007 gallons
Carbon Dioxide:      211.978 pounds
Carbon Monoxide:      17.695 pounds
Hydrocarbons:          3.360 pounds
Nitrogen Oxides:       0.546 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #22: Delta Shores Circle North/24th Street




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     0     7     0     0     7     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     180   40     0     0   50   410   450    0    60     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:  180   40     0     0   50   410   450    0    60     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:   180   40     0     0   50   410   450    0    60     0     0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0     0     0
Reduced Vol:  180   40     0     0   50   410   450    0    60     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
Final Vol.:   180   40     0     0   50   410   450    0    60     0     0     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.98  1.00  1.00 0.81  0.81  0.93 1.00  0.83  1.00 1.00  1.00
Lanes:       1.00 1.00  0.00  0.00 1.00  1.00  1.00 0.00  1.00  0.00 0.00  0.00
Final Sat.:  1769 1862     0     0 1532  1532  1769    0  1583     0     0     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.10 0.02  0.00  0.00 0.03  0.27  0.25 0.00  0.04  0.00 0.00  0.00
Crit Moves:  ****                          ****  ****
Green/Cycle: 0.14 0.52  0.00  0.00 0.38  0.38  0.36 0.00  0.36  0.00 0.00  0.00
Volume/Cap:  0.71 0.04  0.00  0.00 0.09  0.71  0.71 0.00  0.11  0.00 0.00  0.00
Delay/Veh:   49.8 11.7   0.0   0.0 20.0  30.1  31.3  0.0  21.4   0.0  0.0   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  49.8 11.7   0.0   0.0 20.0  30.1  31.3  0.0  21.4   0.0  0.0   0.0
LOS by Move:   D    B     A     A    C     C     C    A     C     A    A     A
HCM2kAvgQ:     7    1     0     0    1    12    13    0     1     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  1  0  0    0  0  1  1  0    1  0  0  0  1    0  0  0  0  0
Lane Group:    L    T   xxxx  xxxx  RT     RT    L  xxxx    R   xxxx xxxx  xxxx
#LnsInGrps:    1    1     0     0    2     2    1    0     1     0    0     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00 xxxxx  xxxx 1.00  1.00  1.00 xxxx  1.00  xxxx xxxx xxxxx
Hev Veh Adj: 0.98 0.98 xxxxx  xxxx 0.98  0.98  0.98 xxxx  0.98  xxxx xxxx xxxxx
Grade Adj:   1.00 1.00 xxxxx  xxxx 1.00  1.00  1.00 xxxx  1.00  xxxx xxxx xxxxx
Parking Adj: xxxx 1.00 xxxxx  xxxx 1.00  1.00  xxxx xxxx  1.00  xxxx xxxx xxxxx
Bus Stp Adj: xxxx 1.00 xxxxx  xxxx 1.00  1.00  xxxx xxxx  1.00  xxxx xxxx xxxxx
Area Adj:    1.00 1.00 xxxxx  xxxx 1.00  1.00  1.00 xxxx  1.00  xxxx xxxx xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx 0.87  0.87  xxxx xxxx  0.85  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  1.00  1.00 0.85  0.85  0.93 1.00  0.83  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 0.95  0.95  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 0.93 0.98  1.00  1.00 0.81  0.81  0.93 1.00  0.83  1.00 1.00  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  0.00  0.00 1.00  1.00  1.00 0.00  1.00  0.00 0.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
```



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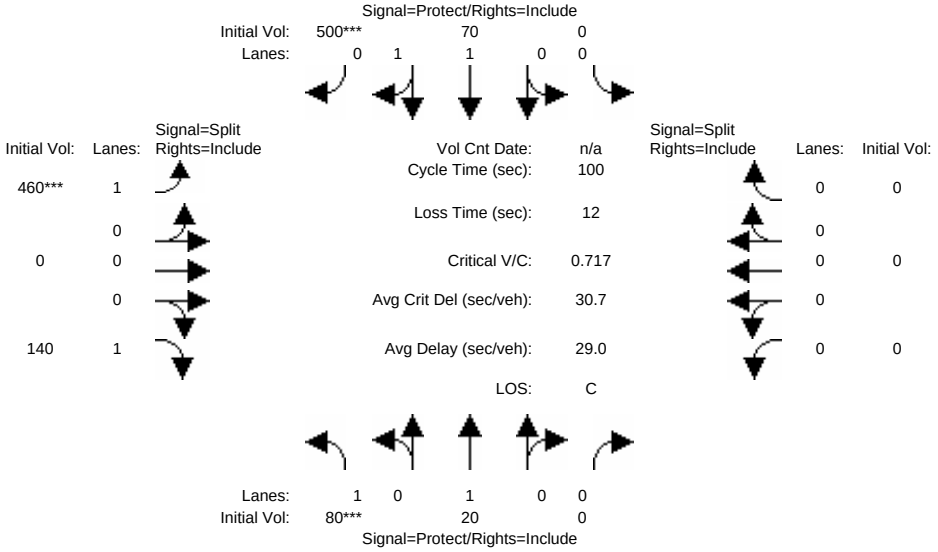
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.14 0.52  0.00  0.00 0.38  0.38  0.36 0.00  0.36  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.8  0.5   0.0   0.0  0.9  10.2  10.7  0.0   1.1   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  0.00  0.00 1.00  1.00  1.00 0.00  1.00  0.00 0.00  0.00
Q2:           2.0  0.0   0.0   0.0  0.1   2.2   2.2  0.0   0.1   0.0  0.0   0.0
HCM2KQueue:   6.8  0.6   0.0   0.0  1.0  12.4  13.0  0.0   1.2   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.20  1.20 1.20  1.17  1.17 1.20  1.20  1.20 1.20  1.20
70th%HCM2kQ:  8.0  0.7   0.0   0.0  1.2  14.6  15.2  0.0   1.5   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.59  1.60  1.60 1.59  1.50  1.49 1.60  1.59  1.60 1.60  1.60
85th%HCM2kQ: 10.4  0.9   0.0   0.0  1.6  18.6  19.4  0.0   2.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.69 1.79  1.80  1.80 1.78  1.62  1.61 1.80  1.78  1.80 1.80  1.80
90th%HCM2kQ: 11.4  1.0   0.0   0.0  1.8  20.0  20.9  0.0   2.2   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.91 2.08  2.10  2.10 2.07  1.80  1.79 2.10  2.06  2.10 2.10  2.10
95th%HCM2kQ: 12.9  1.2   0.0   0.0  2.1  22.3  23.2  0.0   2.5   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.29 2.66  2.70  2.70 2.62  2.09  2.07 2.70  2.61  2.70 2.70  2.70
98th%HCM2kQ: 15.5  1.6   0.0   0.0  2.7  25.9  26.8  0.0   3.2   0.0  0.0   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  42.9  4.9   0.0   0.0  8.0  87.1  96.7  0.0  10.0   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     41.421 pounds
                       6.710 gallons
Carbon Dioxide:      129.234 pounds
Carbon Monoxide:      10.369 pounds
Hydrocarbons:          1.963 pounds
Nitrogen Oxides:       0.352 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     39.223 pounds
                       6.354 gallons
Carbon Dioxide:      122.377 pounds
Carbon Monoxide:      10.197 pounds
Hydrocarbons:          1.928 pounds
Nitrogen Oxides:       0.317 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP PM

Intersection #22: Delta Shores Circle North/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	0	7	0	0	7	0	0	0	0
Volume Module:												
Base Vol:	80	20	0	0	70	500	460	0	140	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:	80	20	0	0	70	500	460	0	140	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:	80	20	0	0	70	500	460	0	140	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	80	20	0	0	70	500	460	0	140	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
Final Vol.:	80	20	0	0	70	500	460	0	140	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.98	1.00	1.00	0.81	0.81	0.93	1.00	0.83	1.00	1.00	1.00
Lanes:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1769	1862	0	0	1535	1535	1769	0	1583	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.01	0.00	0.00	0.05	0.33	0.26	0.00	0.09	0.00	0.00	0.00
Crit Moves:	****					****	****					
Green/Cycle:	0.06	0.52	0.00	0.00	0.45	0.45	0.36	0.00	0.36	0.00	0.00	0.00
Volume/Cap:	0.72	0.02	0.00	0.00	0.10	0.72	0.72	0.00	0.24	0.00	0.00	0.00
Delay/Veh:	65.9	11.8	0.0	0.0	15.6	25.2	31.3	0.0	22.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.9	11.8	0.0	0.0	15.6	25.2	31.3	0.0	22.5	0.0	0.0	0.0
LOS by Move:	E	B	A	A	B	C	C	A	C	A	A	A
HCM2kAvgQ:	4	0	0	0	1	14	13	0	3	0	0	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	1	0	0	0	0	1	1	0	1	0	0	1	0	0	0	1	0	0	0	0
Lane Group:	L	T	xxxx	xxxx	RT	RT	L	xxxx	R	xxxx	xxxx	xxxx
#LnsInGrps:	1	1	0	0	2	2	1	0	1	0	0	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	xxxxx	xxxx	1.00	1.00	1.00	xxxx	1.00	xxxx	xxxx	xxxxx
Hev Veh Adj:	0.98	0.98	xxxxx	xxxx	0.98	0.98	0.98	xxxx	0.98	xxxx	xxxx	xxxxx
Grade Adj:	1.00	1.00	xxxxx	xxxx	1.00	1.00	1.00	xxxx	1.00	xxxx	xxxx	xxxxx
Parking Adj:	xxxx	1.00	xxxxx	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	1.00	xxxxx	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx
Area Adj:	1.00	1.00	xxxxx	xxxx	1.00	1.00	1.00	xxxx	1.00	xxxx	xxxx	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	0.87	0.87	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	1.00	1.00	0.85	0.85	0.93	1.00	0.83	1.00	1.00	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.98	1.00	1.00	0.81	0.81	0.93	1.00	0.83	1.00	1.00	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #22 Delta Shores Circle North/24th Street


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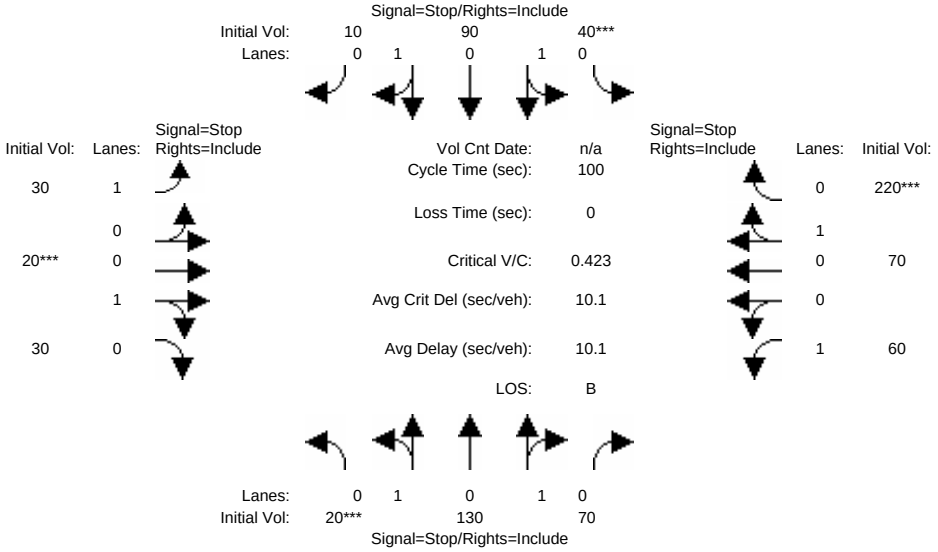
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.06 0.52  0.00  0.00 0.45  0.45  0.36 0.00  0.36  0.00 0.00  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.2  0.3   0.0   0.0  1.2  11.8  11.0  0.0   2.7   0.0  0.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  0.00  0.00 1.00  1.00  1.00 0.00  1.00  0.00 0.00  0.00
Q2:           1.8  0.0   0.0   0.0  0.1   2.3   2.3  0.0   0.3   0.0  0.0   0.0
HCM2KQueue:   3.9  0.3   0.0   0.0  1.3  14.2  13.3  0.0   3.0   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.20  1.20  1.20 1.20  1.17  1.17 1.20  1.19  1.20 1.20  1.20
70th%HCM2kQ:  4.7  0.4   0.0   0.0  1.5  16.6  15.6  0.0   3.6   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.56 1.60  1.60  1.60 1.59  1.49  1.49 1.60  1.57  1.60 1.60  1.60
85th%HCM2kQ:  6.2  0.5   0.0   0.0  2.0  21.1  19.9  0.0   4.8   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.73 1.79  1.80  1.80 1.78  1.60  1.61 1.80  1.74  1.80 1.80  1.80
90th%HCM2kQ:  6.8  0.5   0.0   0.0  2.3  22.6  21.4  0.0   5.3   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.98 2.09  2.10  2.10 2.06  1.77  1.79 2.10  2.01  2.10 2.10  2.10
95th%HCM2kQ:  7.8  0.6   0.0   0.0  2.6  25.1  23.8  0.0   6.1   0.0  0.0   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.44 2.68  2.70  2.70 2.61  2.04  2.06 2.70  2.49  2.70 2.70  2.70
98th%HCM2kQ:  9.6  0.8   0.0   0.0  3.3  28.8  27.4  0.0   7.6   0.0  0.0   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  19.6  2.4   0.0   0.0 10.0 101.2  99.0  0.0  24.5   0.0  0.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     41.399 pounds
                       6.707 gallons
Carbon Dioxide:      129.164 pounds
Carbon Monoxide:      10.274 pounds
Hydrocarbons:          1.917 pounds
Nitrogen Oxides:       0.359 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     39.071 pounds
                       6.330 gallons
Carbon Dioxide:      121.903 pounds
Carbon Monoxide:      10.091 pounds
Hydrocarbons:          1.880 pounds
Nitrogen Oxides:       0.322 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HM 4-Way Stop (alternative)
Baseline WP AM

Intersection #23: Street C/ 24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	20	130	70	40	90	10	30	20	30	60	70	220
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:	20	130	70	40	90	10	30	20	30	60	70	220
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:	20	130	70	40	90	10	30	20	30	60	70	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	130	70	40	90	10	30	20	30	60	70	220
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
Final Vol.:	20	130	70	40	90	10	30	20	30	60	70	220
Saturation Flow Module:												
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:	0.18	1.18	0.64	0.57	1.29	0.14	1.00	0.40	0.60	1.00	0.24	0.76
Final Sat.:	106	706	404	314	737	84	532	247	370	570	166	520
Capacity Analysis Module:												
Vol/Sat:	0.19	0.18	0.17	0.13	0.12	0.12	0.06	0.08	0.08	0.11	0.42	0.42
Crit Moves:	****			****				****				****
Delay/Veh:	9.9	9.7	9.1	9.7	9.4	9.2	9.5	8.6	8.6	9.5	11.2	11.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.9	9.7	9.1	9.7	9.4	9.2	9.5	8.6	8.6	9.5	11.2	11.2
LOS by Move:	A	A	A	A	A	A	A	A	A	A	B	B
ApproachDel:	9.5			9.5			8.9			10.9		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.5			9.5			8.9			10.9		
LOS by Appr:	A			A			A			B		
AllWayAvgQ:	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.7
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	5			5			5			5		
P[C1]:	0.36			0.32			0.28			0.47		
P[C2]:	0.10			0.15			0.25			0.07		
P[C3]:	0.37			0.33			0.21			0.35		
P[C4]:	0.15			0.19			0.22			0.11		
P[C5]:	0.01			0.02			0.03			0.01		
Padj[C1]:	0.013			0.014			0.015			0.011		
Padj[C2]:	0.006			0.006			0.005			0.005		
Padj[C3]:	-0.009			-0.008			-0.003			-0.009		
Padj[C4]:	-0.009			-0.011			-0.013			-0.007		
Padj[C5]:	-0.001			-0.002			-0.003			-0.001		

Lanes:	L1	L2	L1	L2	L1	L2	L1	L2
LaneType:	LTTHRU	RTTHRU	LTTHRU	RTTHRU	LEFT	RTTHRU	LEFT	RTTHRU
HeadwayAdj:	0.125	-0.411	0.320	-0.066	0.534	-0.386	0.534	-0.497
Volume:	110	110	70	70	30	50	60	290
Capacity:	581	635	550	585	532	617	570	686
DegOfUtil:	0.18	0.16	0.12	0.11	0.05	0.08	0.10	0.41
DepHeadway:	5.90	5.36	6.18	5.80	6.40	5.48	6.10	5.07
ServiceTime:	3.6	3.1	3.9	3.5	4.1	3.2	3.8	2.8
Delay:	9.9	9.1	9.7	9.2	9.5	8.6	9.5	11.2
Queue:	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.7

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	9.5	9.5	8.9	10.9
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	9.5	9.5	8.9	10.9
LOS by Appr:	A	A	A	B

OverallDel: 10.1
OverallLOS: B

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #23 Street C/ 24th Street

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound

Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 1 0	0 1 0 1 0	1 0 0 1 0	1 0 0 1 0
Initial Vol:	20 130 70	40 90 10	30 20 30	60 70 220

Major Street Volume: 430
Minor Approach Volume: 220
Minor Approach Volume Threshold: 737

SIGNAL WARRANT DISCLAIMER

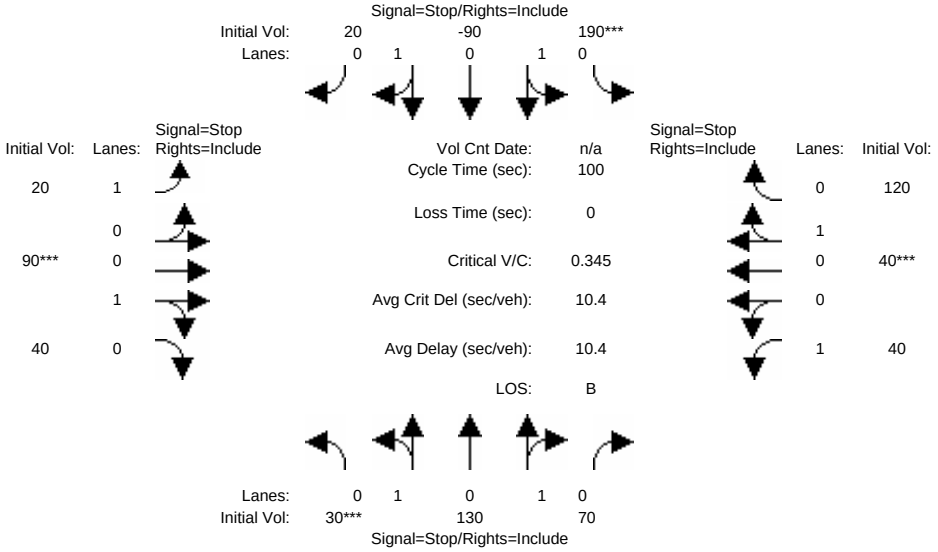
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (alternative)
Baseline WP PM

Intersection #23: Street C/ 24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	30	130	70	190	-90	20	20	90	40	40	40	120
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	130	70	190	-90	20	20	90	40	40	40	120
User Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	30	130	70	190	0	20	20	90	40	40	40	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	130	70	190	0	20	20	90	40	40	40	120
PCE Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	30	130	70	190	0	20	20	90	40	40	40	120
Saturation Flow Module:												
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:	0.26	1.13	0.61	1.00	0.81	0.19	1.00	0.69	0.31	1.00	0.25	0.75
Final Sat.:	149	665	379	551	492	116	506	391	174	513	151	452
Capacity Analysis Module:												
Vol/Sat:	0.20	0.20	0.18	0.34	0.00	0.17	0.04	0.23	0.23	0.08	0.27	0.27
Crit Moves:	****			****				****			****	
Delay/Veh:	10.2	9.9	9.3	12.1	9.5	9.5	9.7	10.3	10.3	9.9	10.2	10.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.2	9.9	9.3	12.1	9.5	9.5	9.7	10.3	10.3	9.9	10.2	10.2
LOS by Move:	B	A	A	B	A	A	A	B	B	A	B	B
ApproachDel:	9.8			11.2			10.2			10.1		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.8			11.2			10.2			10.1		
LOS by Appr:	A			B			B			B		
AllWayAvgQ:	0.2	0.2	0.2	0.5	0.2	0.2	0.0	0.3	0.3	0.1	0.3	0.3
Time Period: 0.25 hour												
HevVeh:	2%			2%			2%			2%		
Alpha Value: 0.01												
GroupType:	5			5			5			5		
P[C1]:	0.29			0.35			0.26			0.28		
P[C2]:	0.23			0.18			0.11			0.09		
P[C3]:	0.22			0.27			0.33			0.36		
P[C4]:	0.22			0.18			0.25			0.23		
P[C5]:	0.03			0.02			0.05			0.04		
Padj[C1]:	0.015			0.014			0.017			0.017		
Padj[C2]:	0.005			0.005			0.009			0.008		
Padj[C3]:	-0.004			-0.006			-0.007			-0.008		
Padj[C4]:	-0.013			-0.011			-0.015			-0.013		
Padj[C5]:	-0.003			-0.002			-0.005			-0.004		

Lanes:	L1	L2	L1	L2	L1	L2	L1	L2
LaneType:	LTTHRU	RTTHRU	LTTHRU	RTTHRU	LEFT	RTTHRU	LEFT	RTTHRU
HeadwayAdj:	0.164	-0.392	0.534	-0.099	0.534	-0.181	0.534	-0.491
Volume:	115	115	190	105	20	130	40	160
Capacity:	569	623	551	608	506	565	513	603
DegOfUtil:	0.19	0.18	0.33	0.17	0.04	0.22	0.07	0.25
DepHeadway:	6.04	5.49	6.31	5.67	6.71	5.99	6.64	5.62
ServiceTime:	3.7	3.2	4.0	3.4	4.4	3.7	4.3	3.3
Delay:	10.2	9.3	12.1	9.5	9.7	10.3	9.9	10.2
Queue:	0.2	0.2	0.5	0.2	0.0	0.3	0.1	0.3

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	9.8	11.2	10.2	10.1
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	9.8	11.2	10.2	10.1
LOS by Appr:	A	B	B	B

OverallDel: 10.4
OverallLOS: B

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #23 Street C/ 24th Street

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound

Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 1 0 1 0	0 1 0 1 0	1 0 0 1 0	1 0 0 1 0
Initial Vol:	30 130 70	190 -90 20	20 90 40	40 40 120

Major Street Volume: 350
Minor Approach Volume: 200
Minor Approach Volume Threshold: 826

SIGNAL WARRANT DISCLAIMER

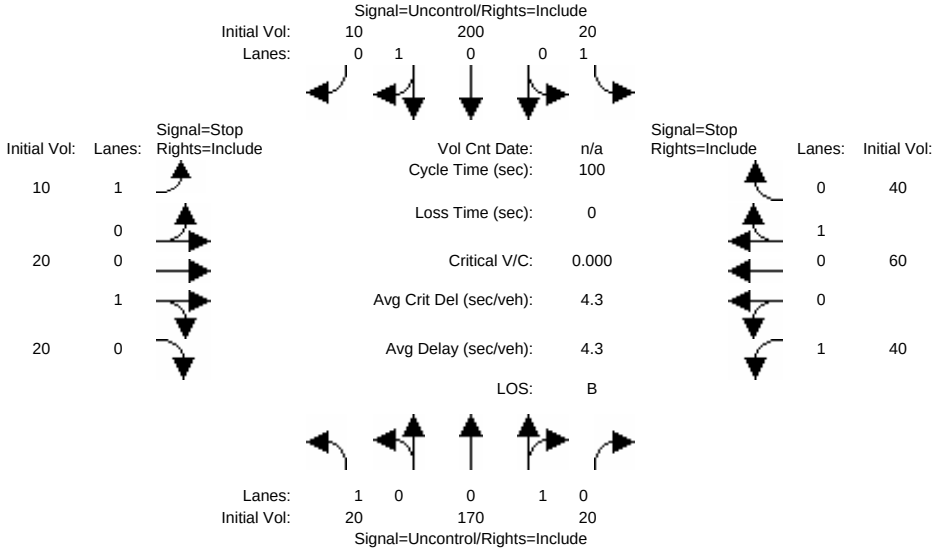
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Baseline WP AM

Intersection #24: Street A/Street C




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      20  170    20    20  200    10    10   20    20    40   60    40
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:   20  170    20    20  200    10    10   20    20    40   60    40
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:    20  170    20    20  200    10    10   20    20    40   60    40
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    20  170    20    20  200    10    10   20    20    40   60    40
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  210 xxxx xxxxx   190 xxxx xxxxx   515  475   205   485  470   180
Potent Cap.: 1361 xxxx xxxxx  1384 xxxx xxxxx   470  488   836   492  492   863
Move Cap.:   1361 xxxx xxxxx  1384 xxxx xxxxx   397  474   836   455  477   863
Volume/Cap:  0.01 xxxx  xxxx  0.01 xxxx  xxxx  0.03 0.04  0.02  0.09 0.13  0.05
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.0 xxxx xxxxx   0.1 xxxx xxxxx   0.3 xxxx xxxxx
Control Del:  7.7 xxxx xxxxx   7.6 xxxx xxxxx  14.3 xxxx xxxxx  13.7 xxxx xxxxx
LOS by Move:   A    *     *     A    *     *     B    *     *     B    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   605  xxxx xxxx   581
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   0.2 xxxxx xxxx   0.6
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx  11.4 xxxxx xxxx  12.5
Shared LOS:    *    *     *     *    *     *     *    *     B     *    *     B
ApproachDel:    xxxxxx           xxxxxx             12.0              12.8
ApproachLOS:     *                *                 B                 B
-----------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #24 Street A/Street C
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
-----------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        1  0  0  1  0    1  0  0  1  0    1  0  0  1  0    1  0  0  1  0
Initial Vol:   20  170    20    20  200    10    10   20    20    40   60    40
ApproachDel:    xxxxxx           xxxxxx             12.0              12.8
------------|---------------||---------------||---------------||---------------|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=50]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=630]
   FAIL - Total volume less than 800 for intersection
          with four or more approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=140]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=630]
   FAIL - Total volume less than 800 for intersection
          with four or more approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).
```


The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #24 Street A/Street C

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	0	1 0	1	0	0	1 0
Initial Vol:	20	170		20	20	200		10	10	20		20	40	60		40

Major Street Volume: 440
Minor Approach Volume: 140
Minor Approach Volume Threshold: 727

SIGNAL WARRANT DISCLAIMER

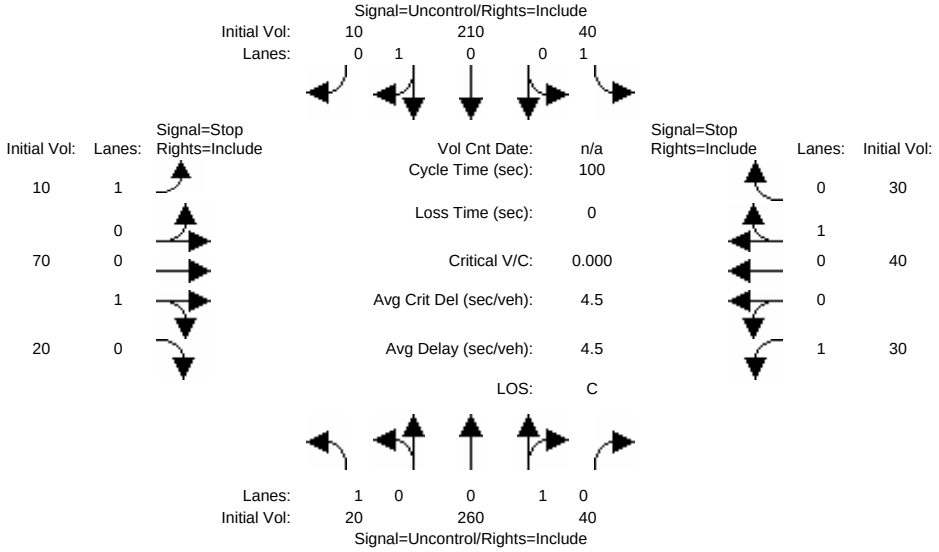
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline WP PM

Intersection #24: Street A/Street C




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      20  260    40    40  210    10    10   70    20    30   40    30
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:   20  260    40    40  210    10    10   70    20    30   40    30
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:    20  260    40    40  210    10    10   70    20    30   40    30
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    20  260    40    40  210    10    10   70    20    30   40    30
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  220 xxxx xxxxx   300 xxxx xxxxx   650  635   215   660  620   280
Potent Cap.: 1349 xxxx xxxxx  1261 xxxx xxxxx   382  396   825   376  404   759
Move Cap.:   1349 xxxx xxxxx  1261 xxxx xxxxx   326  378   825   304  385   759
Volume/Cap:  0.01 xxxx  xxxx  0.03 xxxx  xxxx  0.03 0.19  0.02  0.10 0.10  0.04
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.1 xxxx xxxxx   0.1 xxxx xxxxx   0.3 xxxx xxxxx
Control Del:  7.7 xxxx xxxxx   7.9 xxxx xxxxx  16.4 xxxx xxxxx  18.1 xxxx xxxxx
LOS by Move:   A    *     *     A    *     *     C    *     *     C    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   429  xxxx xxxx   488
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   0.8 xxxxx xxxx   0.5
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx  15.6 xxxxx xxxx  13.6
Shared LOS:    *    *     *     *    *     *     *    *     C     *    *     B
ApproachDel:    xxxxxx           xxxxxx             15.7             15.0
ApproachLOS:     *                *                 C                B
-----------|---------------|---------------|---------------|---------------|
HevVeh:            2%              2%              2%              2%
Grade:             0%              0%              0%              0%
Peds/Hour:         0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #24 Street A/Street C
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        1  0  0  1  0    1  0  0  1  0    1  0  0  1  0    1  0  0  1  0
Initial Vol:   20  260    40    40  210    10    10   70    20    30   40    30
ApproachDel:    xxxxxx           xxxxxx             15.7             15.0
------------|---------------||---------------||---------------||---------------|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=100]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=780]
   FAIL - Total volume less than 800 for intersection
          with four or more approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
   FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=100]
   FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=780]
   FAIL - Total volume less than 800 for intersection
          with four or more approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).
```


The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #24 Street A/Street C

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Lanes:	1	0	0	1 0	1	0	0	1 0	1	0	0	1 0	1	0	0	1 0
Initial Vol:	20	260		40	40	210		10	10	70		20	30	40		30

Major Street Volume: 580
Minor Approach Volume: 100
Minor Approach Volume Threshold: 608

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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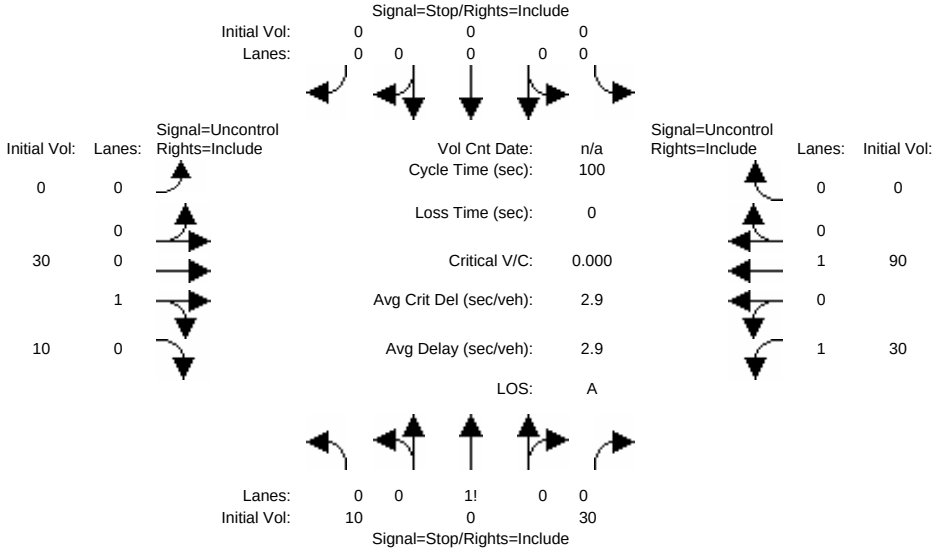
Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline WP AM

Intersection #25: Street C/Street B




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      10    0    30     0    0     0     0   30    10    30   90     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:   10    0    30     0    0     0     0   30    10    30   90     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:    10    0    30     0    0     0     0   30    10    30   90     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    10    0    30     0    0     0     0   30    10    30   90     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4 xxxx   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  185 xxxx    35  xxxx xxxx xxxxx  xxxx xxxx xxxxx    40 xxxx xxxxx
Potent Cap.:  804 xxxx  1038  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1570 xxxx xxxxx
Move Cap.:    793 xxxx  1038  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1570 xxxx xxxxx
Volume/Cap:  0.01 xxxx  0.03  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.02 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.3 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  963 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx  8.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    A     *     *    *     *     *    *     *     *    *     *
ApproachDel:       8.9           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:        A                *                *                *
------------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #25 Street C/Street B
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:   10    0    30     0    0     0     0   30    10    30   90     0
ApproachDel:       8.9           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=40]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=200]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #25 Street C/Street B
********************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	0	1	0	1 0 0
Initial Vol:	10	0	30	0	0	0	0	30	10	30	90	0

Major Street Volume: 160
Minor Approach Volume: 40
Minor Approach Volume Threshold: 916

SIGNAL WARRANT DISCLAIMER

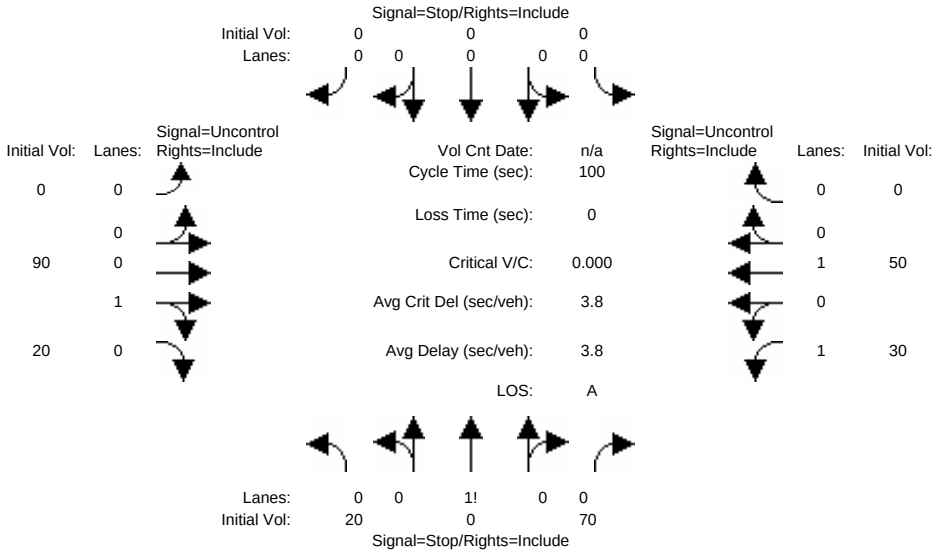
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline WP PM

Intersection #25: Street C/Street B




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      20    0    70     0    0     0     0   90    20    30   50     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:   20    0    70     0    0     0     0   90    20    30   50     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:    20    0    70     0    0     0     0   90    20    30   50     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    20    0    70     0    0     0     0   90    20    30   50     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4 xxxx   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  210 xxxx   100  xxxx xxxx xxxxx  xxxx xxxx xxxxx   110 xxxx xxxxx
Potent Cap.:  778 xxxx   956  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1480 xxxx xxxxx
Move Cap.:    766 xxxx   956  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1480 xxxx xxxxx
Volume/Cap:  0.03 xxxx  0.07  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.02 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.5 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  906 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx  9.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    A     *     *    *     *     *    *     *     *    *     *
ApproachDel:       9.4           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       A                *                *                *
------------|---------------|---------------|---------------|---------------|
HevVeh:            2%              2%              2%              2%
Grade:             0%              0%              0%              0%
Peds/Hour:         0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #25 Street C/Street B
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:       0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:   20    0    70     0    0     0     0   90    20    30   50     0
ApproachDel:       9.4           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=90]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=280]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #25 Street C/Street B
********************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	0	1	0	1 0 0
Initial Vol:	20	0	70	0	0	0	0	90	20	30	50	0

Major Street Volume: 190
Minor Approach Volume: 90
Minor Approach Volume Threshold: 857

SIGNAL WARRANT DISCLAIMER

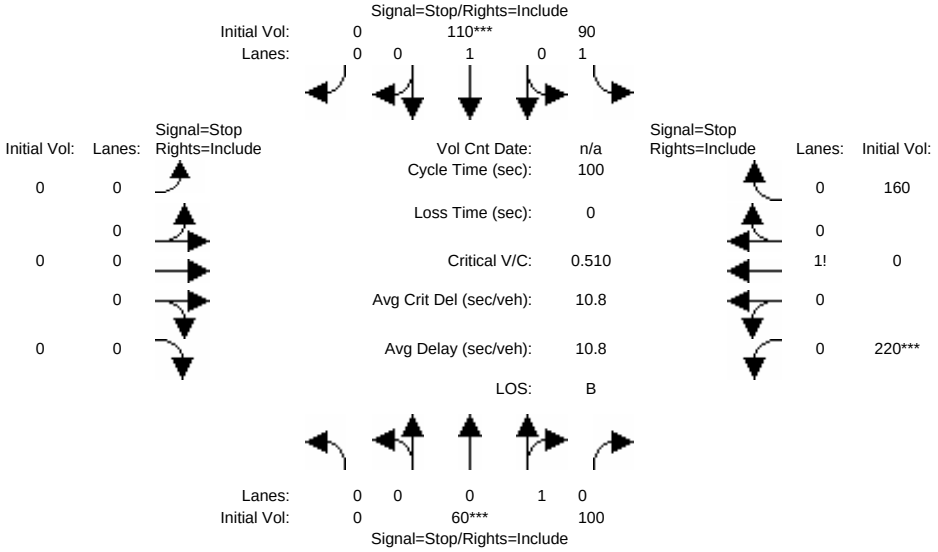
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Baseline WP AM

Intersection #26: Street D/Street E



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	60	100	90	110	0	0	0	0	220	0	160
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	60	100	90	110	0	0	0	0	220	0	160
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	60	100	90	110	0	0	0	0	220	0	160
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	60	100	90	110	0	0	0	0	220	0	160
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
Final Vol.:	0	60	100	90	110	0	0	0	0	220	0	160
Saturation Flow Module:												
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	0.37	0.63	1.00	1.00	0.00	0.00	0.00	0.00	0.58	0.00	0.42
Final Sat.:	0	262	436	562	610	0	0	0	0	432	0	314
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.23	0.23	0.16	0.18	xxxx	xxxx	xxxx	xxxx	0.51	xxxx	0.51
Crit Moves:		****			****					****		
Delay/Veh:	0.0	9.2	9.2	9.9	9.5	0.0	0.0	0.0	0.0	12.1	0.0	12.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.2	9.2	9.9	9.5	0.0	0.0	0.0	0.0	12.1	0.0	12.1
LOS by Move:	*	A	A	A	A	*	*	*	*	B	*	B
ApproachDel:		9.2			9.7			xxxxxx			12.1	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		9.2			9.7			xxxxxx			12.1	
LOS by Appr:		A			A			*			B	
AllWayAvgQ:	0.3	0.3	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.9	0.9	0.9
Time Period: 0.25 hour												
HevVeh:		2%			2%			2%			2%	
Alpha Value: 0.01												

GroupType:	3A	5	X	2
P[C1]:	0.3556	0.3974	x.xxxx	0.5505
P[C2]:	0.1510	0.1092	x.xxxx	0.0000
P[C3]:	0.3463	0.3870	x.xxxx	0.3852
P[C4]:	0.1471	0.1064	x.xxxx	0.0643
P[C5]:	0.0000	0.0000	x.xxxx	0.0000
Padj[C1]:	0.01285	0.01202	xx.xxxxx	0.00963
Padj[C2]:	0.00489	0.00491	xx.xxxxx	0.00514
Padj[C3]:	-0.00892	-0.01055	xx.xxxxx	-0.01091
Padj[C4]:	-0.00883	-0.00638	xx.xxxxx	-0.00386
Padj[C5]:	0.00000	0.00000	xx.xxxxx	0.00000

Lanes:	L1	L2	L1	L2	L1	L2	L1	L2
LaneType:	LTR	NOLANE	LEFT	THRU	NOLANE	NOLANE	LTR	NOLANE
HeadwayAdj:	-0.341	xx.xxx	0.534	0.034	xx.xxx	xx.xxx	-0.103	xx.xxx
Volume:	160	xxxxxx	90	110	xxxxxx	xxxxxx	380	xxxxxx
Capacity:	697	xxxxx	562	610	xxxxx	xxxxx	746	xxxxx
DegOfUtil:	0.22	x.xx	0.15	0.17	x.xx	x.xx	0.49	x.xx
DepHeadway:	4.85	xx.xx	6.12	5.62	xx.xx	xx.xx	4.68	xx.xx
ServiceTime:	2.9	xx.x	3.8	3.3	xx.x	xx.x	2.7	xx.x
Delay:	9.2	xxx.x	9.9	9.5	xxx.x	xxx.x	12.1	xxx.x
Queue:	0.3	xxx.x	0.2	0.2	xxx.x	xxx.x	0.9	xxx.x

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	9.2	9.7	xxx.x	12.1
Delay Adj:	1.00	1.00	x.xx	1.00
ApprAdjDel:	9.2	9.7	xxx.x	12.1
LOS by Appr:	A	A	*	B

OverallDel: 10.8
OverallLOS: B

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #26 Street D/Street E

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound

Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	1 0 1 0 0	0 0 0 0 0	0 0 1! 0 0
Initial Vol:	0 60 100	90 110 0	0 0 0	220 0 160

Major Street Volume: 380
Minor Approach Volume: 200
Minor Approach Volume Threshold: 597

SIGNAL WARRANT DISCLAIMER

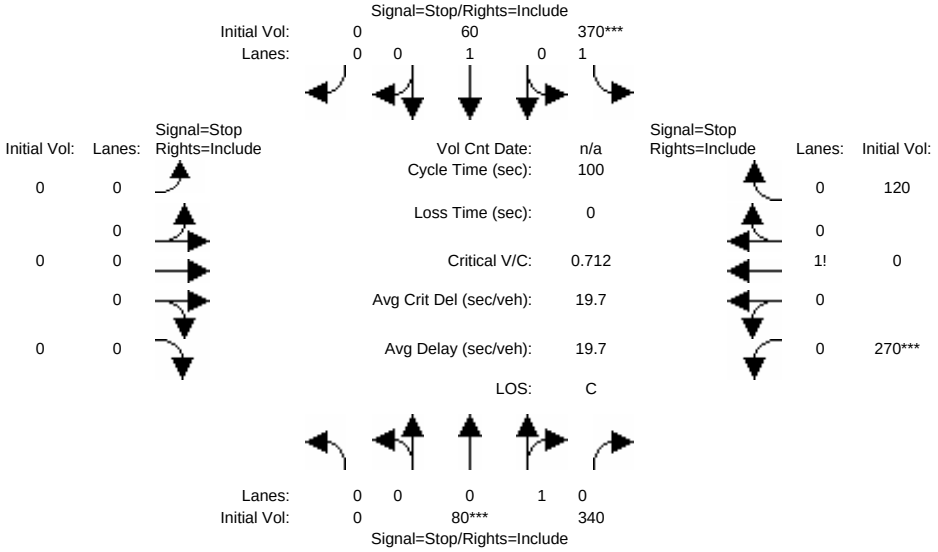
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Baseline WP PM

Intersection #26: Street D/Street E




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    80   340   370    60     0     0     0     0   270     0   120
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    80   340   370    60     0     0     0     0   270     0   120
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    80   340   370    60     0     0     0     0   270     0   120
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:    0    80   340   370    60     0     0     0     0   270     0   120
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
Final Vol.:     0    80   340   370    60     0     0     0     0   270     0   120
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
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  0.19  0.81  1.00  1.00  0.00  0.00  0.00  0.00  0.69  0.00  0.31
Final Sat.:     0   122   517   519   559     0     0     0     0   400     0   178
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     xxxx  0.66  0.66  0.71  0.11  xxxx  xxxx  xxxx  xxxx  0.67  xxxx  0.67
Crit Moves:         ****        ****                                ****
Delay/Veh:    0.0  17.6  17.6  23.8   9.7   0.0   0.0   0.0   0.0  19.5   0.0  19.5
Delay Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:   0.0  17.6  17.6  23.8   9.7   0.0   0.0   0.0   0.0  19.5   0.0  19.5
LOS by Move:    *     C     C     C     A     *     *     *     *     C     *     C
ApproachDel:          17.6              21.8             xxxxxx             19.5
Delay Adj:            1.00              1.00              xxxxx             1.00
ApprAdjDel:           17.6              21.8             xxxxxx             19.5
LOS by Appr:             C                 C                 *                C
AllWayAvgQ:   1.6   1.6   1.6   2.1   0.1   0.0   0.0   0.0   0.0   1.7   1.7   1.7
------------|---------------|---------------|---------------|---------------|
Time Period: 0.25 hour
HevVeh:              2%               2%               2%               2%
Alpha Value: 0.01
------------|---------------|---------------|---------------|---------------|
GroupType:           3A                5                X                2
P[C1]:           0.0945           0.1267           x.xxxx           0.0978
P[C2]:           0.2555           0.2233           x.xxxx           0.0000
P[C3]:           0.1756           0.2353           x.xxxx           0.4365
P[C4]:           0.4744           0.4147           x.xxxx           0.4657
P[C5]:           0.0000           0.0000           x.xxxx           0.0000
Padj[C1]:        0.02030          0.01938          xx.xxxxx         0.02270
Padj[C2]:        0.00869          0.00841          xx.xxxxx         0.01368
Padj[C3]:       -0.00052         -0.00291          xx.xxxxx        -0.00844
Padj[C4]:       -0.02846         -0.02488          xx.xxxxx        -0.02794
Padj[C5]:        0.00000          0.00000          xx.xxxxx         0.00000
------------|---------------|---------------|---------------|---------------|
Lanes:          L1      L2       L1      L2       L1      L2       L1      L2
LaneType:      LTR    NOLANE    LEFT    THRU    NOLANE  NOLANE    LTR    NOLANE
------------|---------------|---------------|---------------|---------------|
HeadwayAdj:  -0.452  xx.xxx    0.534   0.034   xx.xxx  xx.xxx   -0.012  xx.xxx
Volume:        420  xxxxxx      370      60   xxxxxx  xxxxxx      390  xxxxxx
Capacity:      639   xxxxx      519     559    xxxxx   xxxxx      578   xxxxx
DegOfUtil:    0.64    x.xx     0.70    0.10     x.xx    x.xx     0.65    x.xx
DepHeadway:   5.47   xx.xx     6.80    6.30    xx.xx   xx.xx     6.01   xx.xx
ServiceTime:   3.5    xx.x      4.5     4.0     xx.x    xx.x      4.0    xx.x
Delay:        17.6   xxx.x     23.8     9.7    xxx.x   xxx.x     19.5   xxx.x
Queue:         1.6   xxx.x      2.1     0.1    xxx.x   xxx.x      1.7   xxx.x
------------|---------------|---------------|---------------|---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
------------|---------------|---------------|---------------|---------------|
ApproachDel:        17.6             21.8             xxx.x             19.5
Delay Adj:          1.00             1.00              x.xx             1.00
ApprAdjDel:         17.6             21.8             xxx.x             19.5
LOS by Appr:           C                C                *                C
OverallDel:                                19.7
OverallLOS:                                 C
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #26 Street D/Street E
********************************************************************************
Base Volume Alternative: Peak Hour Warrant Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
```


Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	1 0 1 0 0	0 0 0 0 0	0 0 1! 0 0
Initial Vol:	0 80 340	370 60 0	0 0 0	270 0 120

Major Street Volume: 850
Minor Approach Volume: 390
Minor Approach Volume Threshold: 341

SIGNAL WARRANT DISCLAIMER

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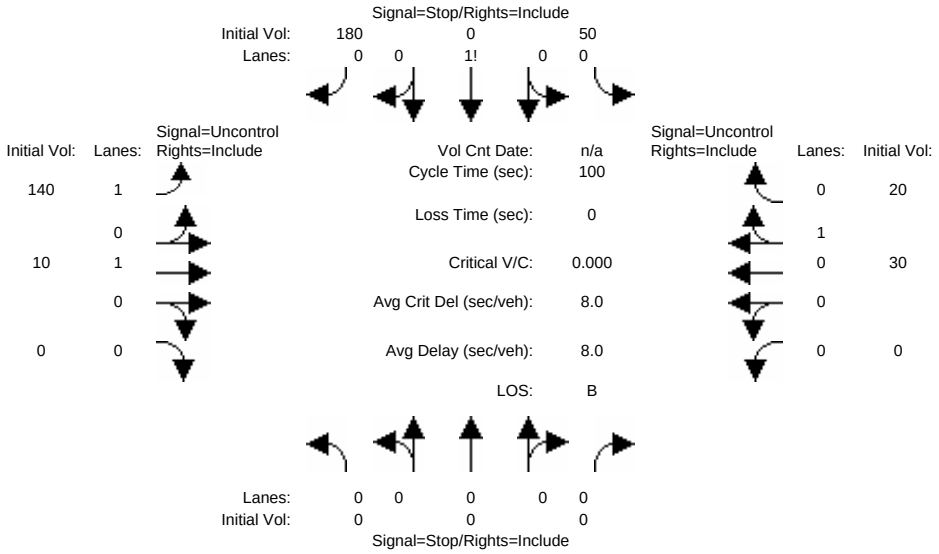
The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline WP AM

Intersection #27: Street E/Street G




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0    0    50    0   180   140   10     0     0   30    20
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    50    0   180   140   10     0     0   30    20
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    50    0   180   140   10     0     0   30    20
Reduct Vol:     0    0    0     0    0     0     0    0     0     0    0     0
Final Vol.:     0    0    0    50    0   180   140   10     0     0   30    20
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   330 xxxx    40    50 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   665 xxxx  1031  1557 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   619 xxxx  1031  1557 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.08 xxxx  0.17  0.09 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.3 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.5 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  901 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  1.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 10.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:    xxxxxx             10.4           xxxxxx           xxxxxx
ApproachLOS:         *               B              *                *
-----------|---------------|----------------|----------------|----------------|
HevVeh:             2%               2%               2%               2%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #27 Street E/Street G
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  1  0  0    0  0  0  1  0
Initial Vol:    0    0    0    50    0   180   140   10     0     0   30    20
ApproachDel:    xxxxxx             10.4           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=230]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=430]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #27 Street E/Street G
********************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0	0	0 0	1!	0	1 0	1	0	0 0	1	0
Initial Vol:	0	0	0	50	0	180	140	10	0	0	30	20

Major Street Volume: 200
Minor Approach Volume: 230
Minor Approach Volume Threshold: 839

SIGNAL WARRANT DISCLAIMER

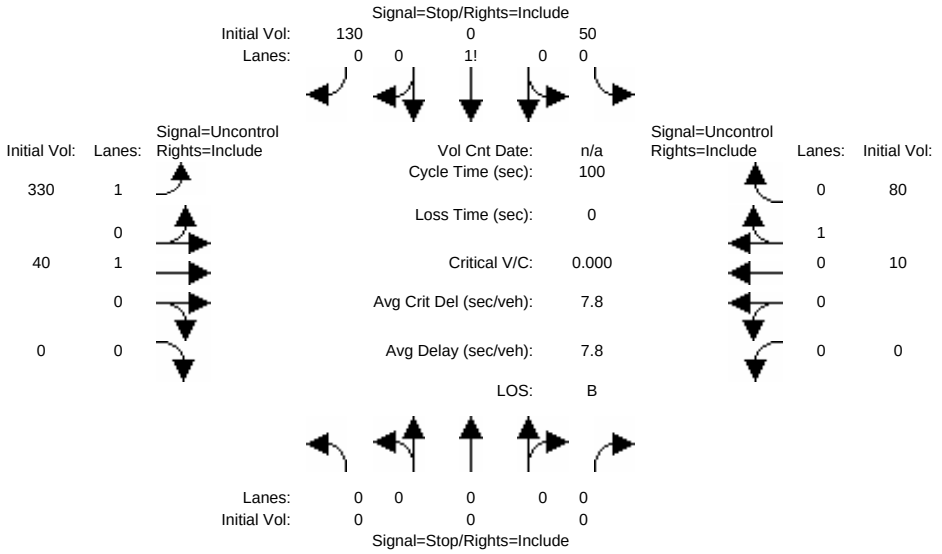
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline WP PM

Intersection #27: Street E/Street G




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0    0    50    0   130   330   40     0     0   10    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:    0    0    0    50    0   130   330   40     0     0   10    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:     0    0    0    50    0   130   330   40     0     0   10    80
Reduct Vol:     0    0    0     0    0     0     0    0     0     0    0     0
Final Vol.:     0    0    0    50    0   130   330   40     0     0   10    80
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4 xxxx   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5 xxxx   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   750 xxxx    50    90 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   379 xxxx  1018  1505 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   315 xxxx  1018  1505 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.16 xxxx  0.13  0.22 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.8 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.1 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  628 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  1.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx 13.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    *     *     *    B     *     *    *     *     *    *     *
ApproachDel:    xxxxxx             13.0           xxxxxx           xxxxxx
ApproachLOS:         *               B              *                *
-----------|---------------|----------------|----------------|----------------|
HevVeh:             2%               2%               2%               2%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #27 Street E/Street G
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  0  0  0    0  0  1! 0  0    1  0  1  0  0    0  0  0  1  0
Initial Vol:    0    0    0    50    0   130   330   40     0     0   10    80
ApproachDel:    xxxxxx             13.0           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=180]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=640]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #27 Street E/Street G
********************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0	0 0		0 0	1! 0	0	1 0	1 0	0	0 0	0 1	0
Initial Vol:	0	0	0	50	0	130	330	40	0	0	10	80

Major Street Volume: 460
Minor Approach Volume: 180
Minor Approach Volume Threshold: 552

SIGNAL WARRANT DISCLAIMER

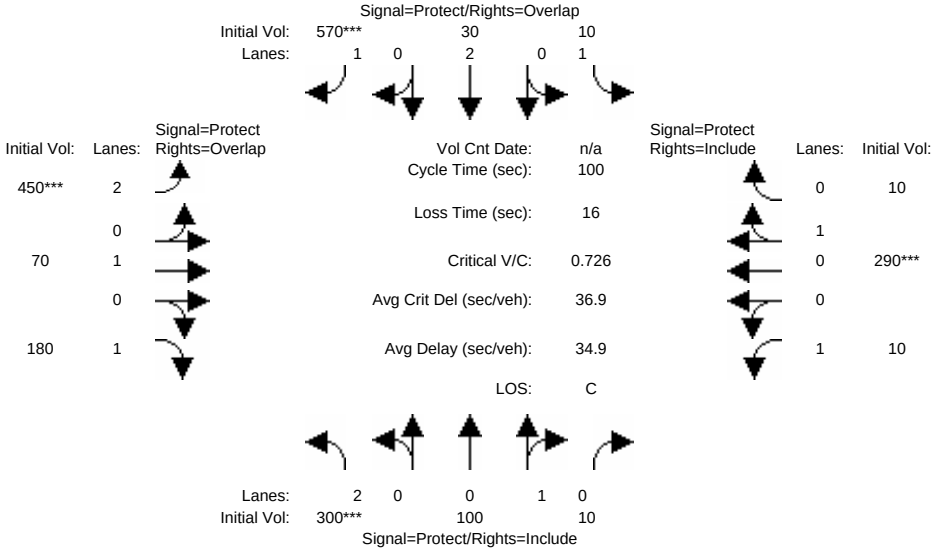
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #28: Delta Shores Circle South/Street D South



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	300	100	10	10	30	570	450	70	180	10	290	10
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:	300	100	10	10	30	570	450	70	180	10	290	10
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:	300	100	10	10	30	570	450	70	180	10	290	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	300	100	10	10	30	570	450	70	180	10	290	10
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
Final Vol.:	300	100	10	10	30	570	450	70	180	10	290	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.97	0.97	0.93	0.93	0.83	0.90	0.98	0.83	0.93	0.98	0.98
Lanes:	2.00	0.91	0.09	1.00	2.00	1.00	2.00	1.00	1.00	1.00	0.97	0.03
Final Sat.:	3432	1669	167	1769	3538	1583	3432	1862	1583	1769	1791	62
Capacity Analysis Module:												
Vol/Sat:	0.09	0.06	0.06	0.01	0.01	0.36	0.13	0.04	0.11	0.01	0.16	0.16
Crit Moves:	****					****	****				****	
Green/Cycle:	0.12	0.25	0.25	0.18	0.32	0.50	0.18	0.24	0.36	0.17	0.22	0.22
Volume/Cap:	0.73	0.24	0.24	0.03	0.03	0.73	0.73	0.16	0.32	0.03	0.73	0.73
Delay/Veh:	48.7	29.8	29.8	33.7	23.6	23.2	42.9	30.5	23.7	34.8	42.3	42.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.7	29.8	29.8	33.7	23.6	23.2	42.9	30.5	23.7	34.8	42.3	42.3
LOS by Move:	D	C	C	C	C	C	D	C	C	C	D	D
HCM2kAvgQ:	6	3	3	0	0	15	8	2	4	0	10	10
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	2	0	0	1	0	1	0	2	0	1	2	0	1	0	1	1	0	0	1	0
Lane Group:	L	RT		RT		L	T		R		L	T		R		L	RT		RT	
#LnsInGrps:	2	1		1		1	2		1		2	1		1		1	1		1	
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrosswalkWid	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.99	0.99	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	1.00	1.00
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.97	0.97	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.98
Usr Sat Adj:	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 Sat Adj:	0.97	1.00	1.00	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.90	0.97	0.97	0.93	0.93	0.83	0.90	0.98	0.83	0.93	0.98	0.98
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

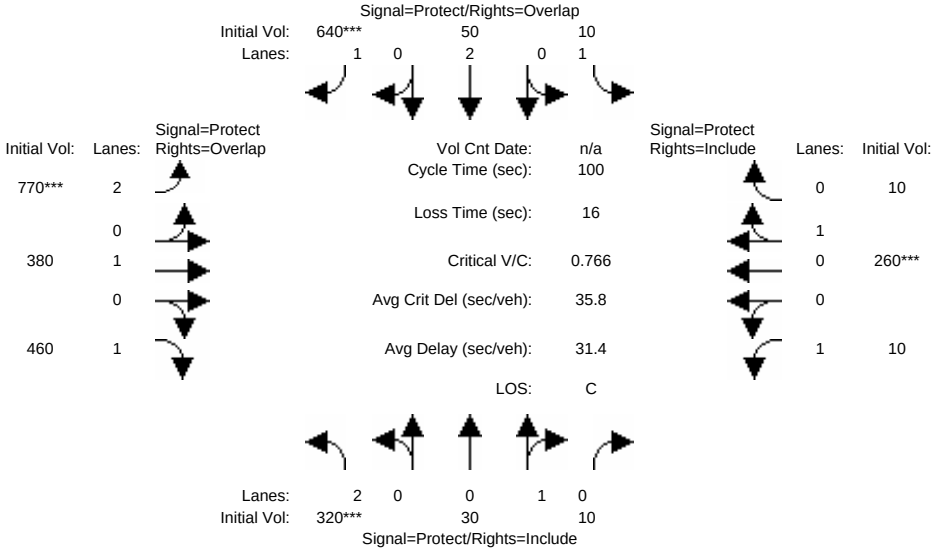
Intersection #28 Delta Shores Circle South/Street D South


```
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.12 0.25  0.25  0.18 0.32  0.50  0.18 0.24  0.36  0.17 0.22  0.22
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.1  2.4   2.4   0.2  0.3  12.5   6.1  1.5   3.6   0.2  7.7   7.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           2.1  0.3   0.3   0.0  0.0   2.4   2.2  0.2   0.5   0.0  2.3   2.3
HCM2KQueue:   6.2  2.7   2.7   0.3  0.3  14.9   8.3  1.7   4.1   0.3 10.0  10.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.20 1.20  1.17  1.18 1.20  1.19  1.20 1.18  1.18
70th%HCM2kQ:  7.4  3.3   3.3   0.3  0.4  17.4   9.8  2.1   4.9   0.3 11.8  11.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.57  1.57  1.60 1.60  1.48  1.53 1.58  1.56  1.60 1.51  1.51
85th%HCM2kQ:  9.6  4.3   4.3   0.4  0.5  22.1  12.6  2.7   6.4   0.4 15.2  15.2
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.69 1.75  1.75  1.79 1.79  1.59  1.66 1.77  1.73  1.79 1.64  1.64
90th%HCM2kQ: 10.5  4.8   4.8   0.5  0.6  23.7  13.8  3.1   7.1   0.5 16.4  16.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.93 2.02  2.02  2.09 2.09  1.76  1.88 2.04  1.98  2.09 1.84  1.84
95th%HCM2kQ: 11.9  5.5   5.5   0.5  0.7  26.2  15.6  3.5   8.1   0.6 18.4  18.4
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.32 2.51  2.51  2.68 2.67  2.02  2.23 2.58  2.43  2.68 2.16  2.16
98th%HCM2kQ: 14.4  6.9   6.9   0.7  0.9  30.0  18.5  4.5  10.0   0.7 21.6  21.6
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
********************************************************************************
Intersection #28 Delta Shores Circle South/Street D South
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  72.3 19.8   2.0   2.1  5.2 112.2 106.1 13.9  32.7   2.1 67.2   2.3
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     74.864 pounds
                      12.128 gallons
Carbon Dioxide:      233.577 pounds
Carbon Monoxide:      18.878 pounds
Hydrocarbons:          3.617 pounds
Nitrogen Oxides:       0.626 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     71.093 pounds
                      11.517 gallons
Carbon Dioxide:      221.810 pounds
Carbon Monoxide:      18.581 pounds
Hydrocarbons:          3.557 pounds
Nitrogen Oxides:       0.565 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP PM

Intersection #28: Delta Shores Circle South/Street D South




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     320   30    10    10   50   640   770  380   460    10  260    10
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:  320   30    10    10   50   640   770  380   460    10  260    10
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:   320   30    10    10   50   640   770  380   460    10  260    10
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  320   30    10    10   50   640   770  380   460    10  260    10
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
Final Vol.:   320   30    10    10   50   640   770  380   460    10  260    10
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.90 0.94  0.94  0.93 0.93  0.83  0.90 0.98  0.83  0.93 0.97  0.97
Lanes:       2.00 0.75  0.25  1.00 2.00  1.00  2.00 1.00  1.00  1.00 0.96  0.04
Final Sat.:  3432 1345   448  1769 3538  1583  3432 1862  1583  1769 1782    69
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.09 0.02  0.02  0.01 0.01  0.40  0.22 0.20  0.29  0.01 0.15  0.15
Crit Moves:  ****                     ****  ****                     ****
Green/Cycle: 0.12 0.21  0.21  0.15 0.23  0.53  0.29 0.39  0.51  0.10 0.19  0.19
Volume/Cap:  0.77 0.11  0.11  0.04 0.06  0.77  0.77 0.53  0.57  0.06 0.77  0.77
Delay/Veh:   50.8 32.2  32.2  36.5 29.7  23.0  35.8 24.2  17.9  41.3 48.1  48.1
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  50.8 32.2  32.2  36.5 29.7  23.0  35.8 24.2  17.9  41.3 48.1  48.1
LOS by Move:   D    C     C     D    C     C     D    C     B     D    D     D
HCM2kAvgQ:     7    1     1     0    1    17    13    9    10     0   10    10
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       2  0  0  1  0    1  0  2  0  1    2  0  1  0  1    1  0  0  1  0
Lane Group:    L   RT     RT    L    T    R    L    T    R    L   RT     RT
#LnsInGrps:    2    1     1     1    2    1    2    1    1    1    1     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:   12   12    12    12   12   12   12   12   12    12   12    12
CrosswalkWid         8               8               8               8
% Hev Veh:           2               2               2               2
Grade:              0%              0%              0%              0%
Parking/Hr:         No              No              No              No
Bus Stp/Hr:          0               0               0               0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0               0               0               0
ExclusiveRT:     Include         Include         Include         Include
% RT Prtct:          0               0               0               0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx 0.96  0.96  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx 0.99  0.99
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.94  0.94  0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.97  0.97
Usr Sat Adj: 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 Sat Adj: 0.97 1.00  1.00  1.00 0.95  1.00  0.97 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 0.90 0.94  0.94  0.93 0.93  0.83  0.90 0.98  0.83  0.93 0.97  0.97
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #28 Delta Shores Circle South/Street D South
```

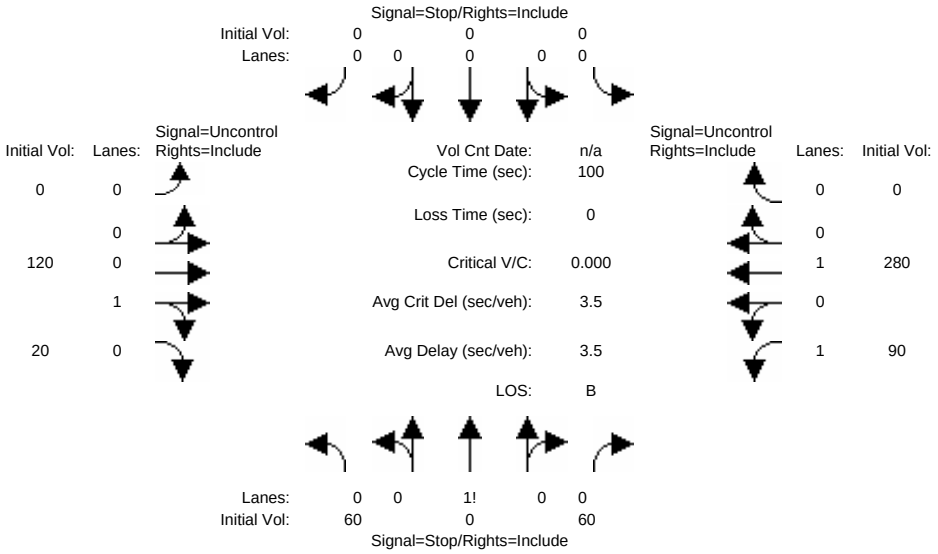


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.12 0.21  0.21  0.15 0.23  0.53  0.29 0.39  0.51  0.10 0.19  0.19
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.4  0.9   0.9   0.2  0.6  14.1  10.1  8.1   8.8   0.3  7.1   7.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           2.4  0.1   0.1   0.0  0.1   2.9   2.8  1.1   1.3   0.1  2.6   2.6
HCM2KQueue:   6.8  1.0   1.0   0.3  0.6  17.0  12.8  9.2  10.1   0.3  9.7   9.7
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.20  1.20 1.20  1.17  1.17 1.18  1.18  1.20 1.18  1.18
70th%HCM2kQ:  8.1  1.2   1.2   0.3  0.8  19.8  15.0 10.8  11.9   0.4 11.5  11.5
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.59  1.59  1.60 1.59  1.47  1.50 1.52  1.51  1.60 1.52  1.52
85th%HCM2kQ: 10.5  1.6   1.6   0.4  1.0  25.0  19.2 14.0  15.3   0.5 14.7  14.7
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.68 1.78  1.78  1.79 1.79  1.57  1.61 1.65  1.64  1.79 1.65  1.65
90th%HCM2kQ: 11.5  1.8   1.8   0.5  1.1  26.7  20.6 15.2  16.6   0.6 16.0  16.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.91 2.07  2.07  2.09 2.08  1.73  1.79 1.86  1.84  2.09 1.85  1.85
95th%HCM2kQ: 13.0  2.1   2.1   0.6  1.3  29.5  23.0 17.1  18.6   0.7 18.0  18.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.29 2.62  2.62  2.68 2.65  1.97  2.07 2.19  2.16  2.68 2.17  2.17
98th%HCM2kQ: 15.6  2.7   2.7   0.7  1.7  33.5  26.6 20.2  21.8   0.8 21.1  21.1
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #28 Delta Shores Circle South/Street D South
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  77.5  6.1   2.0   2.1  9.7 126.8 175.5 73.0  79.4   2.3 61.6   2.4
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    101.324 pounds
                      16.414 gallons
Carbon Dioxide:      316.131 pounds
Carbon Monoxide:      25.319 pounds
Hydrocarbons:          4.777 pounds
Nitrogen Oxides:       0.867 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     95.877 pounds
                      15.532 gallons
Carbon Dioxide:      299.135 pounds
Carbon Monoxide:      24.891 pounds
Hydrocarbons:          4.690 pounds
Nitrogen Oxides:       0.780 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline WP AM

Intersection #29: Street C/Stone-Boswell Access West




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      60    0    60     0    0     0     0  120    20    90  280     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:   60    0    60     0    0     0     0  120    20    90  280     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:    60    0    60     0    0     0     0  120    20    90  280     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    60    0    60     0    0     0     0  120    20    90  280     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4 xxxx   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  590 xxxx   130  xxxx xxxx xxxxx  xxxx xxxx xxxxx   140 xxxx xxxxx
Potent Cap.:  470 xxxx   920  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1443 xxxx xxxxx
Move Cap.:    448 xxxx   920  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1443 xxxx xxxxx
Volume/Cap:  0.13 xxxx  0.07  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.06 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.7 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  602 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 12.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    B     *     *    *     *     *    *     *     *    *     *
ApproachDel:      12.5           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       B               *                *                *
------------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #29 Street C/Stone-Boswell Access West
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:   60    0    60     0    0     0     0  120    20    90  280     0
ApproachDel:      12.5           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=120]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=630]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #29 Street C/Stone-Boswell Access West
********************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	1	0	1 0
Initial Vol:	60	0	60	0	0	0	0	120	20	90	280	0

Major Street Volume: 510
Minor Approach Volume: 120
Minor Approach Volume Threshold: 517

SIGNAL WARRANT DISCLAIMER

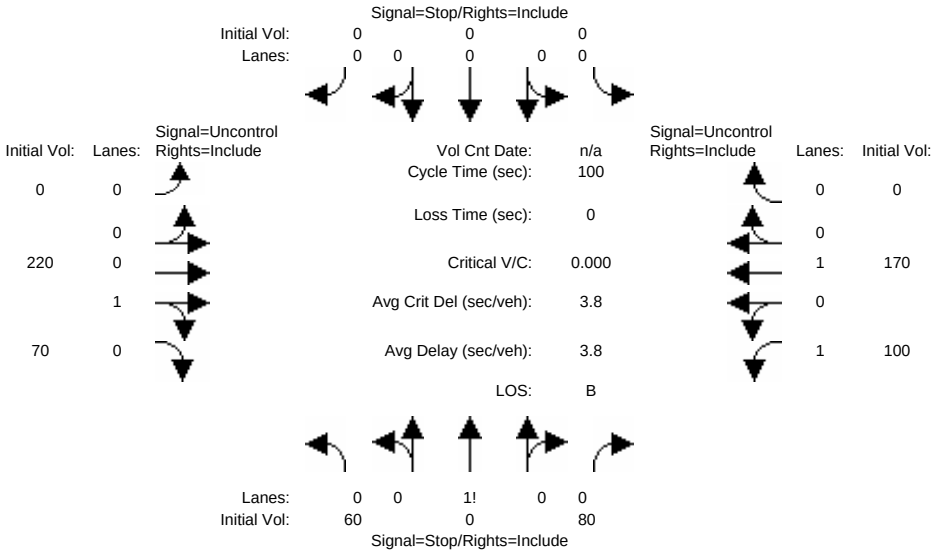
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Baseline WP PM

Intersection #29: Street C/Stone-Boswell Access West




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      60    0    80     0    0     0     0  220    70   100  170     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:   60    0    80     0    0     0     0  220    70   100  170     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:    60    0    80     0    0     0     0  220    70   100  170     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    60    0    80     0    0     0     0  220    70   100  170     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4 xxxx   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  625 xxxx   255  xxxx xxxx xxxxx  xxxx xxxx xxxxx   290 xxxx xxxxx
Potent Cap.:  449 xxxx   784  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1272 xxxx xxxxx
Move Cap.:    422 xxxx   784  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1272 xxxx xxxxx
Volume/Cap:  0.14 xxxx  0.10  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.08 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.3 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.1 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  573 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  1.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 13.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    B     *     *    *     *     *    *     *     *    *     *
ApproachDel:      13.3           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       B               *                *                *
------------|---------------|---------------|---------------|---------------|
HevVeh:            2%              2%              2%              2%
Grade:             0%              0%              0%              0%
Peds/Hour:         0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:      12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #29 Street C/Stone-Boswell Access West
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:       Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:       0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:   60    0    80     0    0     0     0  220    70   100  170     0
ApproachDel:      13.3           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=140]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=700]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #29 Street C/Stone-Boswell Access West
********************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	1! 0	0	0	0	0	0 0	0	0	0	1 0	1	0	1	0 0
Initial Vol:	60	0	80		0	0	0		0	220	70		100	170	0	

Major Street Volume: 560
Minor Approach Volume: 140
Minor Approach Volume Threshold: 485

SIGNAL WARRANT DISCLAIMER

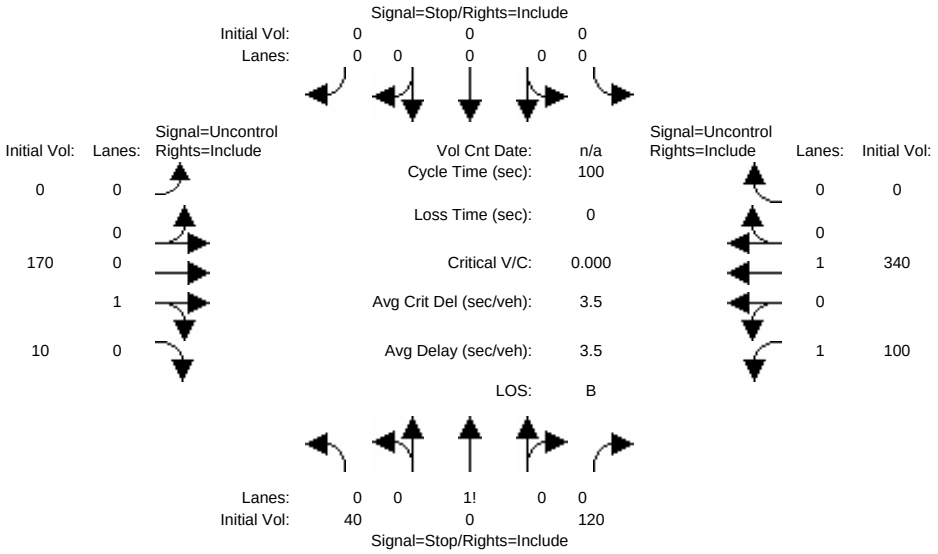
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Baseline WP AM

Intersection #30: Street C/Stone-Boswell Access East




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      40    0   120     0    0     0     0  170    10   100  340     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:   40    0   120     0    0     0     0  170    10   100  340     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:    40    0   120     0    0     0     0  170    10   100  340     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    40    0   120     0    0     0     0  170    10   100  340     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4 xxxx   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  715 xxxx   175  xxxx xxxx xxxxx  xxxx xxxx xxxxx   180 xxxx xxxxx
Potent Cap.:  397 xxxx   868  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1396 xxxx xxxxx
Move Cap.:    376 xxxx   868  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1396 xxxx xxxxx
Volume/Cap:  0.11 xxxx  0.14  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.07 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.8 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  654 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  1.0 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 12.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    B     *     *    *     *     *    *     *     *    *     *
ApproachDel:      12.3           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       B                *                *                *
------------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #30 Street C/Stone-Boswell Access East
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:   40    0   120     0    0     0     0  170    10   100  340     0
ApproachDel:      12.3           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=160]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=780]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #30 Street C/Stone-Boswell Access East
********************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	1	0	1 0
Initial Vol:	40	0	120	0	0	0	0	170	10	100	340	0

Major Street Volume: 620
Minor Approach Volume: 160
Minor Approach Volume Threshold: 450

SIGNAL WARRANT DISCLAIMER

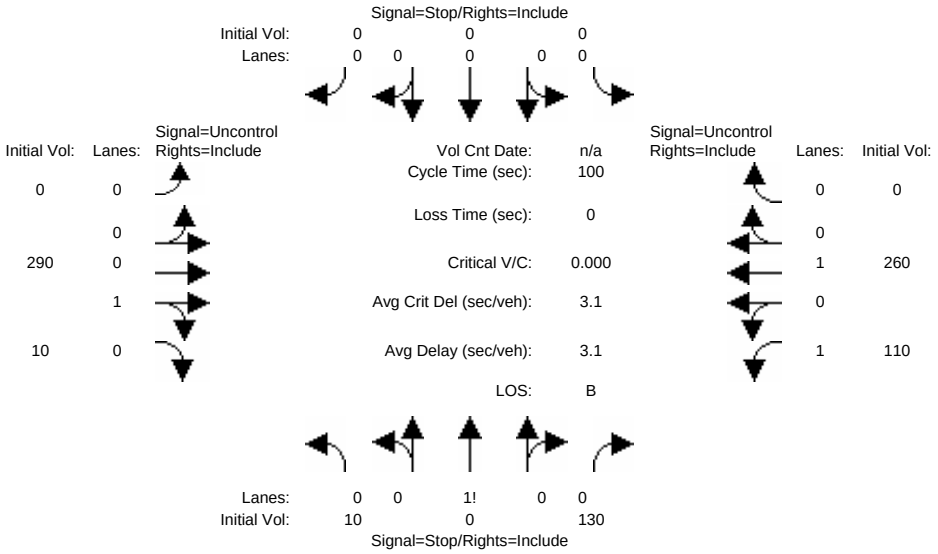
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Baseline WP PM

Intersection #30: Street C/Stone-Boswell Access East




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      10    0   130     0    0     0     0  290    10   110  260     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:   10    0   130     0    0     0     0  290    10   110  260     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:    10    0   130     0    0     0     0  290    10   110  260     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Final Vol.:    10    0   130     0    0     0     0  290    10   110  260     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4 xxxx   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5 xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  775 xxxx   295  xxxx xxxx xxxxx  xxxx xxxx xxxxx   300 xxxx xxxxx
Potent Cap.:  366 xxxx   744  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1261 xxxx xxxxx
Move Cap.:    342 xxxx   744  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1261 xxxx xxxxx
Volume/Cap:  0.03 xxxx  0.17  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.09 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.3 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.1 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  687 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.8 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 11.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    B     *     *    *     *     *    *     *     *    *     *
ApproachDel:      11.6           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       B               *                *                *
------------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #30 Street C/Stone-Boswell Access East
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:   10    0   130     0    0     0     0  290    10   110  260     0
ApproachDel:      11.6           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=140]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=810]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                 Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #30 Street C/Stone-Boswell Access East
********************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	1! 0	0	0	0	0	0 0	0	0	0	1 0	1	0	1	0 0
Initial Vol:	10	0	130		0	0	0		0	290		10	110	260		0

Major Street Volume: 670
Minor Approach Volume: 140
Minor Approach Volume Threshold: 423

SIGNAL WARRANT DISCLAIMER

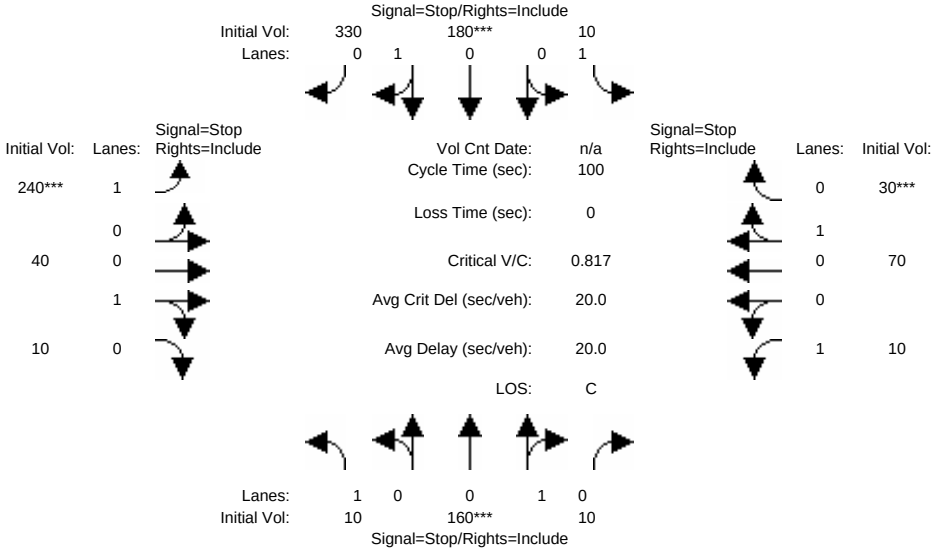
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Baseline WP AM

Intersection #31: Street C/Detroit Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	160	10	10	180	330	240	40	10	10	70	30
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:	10	160	10	10	180	330	240	40	10	10	70	30
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:	10	160	10	10	180	330	240	40	10	10	70	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	160	10	10	180	330	240	40	10	10	70	30
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
Final Vol.:	10	160	10	10	180	330	240	40	10	10	70	30
Saturation Flow Module:												
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	0.94	0.06	1.00	0.35	0.65	1.00	0.80	0.20	1.00	0.70	0.30
Final Sat.:	478	489	31	528	220	404	477	413	103	437	334	143
Capacity Analysis Module:												
Vol/Sat:	0.02	0.33	0.33	0.02	0.82	0.82	0.50	0.10	0.10	0.02	0.21	0.21
Crit Moves:		****			****		****					****
Delay/Veh:	9.9	12.2	12.2	9.5	27.7	27.7	16.3	9.9	9.9	10.4	11.2	11.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.9	12.2	12.2	9.5	27.7	27.7	16.3	9.9	9.9	10.4	11.2	11.2
LOS by Move:	A	B	B	A	D	D	C	A	A	B	B	B
ApproachDel:		12.0			27.3			15.2			11.1	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.0			27.3			15.2			11.1	
LOS by Appr:		B			D			C			B	
AllWayAvgQ:	0.0	0.4	0.4	0.0	3.3	3.3	0.9	0.1	0.1	0.0	0.2	0.2
Time Period: 0.25 hour												
HevVeh:		2%			2%			2%			2%	
Alpha Value: 0.01												
GroupType:		5			5			5			5	
P[C1]:		0.07			0.25			0.10			0.06	
P[C2]:		0.30			0.12			0.03			0.07	
P[C3]:		0.10			0.35			0.48			0.29	
P[C4]:		0.44			0.24			0.33			0.44	
P[C5]:		0.09			0.04			0.05			0.14	
Padj[C1]:		0.022			0.017			0.022			0.025	
Padj[C2]:		0.009			0.008			0.013			0.015	
Padj[C3]:		0.003			-0.007			-0.010			-0.001	
Padj[C4]:		-0.025			-0.014			-0.019			-0.025	
Padj[C5]:		-0.009			-0.004			-0.005			-0.014	
Lanes:	L1	L2		L1	L2		L1	L2		L1	L2	
LaneType:	LEFT	RTTHRU		LEFT	RTTHRU		LEFT	RTTHRU		LEFT	RTTHRU	
HeadwayAdj:	0.534	-0.007		0.534	-0.419		0.534	-0.106		0.534	-0.176	
Volume:	10	170		10	510		240	50		10	100	
Capacity:	478	519		528	625		477	516		437	478	
DegOfUtil:	0.02	0.31		0.02	0.81		0.48	0.09		0.02	0.19	
DepHeadway:	7.09	6.55		6.64	5.69		7.19	6.55		7.58	6.87	
ServiceTime:	4.8	4.3		4.3	3.4		4.9	4.2		5.3	4.6	
Delay:	9.9	12.2		9.5	27.7		16.3	9.9		10.4	11.2	
Queue:	0.0	0.4		0.0	3.3		0.9	0.1		0.0	0.2	

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	12.0	27.3	15.2	11.1
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	12.0	27.3	15.2	11.1
LOS by Appr:	B	D	C	B

OverallDel: 20.0
OverallLOS: C

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #31 Street C/Detroit Boulevard

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound

Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0
Initial Vol:	10 160 10	10 180 330	240 40 10	10 70 30

Major Street Volume: 700
Minor Approach Volume: 290
Minor Approach Volume Threshold: 527

SIGNAL WARRANT DISCLAIMER

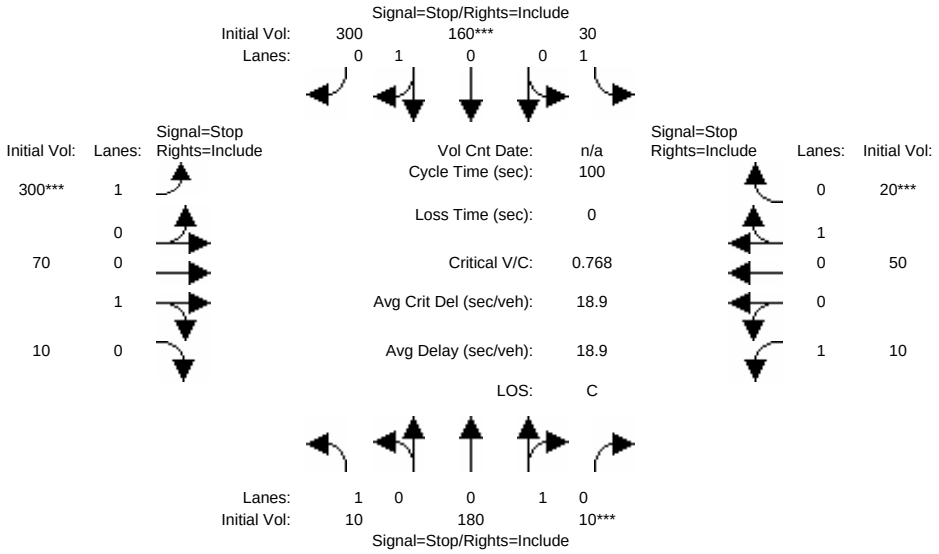
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Baseline WP PM

Intersection #31: Street C/Detroit Boulevard




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      10   180    10    30   160   300   300    70    10    10    50    20
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:   10   180    10    30   160   300   300    70    10    10    50    20
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:    10   180    10    30   160   300   300    70    10    10    50    20
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   10   180    10    30   160   300   300    70    10    10    50    20
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
Final Vol.:    10   180    10    30   160   300   300    70    10    10    50    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
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  0.95  0.05  1.00  0.35  0.65  1.00  0.87  0.13  1.00  0.71  0.29
Final Sat.:   470   482    27   509   208   391   488   459    66   422   329   132
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.02  0.37  0.37  0.06  0.77  0.77  0.61  0.15  0.15  0.02  0.15  0.15
Crit Moves:              ****        ****        ****                      ****
Delay/Veh:   10.1  13.1  13.1  10.0  24.5  24.5  19.7  10.4  10.4  10.6  10.9  10.9
Delay Adj:   1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  10.1  13.1  13.1  10.0  24.5  24.5  19.7  10.4  10.4  10.6  10.9  10.9
LOS by Move:   B     B     B     A     C     C     C     B     B     B     B     B
ApproachDel:       12.9              23.6              17.8              10.8
Delay Adj:         1.00              1.00              1.00              1.00
ApprAdjDel:        12.9              23.6              17.8              10.8
LOS by Appr:         B                 C                 C                 B
AllWayAvgQ:    0.0   0.5   0.5   0.1   2.6   2.6   1.3   0.2   0.2   0.0   0.1   0.1
-----------|---------------|---------------|---------------|---------------|
Time Period: 0.25 hour
HevVeh:              2%                2%                2%                2%
Alpha Value: 0.01
-----------|---------------|---------------|---------------|---------------|
GroupType:           5                 5                 5                 5
P[C1]:            0.07              0.19              0.12              0.05
P[C2]:            0.23              0.11              0.02              0.10
P[C3]:            0.14              0.38              0.48              0.20
P[C4]:            0.49              0.29              0.33              0.47
P[C5]:            0.08              0.04              0.04              0.18
Padj[C1]:         0.023             0.019             0.021             0.026
Padj[C2]:         0.011             0.010             0.012             0.016
Padj[C3]:         0.002            -0.008            -0.010             0.002
Padj[C4]:        -0.029            -0.017            -0.019            -0.026
Padj[C5]:        -0.008            -0.004            -0.004            -0.018
-----------|---------------|---------------|---------------|---------------|
Lanes:          L1      L2       L1      L2       L1      L2       L1      L2
LaneType:     LEFT   RTTHRU    LEFT   RTTHRU    LEFT   RTTHRU    LEFT   RTTHRU
-----------|---------------|---------------|---------------|---------------|
HeadwayAdj:   0.534  -0.003    0.534  -0.423    0.534  -0.053    0.534  -0.166
Volume:         10     190       30     460      300      80       10      70
Capacity:      470     509      509     599      488     525      422     461
DegOfUtil:    0.02    0.35     0.06    0.75     0.59    0.15     0.02    0.14
DepHeadway:   7.26    6.72     6.86    5.91     7.13    6.54     7.75    7.05
ServiceTime:  5.0     4.4      4.6     3.6      4.8     4.2      5.5     4.8
Delay:       10.1    13.1     10.0    24.5     19.7    10.4     10.6    10.9
Queue:        0.0     0.5      0.1     2.6      1.3     0.2      0.0     0.1
-----------|---------------|---------------|---------------|---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
-----------|---------------|---------------|---------------|---------------|
ApproachDel:       12.9              23.6              17.8              10.8
Delay Adj:         1.00              1.00              1.00              1.00
ApprAdjDel:        12.9              23.6              17.8              10.8
LOS by Appr:         B                 C                 C                 B
OverallDel:                                18.9
OverallLOS:                                 C
            Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #31 Street C/Detroit Boulevard
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
```


Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0
Initial Vol:	10 180 10	30 160 300	300 70 10	10 50 20

Major Street Volume: 690
Minor Approach Volume: 380
Minor Approach Volume Threshold: 534

SIGNAL WARRANT DISCLAIMER

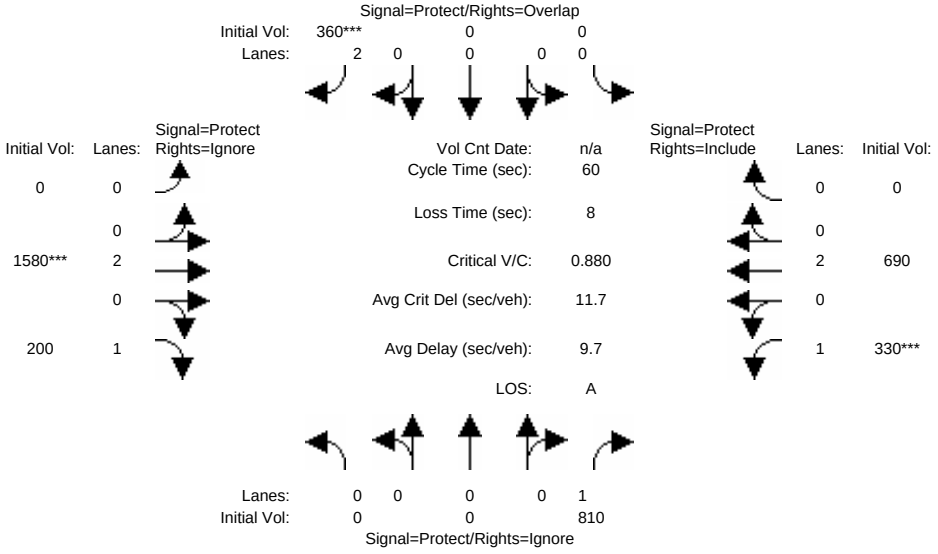
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP AM

Intersection #32:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     4     0   25     0     4   25     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0   810     0     0   360     0 1580   200   330  690     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   810     0     0   360     0 1580   200   330  690     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Volume:     0     0     0     0     0   360     0 1580     0   330  690     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:    0     0     0     0     0   360     0 1580     0   330  690     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
Final Vol.:     0     0     0     0     0   360     0 1580     0   330  690     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  1.00 1.00  0.73  1.00 0.93  1.00  0.93 0.93  1.00
Lanes:       0.00 0.00  1.00  0.00 0.00  2.00  0.00 2.00  1.00  1.00 2.00  0.00
Final Sat.:     0     0  1900     0     0  2786     0 3538  1900  1769 3538     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.13  0.00 0.45  0.00  0.19 0.20  0.00
Crit Moves:                                ****       ****        ****
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  0.76  0.00 0.59  0.00  0.78 0.28  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0  30.8   0.0  3.5   0.0  30.1  3.4   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0  30.8   0.0  3.5   0.0  30.1  3.4   0.0
LOS by Move:    A    A     A     A    A     C     A    A     A     C    A     A
HCM2kAvgQ:      0    0     0     0    0     6     0    7     0     8    3     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  1    0  0  0  0  2    0  0  2  0  1    1  0  2  0  0
Lane Group:  xxxx xxxx    R   xxxx xxxx    R   xxxx   T     R     L    T   xxxx
#LnsInGrps:     0    0     1     0    0     2     0    2     1     1    2     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  xxxx xxxx  0.98  xxxx 0.98 xxxxx  0.98 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx
Area Adj:    xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.83  1.00 0.98  1.00  0.93 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.88  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.73  1.00 0.93  1.00  0.93 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #32
```

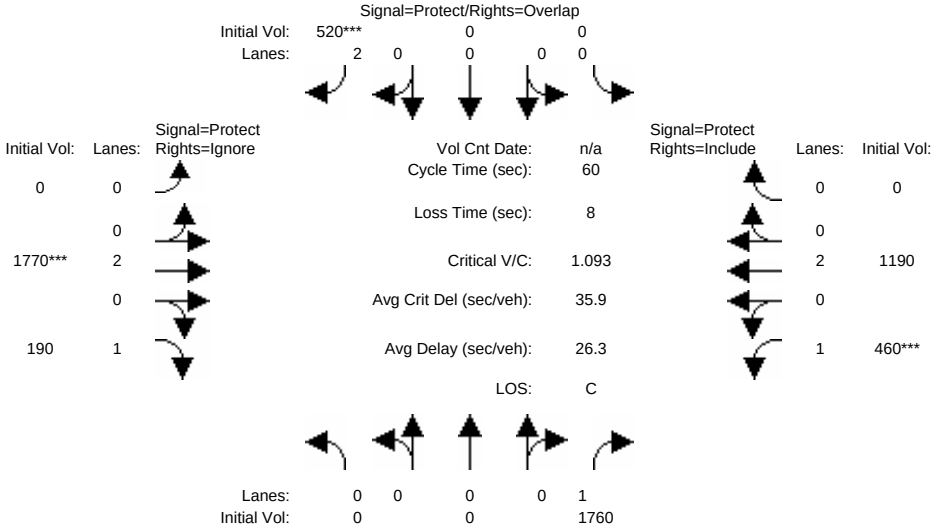


```
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.0  0.0   3.2   0.0  6.0   0.0   5.1  2.3   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   2.4   0.0  1.4   0.0   2.8  0.4   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   5.7   0.0  7.4   0.0   8.0  2.6   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.19  1.20 1.18  1.20  1.18 1.19  1.20
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   6.7   0.0  8.8   0.0   9.4  3.2   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.60 1.60  1.55  1.60 1.53  1.60  1.53 1.57  1.60
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   8.8   0.0 11.4   0.0  12.2  4.2   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.80 1.80  1.70  1.80 1.68  1.80  1.67 1.75  1.80
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0   9.7   0.0 12.4   0.0  13.3  4.6   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.10 2.10  1.94  2.10 1.90  2.10  1.89 2.02  2.10
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  11.0   0.0 14.1   0.0  15.0  5.3   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.70 2.70  2.35  2.70 2.27  2.70  2.24 2.52  2.70
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  13.3   0.0 16.8   0.0  17.8  6.6   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #32
********************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0  85.8   0.0  171   0.0  77.1 64.3   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     54.797 pounds
                       8.877 gallons
Carbon Dioxide:      170.966 pounds
Carbon Monoxide:      12.204 pounds
Hydrocarbons:          1.859 pounds
Nitrogen Oxides:       0.558 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     49.747 pounds
                       8.059 gallons
Carbon Dioxide:      155.212 pounds
Carbon Monoxide:      11.816 pounds
Hydrocarbons:          1.779 pounds
Nitrogen Oxides:       0.487 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP PM

Intersection #32:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     4     0   25     0     4   25     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0  1760     0     0   520     0 1770   190   460 1190     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  1760     0     0   520     0 1770   190   460 1190     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
PHF Volume:     0     0     0     0     0   520     0 1770     0   460 1190     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:    0     0     0     0     0   520     0 1770     0   460 1190     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00
Final Vol.:     0     0     0     0     0   520     0 1770     0   460 1190     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  1.00 1.00  0.73  1.00 0.93  1.00  0.93 0.93  1.00
Lanes:       0.00 0.00  1.00  0.00 0.00  2.00  0.00 2.00  1.00  1.00 2.00  0.00
Final Sat.:     0     0  1900     0     0  2786     0 3538  1900  1769 3538     0
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.00 0.00  0.19  0.00 0.50  0.00  0.26 0.34  0.00
Crit Moves:                                ****        ****        ****
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
Volume/Cap:  0.00 0.00  0.00  0.00 0.00  1.10  0.00 0.66  0.00  1.08 0.48  0.00
Delay/Veh:    0.0  0.0   0.0   0.0  0.0  95.6   0.0  4.1   0.0  90.8  4.2   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0   0.0  0.0  95.6   0.0  4.1   0.0  90.8  4.2   0.0
LOS by Move:    A    A     A     A    A     F     A    A     A     F    A     A
HCM2kAvgQ:      0    0     0     0    0    13     0    9     0    18    6     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  1    0  0  0  0  2    0  0  2  0  1    1  0  2  0  0
Lane Group:  xxxx xxxx    R   xxxx xxxx    R   xxxx   T     R    L    T   xxxx
#LnsInGrps:     0    0     1     0    0     2     0    2     1    1    2     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  xxxx xxxx  0.98  xxxx 0.98 xxxxx  0.98 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx
Area Adj:    xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  1.00 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.83  1.00 0.98  1.00  0.93 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.88  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 1.00 1.00  1.00  1.00 1.00  0.73  1.00 0.93  1.00  0.93 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #32
```

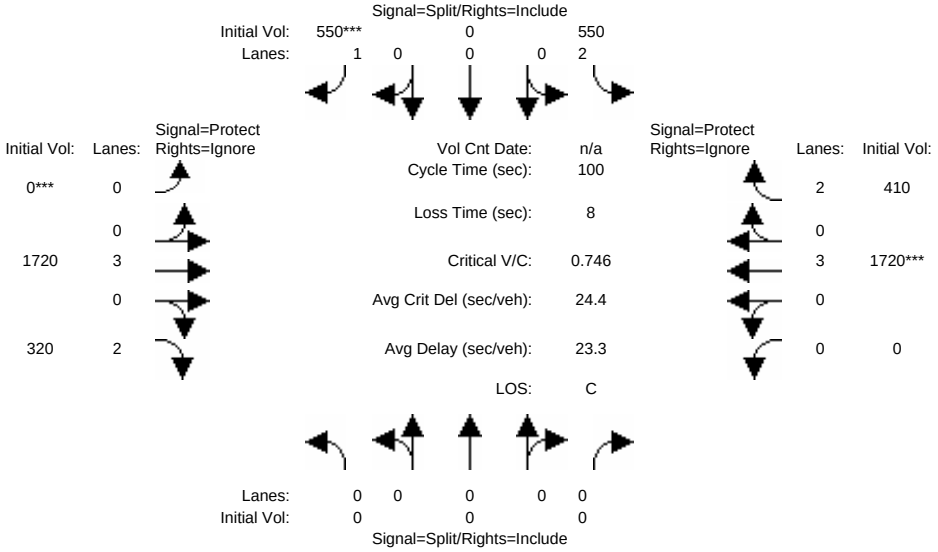


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.0  0.0   4.9   0.0  7.5   0.0   7.7  4.7   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   7.9   0.0  1.9   0.0  10.1  0.9   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0  12.9   0.0  9.3   0.0  17.8  5.6   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.17  1.20 1.18  1.20  1.16 1.19  1.20
70th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  15.1   0.0 11.0   0.0  20.7  6.7   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.60 1.60  1.50  1.60 1.52  1.60  1.47 1.55  1.60
85th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  19.2   0.0 14.2   0.0  26.1  8.7   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.80 1.80  1.61  1.80 1.65  1.80  1.56 1.70  1.80
90th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  20.7   0.0 15.4   0.0  27.8  9.6   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.10 2.10  1.79  2.10 1.86  2.10  1.72 1.94  2.10
95th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  23.1   0.0 17.3   0.0  30.6 10.9   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.70 2.70  2.07  2.70 2.19  2.70  1.95 2.35  2.70
98th%HCM2kQ:  0.0  0.0   0.0   0.0  0.0  26.7   0.0 20.4   0.0  34.8 13.2   0.0
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #32
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0 132.7   0.0  213   0.0 118.1  134   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    118.711 pounds
                      19.231 gallons
Carbon Dioxide:      370.380 pounds
Carbon Monoxide:      29.230 pounds
Hydrocarbons:          5.438 pounds
Nitrogen Oxides:       0.989 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    111.864 pounds
                      18.122 gallons
Carbon Dioxide:      349.016 pounds
Carbon Monoxide:      28.700 pounds
Hydrocarbons:          5.329 pounds
Nitrogen Oxides:       0.890 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP AM

Intersection #33:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   550     0   550     0 1720   320     0 1720   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:    0     0     0   550     0   550     0 1720   320     0 1720   410
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:     0     0     0   550     0   550     0 1720     0     0 1720     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:    0     0     0   550     0   550     0 1720     0     0 1720     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:     0     0     0   550     0   550     0 1720     0     0 1720     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.90 1.00  0.83  1.00 0.89  0.88  1.00 0.89  0.88
Lanes:       0.00 0.00  0.00  2.00 0.00  1.00  0.00 3.00  2.00  0.00 3.00  2.00
Final Sat.:     0     0     0  3432     0  1583     0 5083  3344     0 5083  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.16 0.00  0.35  0.00 0.34  0.00  0.00 0.34  0.00
Crit Moves:                                ****  ****                 ****
Green/Cycle: 0.00 0.00  0.00  0.47 0.00  0.47  0.00 0.45  0.00  0.00 0.45  0.00
Volume/Cap:  0.00 0.00  0.00  0.34 0.00  0.75  0.00 0.75  0.00  0.00 0.75  0.00
Delay/Veh:    0.0  0.0   0.0  17.1  0.0  26.0   0.0 23.9   0.0   0.0 23.9   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  17.1  0.0  26.0   0.0 23.9   0.0   0.0 23.9   0.0
LOS by Move:    A    A     A     B    A     C     A    C     A     A    C     A
HCM2kAvgQ:      0    0     0     6    0    15     0   17     0     0   17     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  0    2  0  0  0  1    0  0  3  0  2    0  0  3  0  2
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R   xxxx   T     R   xxxx   T     R
#LnsInGrps:     0     0     0     2     0     1     0    3     2     0    3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx  0.98  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  0.93 1.00  0.83  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  0.97 1.00  1.00  1.00 0.91  0.88  1.00 0.91  0.88
Fnl Sat Adj: 1.00 1.00  1.00  0.90 1.00  0.83  1.00 0.89  0.88  1.00 0.89  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #33
```

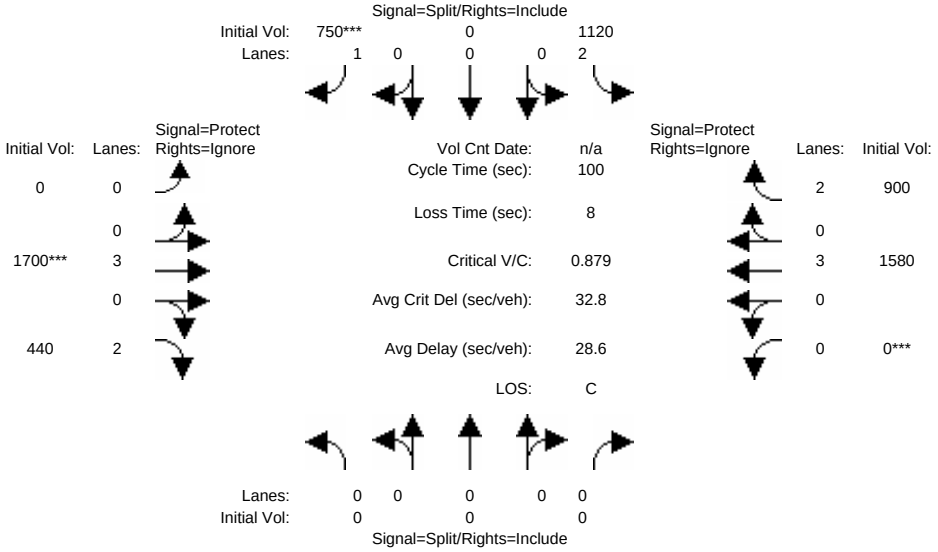


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.47 0.00  0.47  0.00 0.45  0.00  0.00 0.45  0.00
ArrivalType:         3              3              3              3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   5.0  0.0  12.5   0.0 14.4   0.0   0.0 14.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.5  0.0   2.6   0.0  2.7   0.0   0.0  2.7   0.0
HCM2KQueue:   0.0  0.0   0.0   5.5  0.0  15.1   0.0 17.1   0.0   0.0 17.1   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.19 1.20  1.17  1.20 1.17  1.20  1.20 1.17  1.20
70th%HCM2kQ:  0.0  0.0   0.0   6.6  0.0  17.7   0.0 19.9   0.0   0.0 19.9   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.55 1.60  1.48  1.60 1.47  1.60  1.60 1.47  1.60
85th%HCM2kQ:  0.0  0.0   0.0   8.6  0.0  22.4   0.0 25.1   0.0   0.0 25.1   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.70 1.80  1.59  1.80 1.57  1.80  1.80 1.57  1.80
90th%HCM2kQ:  0.0  0.0   0.0   9.4  0.0  24.0   0.0 26.9   0.0   0.0 26.9   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.94 2.10  1.76  2.10 1.73  2.10  2.10 1.73  2.10
95th%HCM2kQ:  0.0  0.0   0.0  10.7  0.0  26.6   0.0 29.6   0.0   0.0 29.6   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.35 2.70  2.01  2.70 1.97  2.70  2.70 1.97  2.70
98th%HCM2kQ:  0.0  0.0   0.0  13.0  0.0  30.5   0.0 33.7   0.0   0.0 33.7   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #33
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  87.4  0.0 112.5   0.0  355   0.0   0.0  355   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    130.309 pounds
                      21.110 gallons
Carbon Dioxide:      406.564 pounds
Carbon Monoxide:      31.699 pounds
Hydrocarbons:          5.695 pounds
Nitrogen Oxides:       1.195 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    122.004 pounds
                      19.765 gallons
Carbon Dioxide:      380.653 pounds
Carbon Monoxide:      31.047 pounds
Hydrocarbons:          5.563 pounds
Nitrogen Oxides:       1.064 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Baseline WP PM

Intersection #33:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0  1120     0   750     0 1700   440     0 1580   900
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  1120     0   750     0 1700   440     0 1580   900
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:     0     0     0  1120     0   750     0 1700     0     0 1580     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:    0     0     0  1120     0   750     0 1700     0     0 1580     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:     0     0     0  1120     0   750     0 1700     0     0 1580     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.90 1.00  0.83  1.00 0.89  0.88  1.00 0.89  0.88
Lanes:       0.00 0.00  0.00  2.00 0.00  1.00  0.00 3.00  2.00  0.00 3.00  2.00
Final Sat.:     0     0     0  3432     0  1583     0 5083  3344     0 5083  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.33 0.00  0.47  0.00 0.33  0.00  0.00 0.31  0.00
Crit Moves:                                ****        ****        ****
Green/Cycle: 0.00 0.00  0.00  0.54 0.00  0.54  0.00 0.38  0.00  0.00 0.38  0.00
Volume/Cap:  0.00 0.00  0.00  0.61 0.00  0.88  0.00 0.88  0.00  0.00 0.82  0.00
Delay/Veh:    0.0  0.0   0.0  16.3  0.0  30.5   0.0 33.8   0.0   0.0 30.7   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  16.3  0.0  30.5   0.0 33.8   0.0   0.0 30.7   0.0
LOS by Move:    A    A     A     B    A     C     A    C     A     A    C     A
HCM2kAvgQ:      0    0     0    12    0    23     0   21     0     0   18     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  0    2  0  0  0  1    0  0  3  0  2    0  0  3  0  2
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R   xxxx   T     R   xxxx   T     R
#LnsInGrps:     0     0     0     2     0     1     0    3     2     0    3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx  0.98  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  0.93 1.00  0.83  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  0.97 1.00  1.00  1.00 0.91  0.88  1.00 0.91  0.88
Fnl Sat Adj: 1.00 1.00  1.00  0.90 1.00  0.83  1.00 0.89  0.88  1.00 0.89  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #33
```

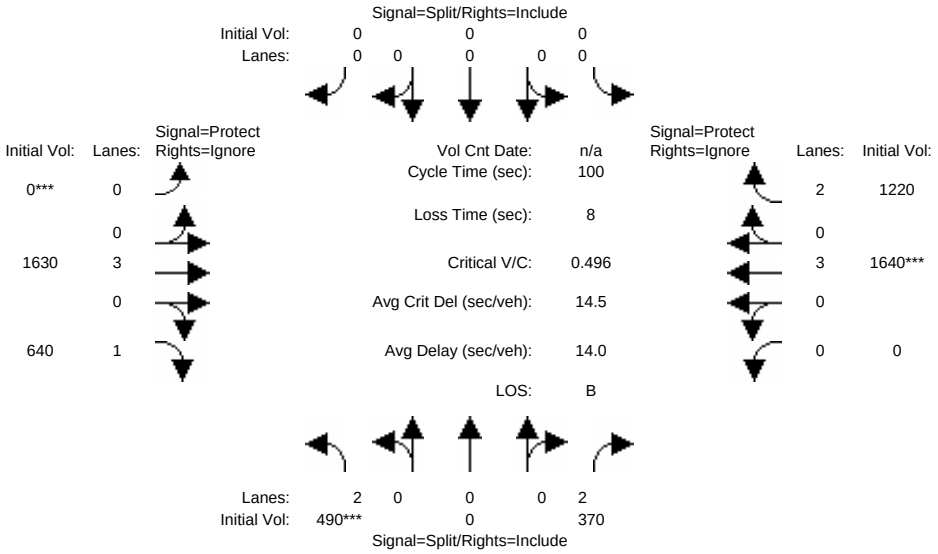


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.54 0.00  0.54  0.00 0.38  0.00  0.00 0.38  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0  11.0  0.0  18.2   0.0 16.1   0.0   0.0 14.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   1.5  0.0   5.2   0.0  5.0   0.0   0.0  3.6   0.0
HCM2KQueue:   0.0  0.0   0.0  12.5  0.0  23.4   0.0 21.1   0.0   0.0 18.1   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.17 1.20  1.16  1.20 1.16  1.20  1.20 1.16  1.20
70th%HCM2kQ:  0.0  0.0   0.0  14.6  0.0  27.1   0.0 24.4   0.0   0.0 21.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.50 1.60  1.44  1.60 1.45  1.60  1.60 1.46  1.60
85th%HCM2kQ:  0.0  0.0   0.0  18.7  0.0  33.7   0.0 30.5   0.0   0.0 26.5   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.61 1.80  1.52  1.80 1.54  1.80  1.80 1.56  1.80
90th%HCM2kQ:  0.0  0.0   0.0  20.1  0.0  35.7   0.0 32.4   0.0   0.0 28.2   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.80 2.10  1.66  2.10 1.69  2.10  2.10 1.72  2.10
95th%HCM2kQ:  0.0  0.0   0.0  22.4  0.0  38.9   0.0 35.5   0.0   0.0 31.1   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.08 2.70  1.87  2.70 1.90  2.70  2.70 1.95  2.70
98th%HCM2kQ:  0.0  0.0   0.0  25.9  0.0  43.7   0.0 40.0   0.0   0.0 35.2   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #33
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 191.5  0.0 164.2   0.0  395   0.0   0.0  355   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    167.260 pounds
                      27.096 gallons
Carbon Dioxide:      521.851 pounds
Carbon Monoxide:      41.445 pounds
Hydrocarbons:          7.689 pounds
Nitrogen Oxides:       1.477 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    157.701 pounds
                      25.547 gallons
Carbon Dioxide:      492.026 pounds
Carbon Monoxide:      40.692 pounds
Hydrocarbons:          7.538 pounds
Nitrogen Oxides:       1.324 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP AM

Intersection #34:




```
Approach:       North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     490     0   370     0     0     0     0  1630   640     0  1640  1220
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:  490     0   370     0     0     0     0  1630   640     0  1640  1220
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Volume:   490     0   370     0     0     0     0  1630     0     0  1640     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  490     0   370     0     0     0     0  1630     0     0  1640     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
Final Vol.:   490     0   370     0     0     0     0  1630     0     0  1640     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.92  1.00  0.75  1.00  1.00  1.00  1.00  0.91  1.00  1.00  0.91  0.88
Lanes:       2.00  0.00  2.00  0.00  0.00  0.00  0.00  3.00  1.00  0.00  3.00  2.00
Final Sat.:  3502     0  2842     0     0     0     0  5187  1900     0  5187  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14  0.00  0.13  0.00  0.00  0.00  0.00  0.31  0.00  0.00  0.32  0.00
Crit Moves:  ****                              ****                    ****
Green/Cycle: 0.28  0.00  0.28  0.00  0.00  0.00  0.00  0.64  0.00  0.00  0.64  0.00
Volume/Cap:  0.50  0.00  0.46  0.00  0.00  0.00  0.00  0.49  0.00  0.00  0.50  0.00
Delay/Veh:   30.3   0.0  30.0   0.0   0.0   0.0   0.0   9.7   0.0   0.0   9.7   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  30.3   0.0  30.0   0.0   0.0   0.0   0.0   9.7   0.0   0.0   9.7   0.0
LOS by Move:   C     A     C     A     A     A     A     A     A     A     A     A
HCM2kAvgQ:     7     0     6     0     0     0     0    10     0     0    10     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        2  0  0  0  2    0  0  0  0  0    0  0  3  0  1    0  0  3  0  2
Lane Group:    L  xxxx    R   xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:    2     0     2     0     0     0     0     3     1     0     3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrosswalkWid          8                 8                 8                 8
% Hev Veh:            0                 0                 0                 0
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
HCM Sat Adj: 0.95  1.00  0.85  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
Usr Sat Adj: 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 Sat Adj: 0.97  1.00  0.88  1.00  1.00  1.00  1.00  0.91  1.00  1.00  0.91  0.88
Fnl Sat Adj: 0.92  1.00  0.75  1.00  1.00  1.00  1.00  0.91  1.00  1.00  0.91  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #34
```

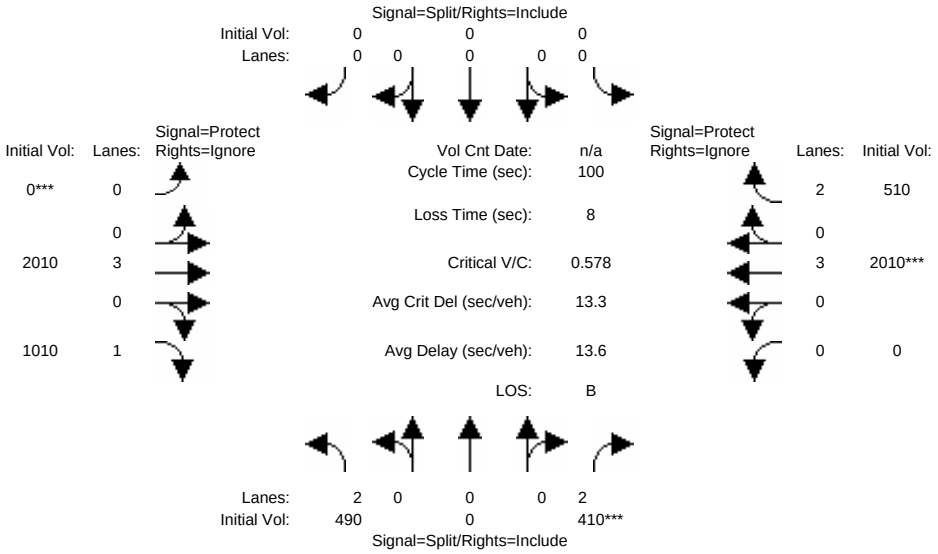


```
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.28 0.00  0.28  0.00 0.00  0.00  0.00 0.64  0.00  0.00 0.64  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           5.9  0.0   4.8   0.0  0.0   0.0   0.0  8.8   0.0   0.0  8.8   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           1.0  0.0   0.8   0.0  0.0   0.0   0.0  1.0   0.0   0.0  1.0   0.0
HCM2KQueue:   6.8  0.0   5.7   0.0  0.0   0.0   0.0  9.7   0.0   0.0  9.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.19  1.20 1.20  1.20  1.20 1.18  1.20  1.20 1.18  1.20
70th%HCM2kQ:  8.1  0.0   6.7   0.0  0.0   0.0   0.0 11.5   0.0   0.0 11.6   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.60  1.55  1.60 1.60  1.60  1.60 1.52  1.60  1.60 1.52  1.60
85th%HCM2kQ: 10.5  0.0   8.8   0.0  0.0   0.0   0.0 14.7   0.0   0.0 14.9   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.68 1.80  1.70  1.80 1.80  1.80  1.80 1.65  1.80  1.80 1.64  1.80
90th%HCM2kQ: 11.5  0.0   9.6   0.0  0.0   0.0   0.0 16.0   0.0   0.0 16.1   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.91 2.10  1.94  2.10 2.10  2.10  2.10 1.85  2.10  2.10 1.85  2.10
95th%HCM2kQ: 13.0  0.0  11.0   0.0  0.0   0.0   0.0 18.0   0.0   0.0 18.1   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.29 2.70  2.35  2.70 2.70  2.70  2.70 2.17  2.70  2.70 2.17  2.70
98th%HCM2kQ: 15.6  0.0  13.3   0.0  0.0   0.0   0.0 21.1   0.0   0.0 21.3   0.0
                       Fuel Consumption and Emissions
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #34
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 102.2  0.0  76.3   0.0  0.0   0.0   0.0  215   0.0   0.0  217   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     89.153 pounds
                      14.443 gallons
Carbon Dioxide:      278.157 pounds
Carbon Monoxide:      20.607 pounds
Hydrocarbons:          3.392 pounds
Nitrogen Oxides:       0.861 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     82.004 pounds
                      13.285 gallons
Carbon Dioxide:      255.854 pounds
Carbon Monoxide:      20.055 pounds
Hydrocarbons:          3.279 pounds
Nitrogen Oxides:       0.758 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```

Delta Shores Phase 1

Level Of Service Computation Report
2000 HCM Operations (alternative)
Baseline WP PM

Intersection #34:




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     490     0   410     0     0     0     0 2010  1010     0 2010   510
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:  490     0   410     0     0     0     0 2010  1010     0 2010   510
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   490     0   410     0     0     0     0 2010     0     0 2010     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:  490     0   410     0     0     0     0 2010     0     0 2010     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   490     0   410     0     0     0     0 2010     0     0 2010     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.92 1.00  0.75  1.00 1.00  1.00  1.00 0.91  1.00  1.00 0.91  0.88
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  2.00
Final Sat.:  3502    0  2842     0    0     0     0 5187  1900     0 5187  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14 0.00  0.14  0.00 0.00  0.00  0.00 0.39  0.00  0.00 0.39  0.00
Crit Moves:              ****                     ****                     ****
Green/Cycle: 0.25 0.00  0.25  0.00 0.00  0.00  0.00 0.67  0.00  0.00 0.67  0.00
Volume/Cap:  0.56 0.00  0.58  0.00 0.00  0.00  0.00 0.58  0.00  0.00 0.58  0.00
Delay/Veh:   33.6  0.0  34.1   0.0  0.0   0.0   0.0  9.1   0.0   0.0  9.1   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  33.6  0.0  34.1   0.0  0.0   0.0   0.0  9.1   0.0   0.0  9.1   0.0
LOS by Move:   C    A     C     A    A     A     A    A     A     A    A     A
HCM2kAvgQ:     7    0     7     0    0     0     0   12     0     0   12     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       2  0  0  0  2    0  0  0  0  0    0  0  3  0  1    0  0  3  0  2
Lane Group:    L  xxxx    R   xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:    2     0     2     0    0     0     0    3     1     0    3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrosswalkWid         8                8                8                8
% Hev Veh:           0                0                0                0
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.95 1.00  0.85  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Usr Sat Adj: 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 Sat Adj: 0.97 1.00  0.88  1.00 1.00  1.00  1.00 0.91  1.00  1.00 0.91  0.88
Fnl Sat Adj: 0.92 1.00  0.75  1.00 1.00  1.00  1.00 0.91  1.00  1.00 0.91  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < No   > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <    Actuated    > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                           2000 HCM Operations Method
                             Base Volume Alternative
********************************************************************************
Intersection #34
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*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.25 0.00  0.25  0.00 0.00  0.00  0.00 0.67  0.00  0.00 0.67  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.1  0.0   5.7   0.0  0.0   0.0   0.0 11.0   0.0   0.0 11.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           1.2  0.0   1.3   0.0  0.0   0.0   0.0  1.3   0.0   0.0  1.3   0.0
HCM2KQueue:   7.3  0.0   7.0   0.0  0.0   0.0   0.0 12.3   0.0   0.0 12.3   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.18  1.20 1.20  1.20  1.20 1.17  1.20  1.20 1.17  1.20
70th%HCM2kQ:  8.7  0.0   8.2   0.0  0.0   0.0   0.0 14.5   0.0   0.0 14.5   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.60  1.54  1.60 1.60  1.60  1.60 1.50  1.60  1.60 1.50  1.60
85th%HCM2kQ: 11.3  0.0  10.7   0.0  0.0   0.0   0.0 18.5   0.0   0.0 18.5   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.68 1.80  1.68  1.80 1.80  1.80  1.80 1.62  1.80  1.80 1.62  1.80
90th%HCM2kQ: 12.3  0.0  11.7   0.0  0.0   0.0   0.0 19.9   0.0   0.0 19.9   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.90 2.10  1.91  2.10 2.10  2.10  2.10 1.80  2.10  2.10 1.80  2.10
95th%HCM2kQ: 13.9  0.0  13.3   0.0  0.0   0.0   0.0 22.3   0.0   0.0 22.3   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.27 2.70  2.29  2.70 2.70  2.70  2.70 2.09  2.70  2.70 2.09  2.70
98th%HCM2kQ: 16.6  0.0  15.9   0.0  0.0   0.0   0.0 25.8   0.0   0.0 25.8   0.0
                        Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #34
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 106.9  0.0  89.9   0.0  0.0   0.0   0.0  270   0.0   0.0  270   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    105.175 pounds
                      17.038 gallons
Carbon Dioxide:      328.147 pounds
Carbon Monoxide:      24.250 pounds
Hydrocarbons:          3.967 pounds
Nitrogen Oxides:       1.025 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     96.642 pounds
                      15.656 gallons
Carbon Dioxide:      301.522 pounds
Carbon Monoxide:      23.590 pounds
Hydrocarbons:          3.831 pounds
Nitrogen Oxides:       0.901 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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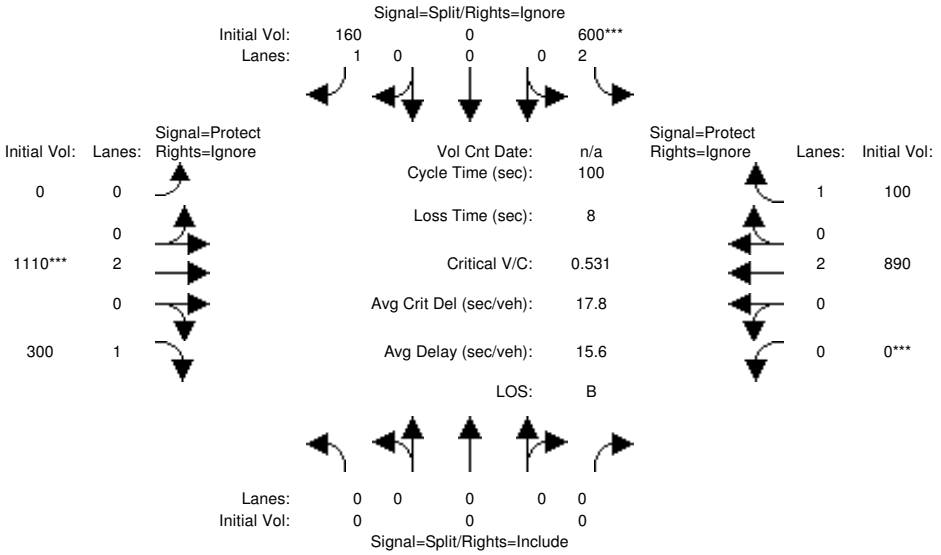
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum AM

Intersection #1: Pocket Road/I-5 SB Ramps



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	7	0	0	7	0	0	7	0
Volume Module:												
Base Vol:	0	0	0	600	0	160	0	1110	300	0	890	100
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	600	0	160	0	1110	300	0	890	100
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	600	0	0	0	1110	0	0	890	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	600	0	0	0	1110	0	0	890	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	600	0	0	0	1110	0	0	890	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3432	0	1900	0	3538	1900	0	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.31	0.00	0.00	0.25	0.00
Crit Moves:				****				****		****		
Green/Cycle:	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.59	0.00	0.00	0.59	0.00
Volume/Cap:	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.53	0.00	0.00	0.43	0.00
Delay/Veh:	0.0	0.0	0.0	27.7	0.0	0.0	0.0	12.5	0.0	0.0	11.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	27.7	0.0	0.0	0.0	12.5	0.0	0.0	11.3	0.0
LOS by Move:	A	A	A	C	A	A	A	B	A	A	B	A
HCM2kAvgQ:	0	0	0	8	0	0	0	11	0	0	8	0

HCM Ops Adjusted Lane Utilization Module:																
Lanes:	0	0	0	0	0	2	0	0	0	1	0	0	2	0	1	0	0	2	0	1
Lane Group:	xxxx	xxxx	xxxx		L	xxxx		R	xxxx		T		R	xxxx		T		R		
#LnsInGrps:	0		0		0	2		0	1		0		2	1		0		2		1

HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < Other > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		

HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx

HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	xxxxx	xxxx	0.98	xxxxx	xxxx	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.93	1.00	1.00	1.00	0.98	1.00	1.00	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00

Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < No > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00

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      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
********************************************************************************
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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.59	0.00	0.00	0.59	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.0	0.0	0.0	7.0	0.0	0.0	0.0	9.7	0.0	0.0	7.1	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Q2:	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1	0.0	0.0	0.7	0.0
HCM2KQueue:	0.0	0.0	0.0	8.1	0.0	0.0	0.0	10.8	0.0	0.0	7.8	0.0
70th%Factor:	1.20	1.20	1.20	1.18	1.20	1.20	1.20	1.18	1.20	1.20	1.18	1.20
HCM2k70thQ:	0.0	0.0	0.0	9.5	0.0	0.0	0.0	12.7	0.0	0.0	9.3	0.0
85th%Factor:	1.60	1.60	1.60	1.53	1.60	1.60	1.60	1.51	1.60	1.60	1.53	1.60
HCM2k85thQ:	0.0	0.0	0.0	12.4	0.0	0.0	0.0	16.3	0.0	0.0	12.0	0.0
90th%Factor:	1.80	1.80	1.80	1.67	1.80	1.80	1.80	1.63	1.80	1.80	1.67	1.80
HCM2k90thQ:	0.0	0.0	0.0	13.5	0.0	0.0	0.0	17.6	0.0	0.0	13.1	0.0
95th%Factor:	2.10	2.10	2.10	1.88	2.10	2.10	2.10	1.83	2.10	2.10	1.89	2.10
HCM2k95thQ:	0.0	0.0	0.0	15.2	0.0	0.0	0.0	19.7	0.0	0.0	14.8	0.0
98th%Factor:	2.70	2.70	2.70	2.24	2.70	2.70	2.70	2.14	2.70	2.70	2.25	2.70
HCM2k98thQ:	0.0	0.0	0.0	18.1	0.0	0.0	0.0	23.0	0.0	0.0	17.6	0.0

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #1 Pocket Road/I-5 SB Ramps

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Run Speed:		30 MPH			30 MPH			30 MPH			30 MPH	
NumOfStops:	0.0	0.0	0.0	121.9	0.0	0.0	0.0	165	0.0	0.0	122	0.0

Name: year 1995 composite fleet
Fuel Consumption: 59.360 pounds
9.616 gallons
Carbon Dioxide: 185.202 pounds
Carbon Monoxide: 13.878 pounds
Hydrocarbons: 2.332 pounds
Nitrogen Oxides: 0.567 pounds

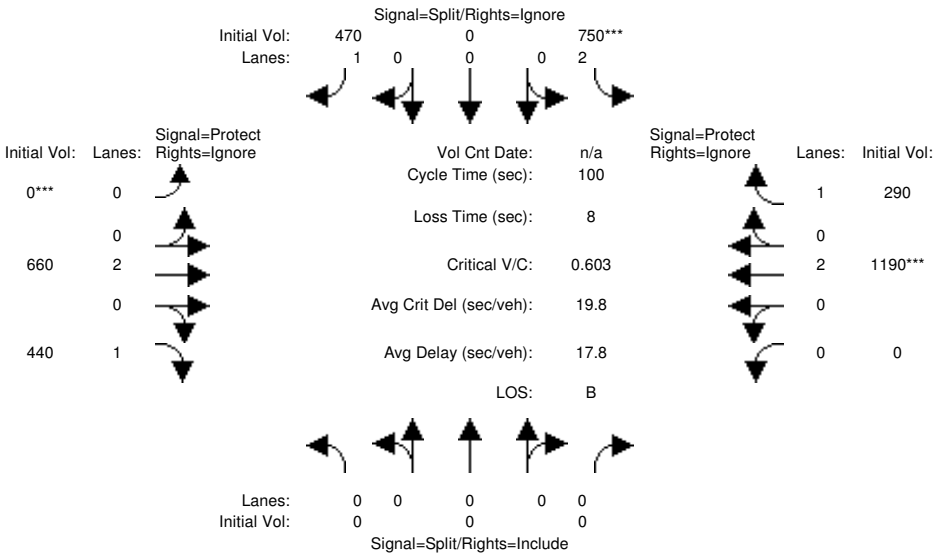
Name: year 2000 composite fleet
Fuel Consumption: 54.814 pounds
8.880 gallons
Carbon Dioxide: 171.019 pounds
Carbon Monoxide: 13.526 pounds
Hydrocarbons: 2.260 pounds
Nitrogen Oxides: 0.501 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Base Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum PM

Intersection #1: Pocket Road/I-5 SB Ramps



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	7	0	0	7	0	0	7	0
Volume Module:												
Base Vol:	0	0	0	750	0	470	0	660	440	0	1190	290
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	750	0	470	0	660	440	0	1190	290
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	750	0	0	0	660	0	0	1190	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	750	0	0	0	660	0	0	1190	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	750	0	0	0	660	0	0	1190	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3432	0	1900	0	3538	1900	0	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.19	0.00	0.00	0.34	0.00
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.56	0.00	0.00	0.56	0.00
Volume/Cap:	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.33	0.00	0.00	0.60	0.00
Delay/Veh:	0.0	0.0	0.0	26.9	0.0	0.0	0.0	12.1	0.0	0.0	15.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	26.9	0.0	0.0	0.0	12.1	0.0	0.0	15.3	0.0
LOS by Move:	A	A	A	C	A	A	A	B	A	A	B	A
HCM2kAvgQ:	0	0	0	10	0	0	0	6	0	0	13	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	2	0	0	1	0	0	2	0	1	0	0	2	0	1
Lane Group:	xxxx	xxxx	xxxx	L	xxxx	R	xxxx	T	R	xxxx	T	R
#LnsInGrps:	0	0	0	2	0	1	0	2	1	0	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	xxxxx	xxxx	0.98	xxxxx	xxxx	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.93	1.00	1.00	1.00	0.98	1.00	1.00	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #1 Pocket Road/I-5 SB Ramps


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*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.36 0.00  0.00  0.00 0.56  0.00  0.00 0.56  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   8.8  0.0   0.0   0.0  5.2   0.0   0.0 11.6   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   1.5  0.0   0.0   0.0  0.5   0.0   0.0  1.5   0.0
HCM2KQueue:   0.0  0.0   0.0  10.2  0.0   0.0   0.0  5.7   0.0   0.0 13.1   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.20  1.20 1.19  1.20  1.20 1.17  1.20
HCM2k70thQ:   0.0  0.0   0.0  12.0  0.0   0.0   0.0  6.8   0.0   0.0 15.3   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.51 1.60  1.60  1.60 1.55  1.60  1.60 1.49  1.60
HCM2k85thQ:   0.0  0.0   0.0  15.5  0.0   0.0   0.0  8.9   0.0   0.0 19.5   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.64 1.80  1.80  1.80 1.70  1.80  1.80 1.61  1.80
HCM2k90thQ:   0.0  0.0   0.0  16.8  0.0   0.0   0.0  9.8   0.0   0.0 21.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.84 2.10  2.10  2.10 1.94  2.10  2.10 1.79  2.10
HCM2k95thQ:   0.0  0.0   0.0  18.8  0.0   0.0   0.0 11.1   0.0   0.0 23.4   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.16 2.70  2.70  2.70 2.34  2.70  2.70 2.07  2.70
HCM2k98thQ:   0.0  0.0   0.0  22.0  0.0   0.0   0.0 13.5   0.0   0.0 27.0   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 153.0  0.0   0.0   0.0 89.7   0.0   0.0  198   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     63.732 pounds
                      10.325 gallons
Carbon Dioxide:      198.844 pounds
Carbon Monoxide:      15.103 pounds
Hydrocarbons:          2.598 pounds
Nitrogen Oxides:       0.601 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     59.126 pounds
                       9.578 gallons
Carbon Dioxide:      184.473 pounds
Carbon Monoxide:      14.745 pounds
Hydrocarbons:          2.525 pounds
Nitrogen Oxides:       0.532 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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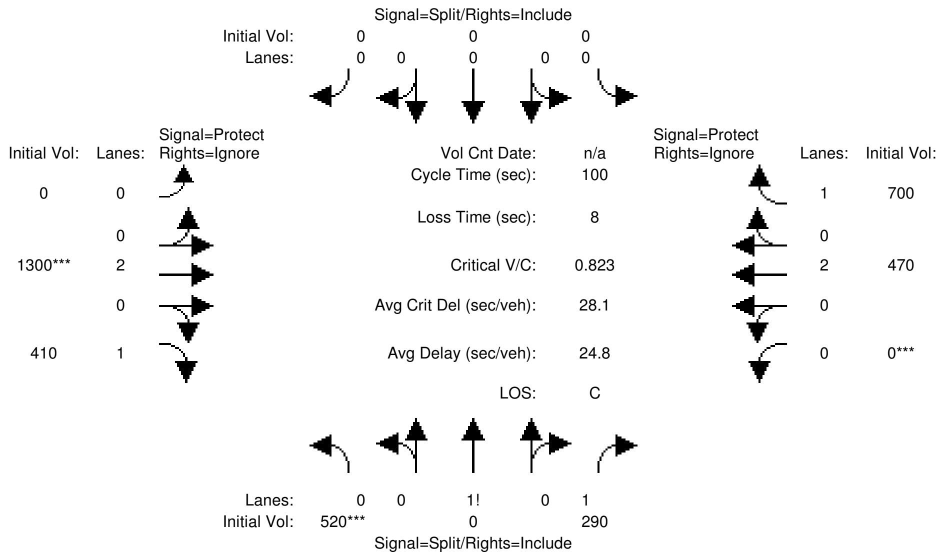
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum AM

Intersection #2: Meadowview Road/I-5 NB Ramps



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	7	0	0	0	0	0	7	0	0	7	0
Volume Module:												
Base Vol:	520	0	290	0	0	0	0	1300	410	0	470	700
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:	520	0	290	0	0	0	0	1300	410	0	470	700
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	520	0	290	0	0	0	0	1300	0	0	470	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	520	0	290	0	0	0	0	1300	0	0	470	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	520	0	290	0	0	0	0	1300	0	0	470	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.90	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	0.78	0.00	1.22	0.00	0.00	0.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	1335	0	2079	0	0	0	0	3538	1900	0	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.39	0.00	0.14	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.13	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.47	0.00	0.47	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.45	0.00
Volume/Cap:	0.82	0.00	0.29	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.30	0.00
Delay/Veh:	28.4	0.0	16.2	0.0	0.0	0.0	0.0	27.8	0.0	0.0	17.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.4	0.0	16.2	0.0	0.0	0.0	0.0	27.8	0.0	0.0	17.8	0.0
LOS by Move:	C	A	B	A	A	A	A	C	A	A	B	A
HCM2kAvgQ:	20	0	4	0	0	0	0	20	0	0	5	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0 0	1! 0	1	0 0	0 0	0	0 0	2 0	1	0 0	2 0	1
Lane Group:	LTR	LTR	LTR	xxxx	xxxx	xxxx	xxxx	T	R	xxxx	T	R
#LnsInGrps:	1	1	2	0	0	0	0	2	1	0	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	xxxx	4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	xxxxx	xxxx	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
RT Adj:	0.95	xxxx	0.95	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	0.97	xxxx	0.97	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.90	1.00	0.90	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.90	1.00	0.90	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < Actuated > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative
****
Intersection #2 Meadowview Road/I-5 NB Ramps

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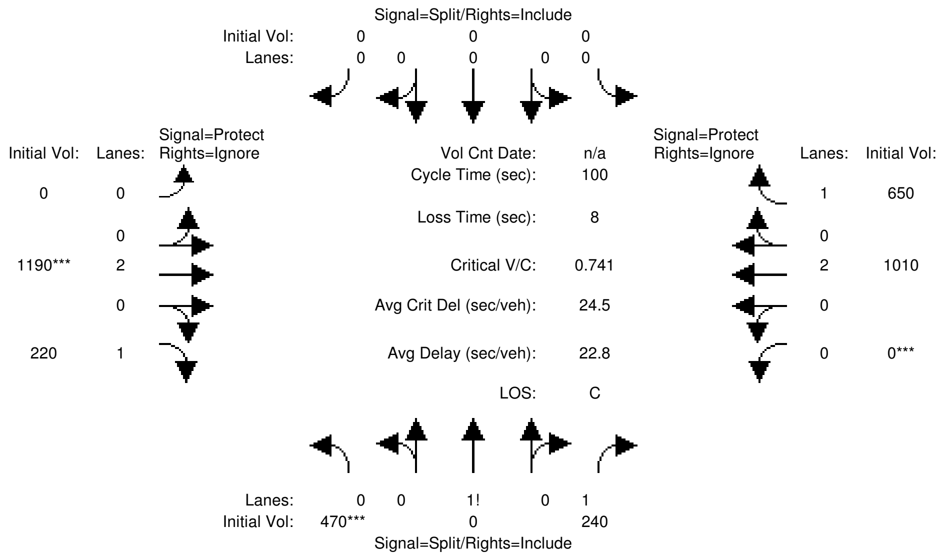
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.47 0.00  0.47  0.00 0.00  0.00  0.00 0.45  0.00  0.00 0.45  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:          15.9  0.0   4.0   0.0  0.0   0.0   0.0 16.6   0.0   0.0  4.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           3.8  0.0   0.4   0.0  0.0   0.0   0.0  3.8   0.0   0.0  0.4   0.0
HCM2KQueue:  19.8  0.0   4.5   0.0  0.0   0.0   0.0 20.5   0.0   0.0  4.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.16 1.20  1.19  1.20 1.20  1.20  1.20 1.16  1.20  1.20 1.19  1.20
HCM2k70thQ:  22.9  0.0   5.3   0.0  0.0   0.0   0.0 23.7   0.0   0.0  5.7   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.46 1.60  1.56  1.60 1.60  1.60  1.60 1.45  1.60  1.60 1.56  1.60
HCM2k85thQ:  28.8  0.0   7.0   0.0  0.0   0.0   0.0 29.7   0.0   0.0  7.5   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.55 1.80  1.72  1.80 1.80  1.80  1.80 1.54  1.80  1.80 1.71  1.80
HCM2k90thQ:  30.6  0.0   7.7   0.0  0.0   0.0   0.0 31.6   0.0   0.0  8.2   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.70 2.10  1.97  2.10 2.10  2.10  2.10 1.69  2.10  2.10 1.96  2.10
HCM2k95thQ:  33.6  0.0   8.8   0.0  0.0   0.0   0.0 34.6   0.0   0.0  9.4   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 1.92 2.70  2.41  2.70 2.70  2.70  2.70 1.91  2.70  2.70 2.39  2.70
HCM2k98thQ:  37.9  0.0  10.8   0.0  0.0   0.0   0.0 39.0   0.0   0.0 11.5   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 112.1  0.0  44.4   0.0  0.0   0.0   0.0  284   0.0   0.0 75.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     76.651 pounds
                      12.417 gallons
Carbon Dioxide:      239.150 pounds
Carbon Monoxide:      18.754 pounds
Hydrocarbons:          3.408 pounds
Nitrogen Oxides:       0.691 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     71.933 pounds
                      11.653 gallons
Carbon Dioxide:      224.432 pounds
Carbon Monoxide:      18.384 pounds
Hydrocarbons:          3.333 pounds
Nitrogen Oxides:       0.617 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum PM

Intersection #2: Meadowview Road/I-5 NB Ramps



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	7	0	0	0	0	0	7	0	0	7	0
Volume Module:												
Base Vol:	470	0	240	0	0	0	0	1190	220	0	1010	650
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:	470	0	240	0	0	0	0	1190	220	0	1010	650
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	470	0	240	0	0	0	0	1190	0	0	1010	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	470	0	240	0	0	0	0	1190	0	0	1010	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	470	0	240	0	0	0	0	1190	0	0	1010	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.90	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	0.80	0.00	1.20	0.00	0.00	0.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	1363	0	2058	0	0	0	0	3538	1900	0	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.34	0.00	0.12	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.29	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.47	0.00	0.47	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.45	0.00
Volume/Cap:	0.74	0.00	0.25	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.63	0.00
Delay/Veh:	24.9	0.0	16.2	0.0	0.0	0.0	0.0	24.3	0.0	0.0	21.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.9	0.0	16.2	0.0	0.0	0.0	0.0	24.3	0.0	0.0	21.6	0.0
LOS by Move:	C	A	B	A	A	A	A	C	A	A	C	A
HCM2kAvgQ:	16	0	4	0	0	0	0	17	0	0	13	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:		0 0 1! 0 1			0 0 0 0 0			0 0 2 0 1			0 0 2 0 1	
Lane Group:	LTR	LTR	LTR	xxxx	xxxx	xxxx	xxxx	T	R	xxxx	T	R
#LnsInGrps:	1	1	2	0	0	0	0	2	1	0	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	xxxx	4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	xxxxx	xxxx	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Parking Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Bus Stp Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
RT Adj:	0.95	xxxx	0.95	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	0.97	xxxx	0.97	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.90	1.00	0.90	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.90	1.00	0.90	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < Actuated > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #2 Meadowview Road/I-5 NB Ramps


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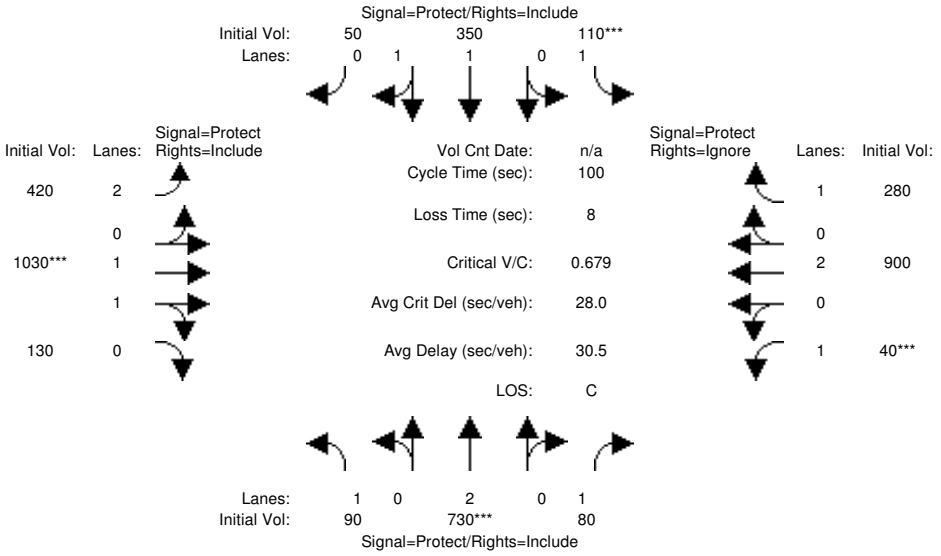
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.47 0.00  0.47  0.00 0.00  0.00  0.00 0.45  0.00  0.00 0.45  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:          13.4  0.0   3.4   0.0  0.0   0.0   0.0 14.3   0.0   0.0 11.3   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           2.6  0.0   0.3   0.0  0.0   0.0   0.0  2.6   0.0   0.0  1.6   0.0
HCM2KQueue:  16.0  0.0   3.7   0.0  0.0   0.0   0.0 16.9   0.0   0.0 12.9   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.17 1.20  1.19  1.20 1.20  1.20  1.20 1.17  1.20  1.20 1.17  1.20
HCM2k70thQ:  18.6  0.0   4.4   0.0  0.0   0.0   0.0 19.7   0.0   0.0 15.1   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.48 1.60  1.57  1.60 1.60  1.60  1.60 1.47  1.60  1.60 1.50  1.60
HCM2k85thQ:  23.6  0.0   5.8   0.0  0.0   0.0   0.0 24.9   0.0   0.0 19.3   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.58 1.80  1.73  1.80 1.80  1.80  1.80 1.57  1.80  1.80 1.61  1.80
HCM2k90thQ:  25.2  0.0   6.4   0.0  0.0   0.0   0.0 26.6   0.0   0.0 20.8   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.75 2.10  1.99  2.10 2.10  2.10  2.10 1.73  2.10  2.10 1.79  2.10
HCM2k95thQ:  27.9  0.0   7.3   0.0  0.0   0.0   0.0 29.3   0.0   0.0 23.1   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 1.99 2.70  2.45  2.70 2.70  2.70  2.70 1.97  2.70  2.70 2.07  2.70
HCM2k98thQ:  31.8  0.0   9.0   0.0  0.0   0.0   0.0 33.4   0.0   0.0 26.7   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  95.8  0.0  36.3   0.0  0.0   0.0   0.0  245   0.0   0.0  193   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     82.315 pounds
                      13.335 gallons
Carbon Dioxide:      256.822 pounds
Carbon Monoxide:      19.982 pounds
Hydrocarbons:          3.580 pounds
Nitrogen Oxides:       0.755 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     77.017 pounds
                      12.477 gallons
Carbon Dioxide:      240.294 pounds
Carbon Monoxide:      19.567 pounds
Hydrocarbons:          3.496 pounds
Nitrogen Oxides:       0.672 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HM Operations (alternative)
Cum AM

Intersection #3: Meadowview Road/Freeport Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	90	730	80	110	350	50	420	1030	130	40	900	280
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	730	80	110	350	50	420	1030	130	40	900	280
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	90	730	80	110	350	50	420	1030	130	40	900	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	730	80	110	350	50	420	1030	130	40	900	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	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	90	730	80	110	350	50	420	1030	130	40	900	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.91	0.91	0.90	0.92	0.92	0.93	0.93	1.00
Lanes:	1.00	2.00	1.00	1.00	1.75	0.25	2.00	1.78	0.22	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	1769	3037	434	3432	3088	390	1769	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.05	0.21	0.05	0.06	0.12	0.12	0.12	0.33	0.33	0.02	0.25	0.00
Crit Moves:		****		****				****		****		
Green/Cycle:	0.12	0.30	0.30	0.09	0.27	0.27	0.17	0.48	0.48	0.05	0.36	0.00
Volume/Cap:	0.43	0.69	0.17	0.69	0.43	0.43	0.71	0.69	0.69	0.45	0.71	0.00
Delay/Veh:	42.3	33.0	26.1	56.5	30.5	30.5	42.9	21.4	21.4	49.8	29.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.3	33.0	26.1	56.5	30.5	30.5	42.9	21.4	21.4	49.8	29.4	0.0
LOS by Move:	D	C	C	E	C	C	D	C	C	D	C	A
HCM2kAvgQ:	3	11	2	5	6	6	8	15	15	2	14	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	1	0	1	1	0	2	0	1	1	0	1	0	2	0	1
Lane Group:	L		T		R	L		RT		RT	L		RT		RT	L		T		R
#LnsInGrps:	1		2		1	1		2		2	2		2		2	1		2		1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	0.85	xxxx	0.98	0.98	xxxx	0.98	0.98	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.96	0.96	0.93	0.96	0.96	0.93	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.91	0.91	0.90	0.92	0.92	0.93	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #3 Meadowview Road/Freeport Boulevard


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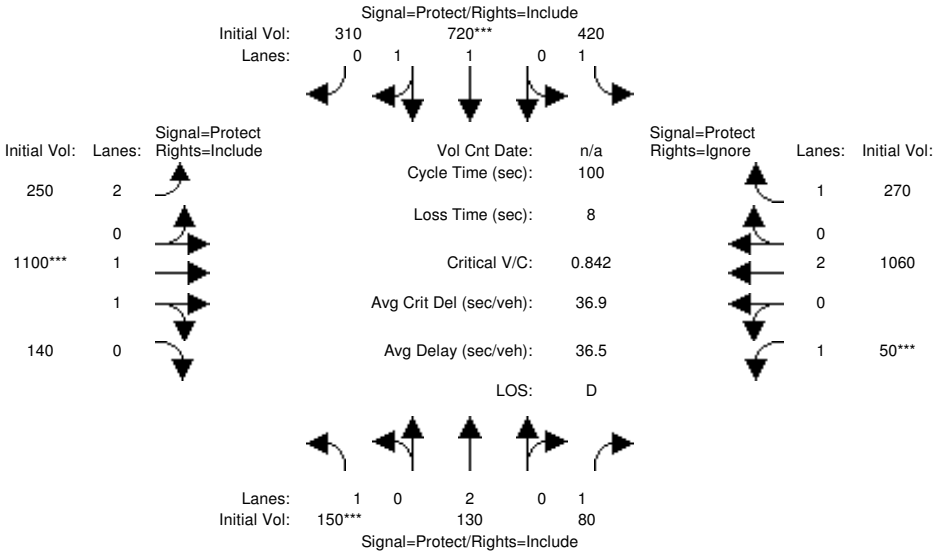
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.12 0.30  0.30  0.09 0.27  0.27  0.17 0.48  0.48  0.05 0.36  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.3  9.4   1.6   3.0  4.8   4.8   5.7 13.2  13.2   1.1 11.3   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Q2:           0.7  2.1   0.2   1.7  0.7   0.7   2.1  2.1   2.1   0.7  2.2   0.0
HCM2KQueue:   3.0 11.5   1.8   4.7  5.6   5.6   7.7 15.3  15.3   1.8 13.5   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.18  1.20  1.19 1.19  1.19  1.18 1.17  1.17  1.20 1.17  1.20
HCM2k70thQ:   3.6 13.5   2.2   5.6  6.6   6.6   9.1 17.9  17.9   2.2 15.9   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.57 1.50  1.58  1.56 1.55  1.55  1.53 1.48  1.48  1.58 1.49  1.60
HCM2k85thQ:   4.8 17.3   2.9   7.3  8.6   8.6  11.8 22.6  22.6   2.9 20.2   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.74 1.63  1.76  1.72 1.70  1.70  1.67 1.59  1.59  1.77 1.60  1.80
HCM2k90thQ:   5.3 18.7   3.3   8.1  9.5   9.5  12.9 24.3  24.3   3.2 21.7   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.01 1.82  2.04  1.96 1.94  1.94  1.89 1.76  1.76  2.04 1.78  2.10
HCM2k95thQ:   6.1 20.9   3.8   9.2 10.8  10.8  14.6 26.9  26.9   3.7 24.1   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.49 2.11  2.57  2.40 2.35  2.35  2.25 2.01  2.01  2.57 2.05  2.70
HCM2k98thQ:   7.6 24.3   4.7  11.3 13.1  13.1  17.4 30.7  30.7   4.7 27.8   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  20.9  161  14.8  26.7 72.3  10.3  99.0  200  25.3   9.7  193   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    132.673 pounds
                      21.493 gallons
Carbon Dioxide:      413.939 pounds
Carbon Monoxide:      33.067 pounds
Hydrocarbons:          6.205 pounds
Nitrogen Oxides:       1.148 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    125.397 pounds
                      20.314 gallons
Carbon Dioxide:      391.239 pounds
Carbon Monoxide:      32.494 pounds
Hydrocarbons:          6.090 pounds
Nitrogen Oxides:       1.031 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum PM

Intersection #3: Meadowview Road/Freeport Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	150	130	80	420	720	310	250	1100	140	50	1060	270
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:	150	130	80	420	720	310	250	1100	140	50	1060	270
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	150	130	80	420	720	310	250	1100	140	50	1060	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	150	130	80	420	720	310	250	1100	140	50	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	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	150	130	80	420	720	310	250	1100	140	50	1060	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.89	0.89	0.90	0.92	0.92	0.93	0.93	1.00
Lanes:	1.00	2.00	1.00	1.00	1.40	0.60	2.00	1.77	0.23	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	1769	2362	1017	3432	3085	393	1769	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.08	0.04	0.05	0.24	0.30	0.30	0.07	0.36	0.36	0.03	0.30	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.10	0.10	0.10	0.35	0.36	0.36	0.09	0.42	0.42	0.05	0.37	0.00
Volume/Cap:	0.86	0.36	0.49	0.68	0.86	0.86	0.80	0.86	0.86	0.57	0.80	0.00
Delay/Veh:	76.3	42.3	44.6	30.6	36.2	36.2	58.1	31.9	31.9	54.7	31.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.3	42.3	44.6	30.6	36.2	36.2	58.1	31.9	31.9	54.7	31.5	0.0
LOS by Move:	E	D	D	C	D	D	E	C	C	D	C	A
HCM2kAvgQ:	7	2	3	12	18	18	6	21	21	2	17	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	1	0	1	1	0	2	0	1	1	0	2	0	1
Lane Group:	L	T	R	L	RT	RT	L	RT	RT	L	T	R
#LnsInGrps:	1	2	1	1	2	2	2	2	2	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	0.85	xxxx	0.96	0.96	xxxx	0.98	0.98	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.89	0.89	0.90	0.92	0.92	0.93	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

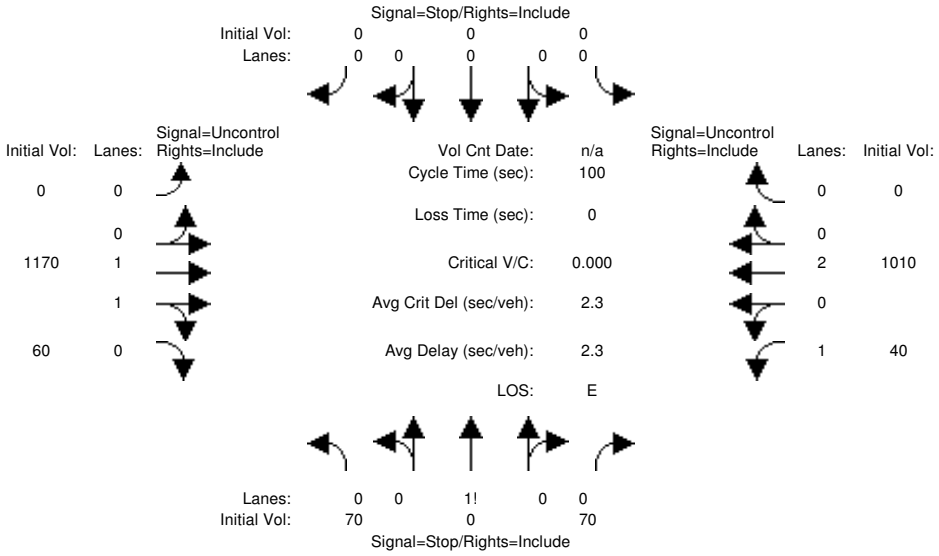
Intersection #3 Meadowview Road/Freeport Boulevard


```
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.10 0.10  0.10  0.35 0.36  0.36  0.09 0.42  0.42  0.05 0.37  0.00
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.1  1.8   2.1   9.9 14.0  14.0   3.5 16.5  16.5   1.4 13.8   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Q2:           3.0  0.5   0.9   1.9  4.3   4.3   2.5  4.5   4.5   1.1  3.4   0.0
HCM2KQueue:   7.1  2.3   3.0  11.9 18.3  18.3   6.0 21.0  21.0   2.4 17.2   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.19  1.19  1.17 1.16  1.16  1.19 1.16  1.16  1.19 1.17  1.20
HCM2k70thQ:   8.5  2.7   3.6  13.9 21.3  21.3   7.1 24.3  24.3   2.9 20.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.58  1.57  1.50 1.46  1.46  1.55 1.45  1.45  1.58 1.47  1.60
HCM2k85thQ:  11.0  3.6   4.7  17.8 26.8  26.8   9.3 30.4  30.4   3.8 25.3   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.68 1.76  1.74  1.62 1.56  1.56  1.70 1.54  1.54  1.75 1.57  1.80
HCM2k90thQ:  12.0  4.0   5.2  19.2 28.6  28.6  10.2 32.3  32.3   4.2 27.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.90 2.03  2.01  1.81 1.72  1.72  1.93 1.69  1.69  2.02 1.73  2.10
HCM2k95thQ:  13.6  4.7   6.0  21.5 31.4  31.4  11.6 35.4  35.4   4.9 29.8   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.28 2.54  2.50  2.10 1.94  1.94  2.33 1.90  1.90  2.53 1.97  2.70
HCM2k98thQ:  16.3  5.8   7.4  24.9 35.6  35.6  14.0 39.8  39.8   6.1 33.8   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  36.9 30.2  18.9  89.4  167  71.9  61.3  250  31.8  12.2  237   0.0
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    168.014 pounds
                      27.218 gallons
Carbon Dioxide:      524.205 pounds
Carbon Monoxide:      42.508 pounds
Hydrocarbons:          8.174 pounds
Nitrogen Oxides:       1.407 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    159.718 pounds
                      25.874 gallons
Carbon Dioxide:      498.322 pounds
Carbon Monoxide:      41.852 pounds
Hydrocarbons:          8.043 pounds
Nitrogen Oxides:       1.271 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum AM

Intersection #4: Meadowview Road/Manorside Drive




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      70    0    70     0    0     0     0 1170    60    40 1010     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:   70    0    70     0    0     0     0 1170    60    40 1010     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:    70    0    70     0    0     0     0 1170    60    40 1010     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   70    0    70     0    0     0     0 1170    60    40 1010     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 1785 2290   615  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1230 xxxx xxxxx
Potent Cap.:   73   39   434  xxxx xxxx xxxxx  xxxx xxxx xxxxx   562 xxxx xxxxx
Move Cap.:     69   36   434  xxxx xxxx xxxxx  xxxx xxxx xxxxx   562 xxxx xxxxx
Total Cap:    177  136 xxxxx   142  122 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  0.40 0.00  0.16  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.07 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  11.9 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     B    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  251 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  3.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 35.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    E     *     *    *     *     *    *     *     *    *     *
ApproachDel:      35.9           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       E               *                *                *
-----------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance [Median Type: TWLTL][Median Storage: 1 car]
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage One Module:
Cnflict Vol:1200  1200 xxxxx 1090  1090 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 248   256 xxxxx  230   289 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   248   256 xxxxx  213   269 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
-----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage Two Module:
Cnflict Vol: 585  1090 xxxxx  585  1230 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 520   289 xxxxx  464   248 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   483   269 xxxxx  389   248 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:       0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:   70    0    70     0    0     0     0 1170    60    40 1010     0
ApproachDel:      35.9           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.4]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=140]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2420]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```



```
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
********************************************************************************
Base Volume Alternative: Peak Hour Warrant Met
------------|---------------||---------------||---------------||---------------|
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:   70    0    70     0    0     0     0 1170    60    40 1010     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              2280
Minor Approach Volume:            140
Minor Approach Volume Threshold: 1 [less than minimum of 100]
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
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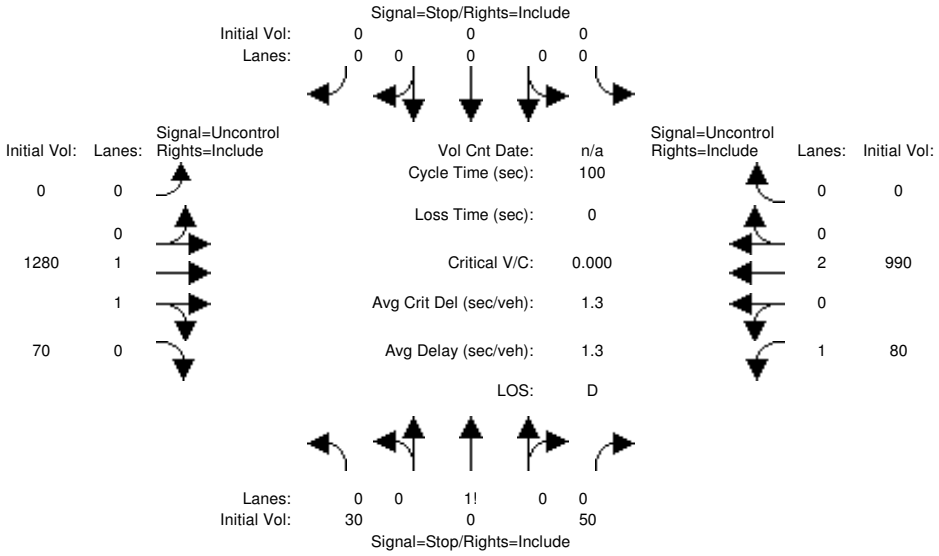
Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum PM

Intersection #4: Meadowview Road/Manorside Drive



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Volume Module:																
Base Vol:	30		0		50	0		0		0	0		1280		70	80		990		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:	30		0		50	0		0		0	0		1280		70	80		990		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:	30		0		50	0		0		0	0		1280		70	80		990		0
Reduct Vol:	0		0		0	0		0		0	0		0		0	0		0		0
FinalVolume:	30		0		50	0		0		0	0		1280		70	80		990		0
Critical Gap Module:																
Critical Gp:	6.8		6.5		6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		4.1	xxxx	xxxxx	
FollowUpTim:	3.5		4.0		3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		2.2	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	1970		2465		675	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		1350	xxxx	xxxxx	
Potent Cap.:	55		30		396	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		506	xxxx	xxxxx	
Move Cap.:	48		25		396	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		506	xxxx	xxxxx	
Total Cap:	148		115	xxxxx	118	88	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Volume/Cap:	0.20		0.00	0.13	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.16	xxxx	xxxx			
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.6	xxxx	xxxxx	
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx		13.4	xxxx	xxxxx			
LOS by Move:	*		*		*	*		*		*	*		*		B	*		*		
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx		243	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx		1.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx		26.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*		D	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	26.9				xxxxxx				xxxxxx				xxxxxx			
ApproachLOS:	D				*				*				*			
HevVeh:	2%				2%				2%				2%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																
Two-Stage Gap Acceptance [Median Type: TWLTL][Median Storage: 1 car]																
Two-Stage Gap Acceptance - Stage One Module:																
Cnflict Vol:	1315		1315	xxxxx	1150	1150	xxxxx	xxxx	xxxxx	xxxx	xxxxx	xxxx	xxxxx			
Potent Cap.:	215		226	xxxxx	211	271	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx			
Move Cap.:	215		226	xxxxx	178	228	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx			
Two-Stage Gap Acceptance - Stage Two Module:																
Cnflict Vol:	655		1150	xxxxx	640	1350	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx			
Potent Cap.:	479		271	xxxxx	430	217	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx			
Move Cap.:	403		228	xxxxx	376	217	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx			

Peak Hour Delay Signal Warrant Report

Intersection #4 Meadowview Road/Manorside Drive

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	1	1	0	1	0	2	0	0
Initial Vol:	30		0		50	0		0		0	0		1280		70	80		990		0
ApproachDel:	26.9					xxxxxx					xxxxxx					xxxxxx				

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=80]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2500]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an


```
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

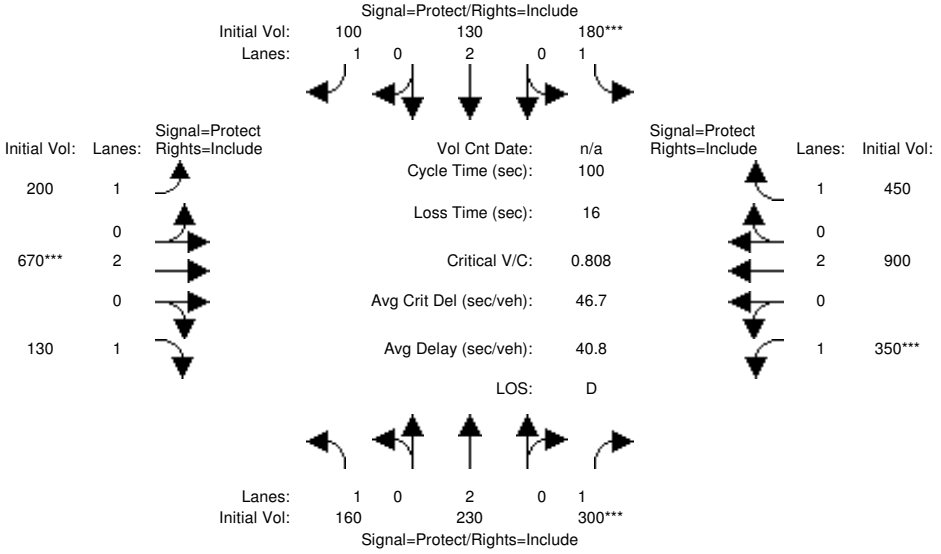
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
*******************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:   30    0    50     0    0     0     0 1280    70    80  990     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              2420
Minor Approach Volume:            80
Minor Approach Volume Threshold: -20 [less than minimum of 100]
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum AM

Intersection #5: Meadowview Road/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	160	230	300	180	130	100	200	670	130	350	900	450
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	230	300	180	130	100	200	670	130	350	900	450
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	230	300	180	130	100	200	670	130	350	900	450
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	230	300	180	130	100	200	670	130	350	900	450
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	230	300	180	130	100	200	670	130	350	900	450
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	1769	3538	1583	1769	3538	1583	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.09	0.07	0.19	0.10	0.04	0.06	0.11	0.19	0.08	0.20	0.25	0.28
Crit Moves:			****	****				****		****		
Green/Cycle:	0.20	0.23	0.23	0.13	0.16	0.16	0.14	0.23	0.23	0.24	0.34	0.34
Volume/Cap:	0.44	0.28	0.81	0.81	0.23	0.40	0.83	0.81	0.35	0.81	0.74	0.83
Delay/Veh:	35.8	31.5	48.5	61.8	37.1	39.0	62.7	42.1	32.5	46.3	31.4	40.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.8	31.5	48.5	61.8	37.1	39.0	62.7	42.1	32.5	46.3	31.4	40.5
LOS by Move:	D	C	D	E	D	D	E	D	C	D	C	D
HCM2kAvgQ:	5	3	11	8	2	3	8	12	4	12	14	15
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0 2	0 1	1	0 2	0 1	1	0 2	0 1	1	0 2	0 1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	1	2	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #5 Meadowview Road/24th Street


```
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.20 0.23  0.23  0.13 0.16  0.16  0.14 0.23  0.23  0.24 0.34  0.34
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.9  2.8   7.9   4.9  1.7   2.5   5.4  9.3   3.0   9.2 11.6  11.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.8  0.4   3.1   2.8  0.3   0.6   3.0  3.2   0.5   3.2  2.6   3.7
HCM2KQueue:   4.7  3.1  11.0   7.6  2.0   3.1   8.5 12.5   3.5  12.4 14.1  15.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.18  1.18 1.20  1.19  1.18 1.17  1.19  1.17 1.17  1.17
HCM2k70thQ:   5.6  3.7  12.9   9.0  2.3   3.8  10.0 14.6   4.2  14.5 16.6  17.7
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.56 1.57  1.51  1.53 1.58  1.57  1.53 1.50  1.57  1.50 1.49  1.48
HCM2k85thQ:   7.3  4.9  16.6  11.7  3.1   4.9  12.9 18.7   5.5  18.5 21.0  22.4
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.72 1.74  1.63  1.67 1.76  1.74  1.66 1.61  1.74  1.62 1.60  1.59
HCM2k90thQ:   8.0  5.5  17.9  12.8  3.5   5.5  14.1 20.1   6.1  20.0 22.6  24.1
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.96 2.00  1.83  1.89 2.04  2.00  1.88 1.80  1.99  1.80 1.77  1.76
HCM2k95thQ:   9.2  6.3  20.1  14.5  4.0   6.3  15.9 22.4   7.1  22.3 25.1  26.7
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.40 2.49  2.13  2.26 2.56  2.48  2.22 2.08  2.46  2.09 2.04  2.01
HCM2k98thQ:  11.2  7.8  23.4  17.2  5.0   7.8  18.8 26.0   8.7  25.8 28.8  30.5
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #5 Meadowview Road/24th Street
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  35.0 47.1  70.8  43.8 28.4  22.5  48.7  158  27.1  82.4  198 103.3
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    156.039 pounds
                      25.278 gallons
Carbon Dioxide:      486.841 pounds
Carbon Monoxide:      39.835 pounds
Hydrocarbons:          7.785 pounds
Nitrogen Oxides:       1.266 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    148.893 pounds
                      24.121 gallons
Carbon Dioxide:      464.545 pounds
Carbon Monoxide:      39.270 pounds
Hydrocarbons:          7.672 pounds
Nitrogen Oxides:       1.149 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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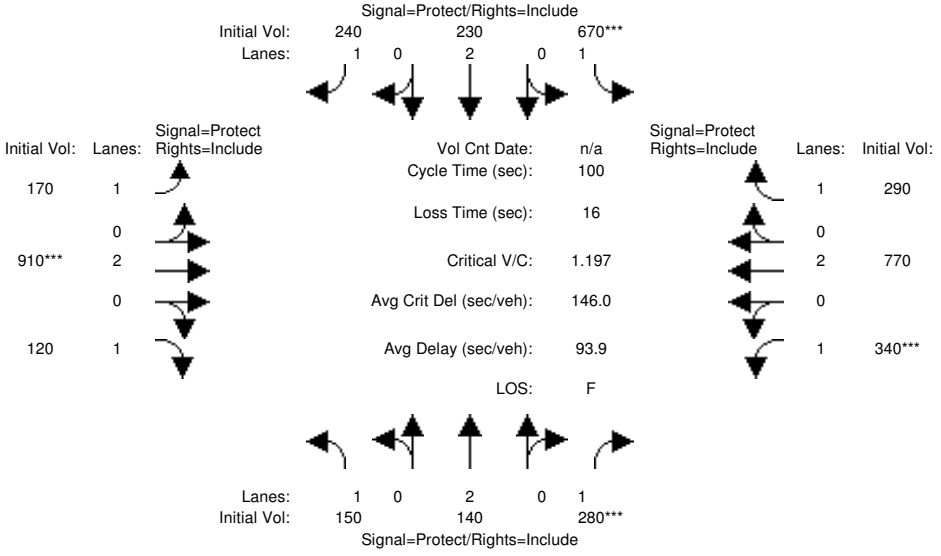
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum PM

Intersection #5: Meadowview Road/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	150	140	280	670	230	240	170	910	120	340	770	290
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:	150	140	280	670	230	240	170	910	120	340	770	290
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:	150	140	280	670	230	240	170	910	120	340	770	290
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	150	140	280	670	230	240	170	910	120	340	770	290
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:	150	140	280	670	230	240	170	910	120	340	770	290
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	1769	3538	1583	1769	3538	1583	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.08	0.04	0.18	0.38	0.07	0.15	0.10	0.26	0.08	0.19	0.22	0.18
Crit Moves:			****	****				****		****		
Green/Cycle:	0.17	0.15	0.15	0.32	0.30	0.30	0.12	0.21	0.21	0.16	0.26	0.26
Volume/Cap:	0.51	0.27	1.20	1.20	0.22	0.51	0.84	1.20	0.35	1.20	0.84	0.70
Delay/Veh:	39.4	38.1	164.9	139.1	26.5	30.0	68.1	140	34.0	159.5	41.6	38.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.4	38.1	164.9	139.1	26.5	30.0	68.1	140	34.0	159.5	41.6	38.9
LOS by Move:	D	D	F	F	C	C	E	F	C	F	D	D
HCM2kAvgQ:	5	2	17	37	3	7	8	27	3	20	14	9
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	2	0	1	1	0	2	0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	1	2	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #5 Meadowview Road/24th Street


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.17 0.15  0.15  0.32 0.30  0.30  0.12 0.21  0.21  0.16 0.26  0.26
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.8  1.8   7.8  18.6  2.5   5.5   4.6 13.3   2.8   9.4 10.6   7.3
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.0  0.4   9.5  18.3  0.3   1.0   3.0 14.1   0.5  10.9  3.7   2.1
HCM2KQueue:   4.8  2.2  17.2  36.9  2.8   6.5   7.6 27.4   3.4  20.3 14.3   9.4
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.17  1.14 1.19  1.18  1.18 1.15  1.19  1.16 1.17  1.18
HCM2k70thQ:   5.7  2.6  20.1  42.1  3.3   7.7   9.0 31.5   4.0  23.6 16.8  11.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.56 1.58  1.47  1.39 1.57  1.54  1.53 1.42  1.57  1.45 1.49  1.52
HCM2k85thQ:   7.4  3.4  25.3  51.3  4.4  10.1  11.6 38.9   5.3  29.5 21.3  14.3
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.71 1.76  1.57  1.46 1.75  1.69  1.67 1.50  1.74  1.54 1.60  1.65
HCM2k90thQ:   8.2  3.8  27.0  54.0  4.9  11.0  12.7 41.1   5.9  31.4 22.9  15.5
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.96 2.03  1.73  1.58 2.01  1.92  1.89 1.63  2.00  1.69 1.77  1.86
HCM2k95thQ:   9.4  4.4  29.8  58.3  5.6  12.5  14.4 44.7   6.7  34.4 25.4  17.4
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.39 2.55  1.97  1.76 2.51  2.31  2.26 1.82  2.47  1.91 2.03  2.19
HCM2k98thQ:  11.4  5.5  33.9  65.0  7.0  15.0  17.1 49.9   8.3  38.8 29.1  20.5
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #5 Meadowview Road/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  34.2 31.1  72.5 184.3 43.2  49.7  41.6  240  25.5  88.3  182  65.6
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    335.479 pounds
                      54.348 gallons
Carbon Dioxide:     1046.693 pounds
Carbon Monoxide:      90.244 pounds
Hydrocarbons:         19.193 pounds
Nitrogen Oxides:       2.228 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    327.230 pounds
                      53.011 gallons
Carbon Dioxide:     1020.957 pounds
Carbon Monoxide:      89.589 pounds
Hydrocarbons:         19.063 pounds
Nitrogen Oxides:       2.090 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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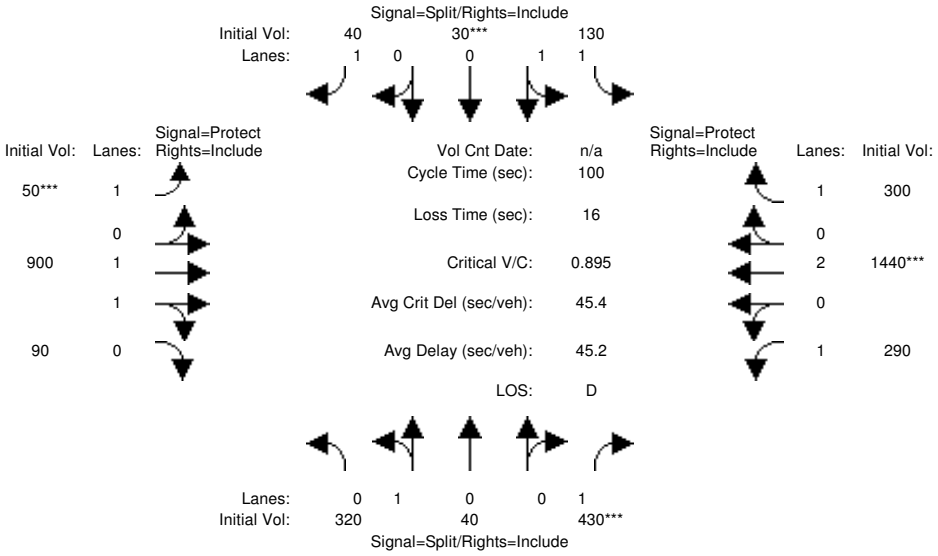
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum AM

Intersection #6: Meadowview Road/Detroit Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	7	0	0	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	320	40	430	130	30	40	50	900	90	290	1440	300
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:	320	40	430	130	30	40	50	900	90	290	1440	300
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:	320	40	430	130	30	40	50	900	90	290	1440	300
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	320	40	430	130	30	40	50	900	90	290	1440	300
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:	320	40	430	130	30	40	50	900	90	290	1440	300
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.83	0.94	0.94	0.83	0.93	0.92	0.92	0.93	0.93	0.83
Lanes:	0.89	0.11	1.00	1.62	0.38	1.00	1.00	1.82	0.18	1.00	2.00	1.00
Final Sat.:	1584	198	1583	2908	671	1583	1769	3171	317	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.20	0.20	0.27	0.04	0.04	0.03	0.03	0.28	0.28	0.16	0.41	0.19
Crit Moves:			****		****		****				****	
Green/Cycle:	0.29	0.29	0.29	0.07	0.07	0.07	0.05	0.31	0.31	0.18	0.43	0.43
Volume/Cap:	0.70	0.70	0.94	0.64	0.64	0.36	0.57	0.93	0.93	0.93	0.94	0.44
Delay/Veh:	36.1	36.1	63.0	50.7	50.7	46.4	54.7	47.4	47.4	73.6	39.2	20.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.1	36.1	63.0	50.7	50.7	46.4	54.7	47.4	47.4	73.6	39.2	20.4
LOS by Move:	D	D	E	D	D	D	D	D	D	E	D	C
HCM2kAvgQ:	11	11	18	4	4	2	2	20	20	13	27	7
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	1	0	0	1	1	1	0	0	1	0	1	1	0	1	0	2	0	1
Lane Group:	LT	LT	R	LT	LT	R	L	RT	RT	L	T	R
#LnsInGrps:	1	1	1	2	2	1	1	2	2	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	4	xxxx	4	4	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	0.99	0.99	xxxx	xxxx	0.85
LT Adj:	0.96	0.96	xxxxx	0.96	0.96	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.94	0.94	0.83	0.94	0.94	0.83	0.93	0.97	0.97	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.94	0.94	0.83	0.94	0.94	0.83	0.93	0.92	0.92	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #6 Meadowview Road/Detroit Boulevard


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*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.29 0.29  0.29  0.07 0.07  0.07  0.05 0.31  0.31  0.18 0.43  0.43
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           8.9  8.9  11.7   2.2  2.2   1.1   1.4 14.0  14.0   7.9 20.2   5.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           2.1  2.1   5.9   1.4  1.4   0.5   1.1  6.0   6.0   4.8  7.3   0.8
HCM2KQueue:  11.0 11.0  17.6   3.6  3.6   1.6   2.4 20.0  20.0  12.7 27.4   6.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.18  1.16  1.19 1.19  1.20  1.19 1.16  1.16  1.17 1.15  1.18
HCM2k70thQ:  13.0 13.0  20.4   4.3  4.3   1.9   2.9 23.2  23.2  14.9 31.6   7.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.51 1.51  1.47  1.57 1.57  1.58  1.58 1.45  1.45  1.50 1.42  1.54
HCM2k85thQ:  16.6 16.6  25.7   5.6  5.6   2.5   3.8 29.1  29.1  19.1 39.0  10.2
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.63 1.63  1.57  1.73 1.73  1.77  1.75 1.55  1.55  1.61 1.50  1.69
HCM2k90thQ:  18.0 18.0  27.5   6.2  6.2   2.8   4.2 30.9  30.9  20.5 41.2  11.2
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.83 1.83  1.73  1.99 1.99  2.05  2.02 1.70  1.70  1.80 1.63  1.92
HCM2k95thQ:  20.1 20.1  30.3   7.1  7.1   3.3   4.9 34.0  34.0  22.9 44.7  12.7
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.13 2.13  1.96  2.46 2.46  2.58  2.53 1.91  1.91  2.08 1.82  2.30
HCM2k98thQ:  23.5 23.5  34.4   8.8  8.8   4.1   6.1 38.3  38.3  26.4 50.0  15.2
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  71.4  8.9 105.1  31.6  7.3   9.5  12.2  218  21.8  71.4  345  52.6
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    179.523 pounds
                      29.083 gallons
Carbon Dioxide:      560.111 pounds
Carbon Monoxide:      46.187 pounds
Hydrocarbons:          9.139 pounds
Nitrogen Oxides:       1.426 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    171.831 pounds
                      27.837 gallons
Carbon Dioxide:      536.112 pounds
Carbon Monoxide:      45.578 pounds
Hydrocarbons:          9.017 pounds
Nitrogen Oxides:       1.299 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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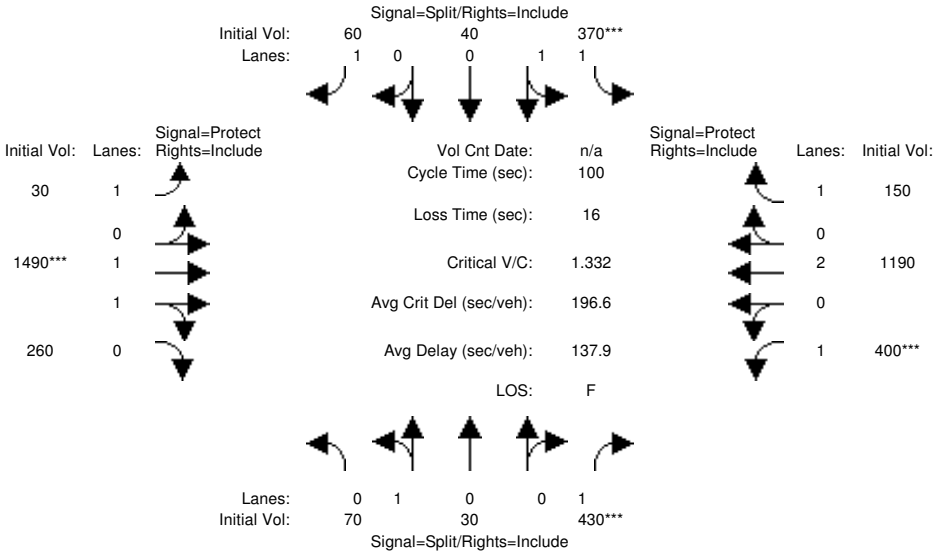
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum PM

Intersection #6: Meadowview Road/Detroit Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	7	0	0	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	70	30	430	370	40	60	30	1490	260	400	1190	150
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:	70	30	430	370	40	60	30	1490	260	400	1190	150
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:	70	30	430	370	40	60	30	1490	260	400	1190	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	30	430	370	40	60	30	1490	260	400	1190	150
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:	70	30	430	370	40	60	30	1490	260	400	1190	150
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.94	0.94	0.83	0.93	0.91	0.91	0.93	0.93	0.83
Lanes:	0.70	0.30	1.00	1.80	0.20	1.00	1.00	1.70	0.30	1.00	2.00	1.00
Final Sat.:	1259	540	1583	3216	348	1583	1769	2946	514	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.06	0.06	0.27	0.12	0.12	0.04	0.02	0.51	0.51	0.23	0.34	0.09
Crit Moves:			****	****				****		****		
Green/Cycle:	0.20	0.20	0.20	0.09	0.09	0.09	0.07	0.38	0.38	0.17	0.48	0.48
Volume/Cap:	0.27	0.27	1.33	1.33	1.33	0.44	0.24	1.33	1.33	1.33	0.70	0.20
Delay/Veh:	33.9	33.9	208.8	215.6	216	45.6	44.9	186	185.6	211.9	21.8	15.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.9	33.9	208.8	215.6	216	45.6	44.9	186	185.6	211.9	21.8	15.2
LOS by Move:	C	C	F	F	F	D	D	F	F	F	C	B
HCM2kAvgQ:	3	3	29	15	15	2	1	58	58	27	16	3
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	1	0	0	1	1	1	0	0	1	1	0	1	1	0	2	0	1
Lane Group:	LT	LT	R	LT	LT	R	L	RT	RT	L	T	R
#LnsInGrps:	1	1	1	2	2	1	1	2	2	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	4	xxxx	4	4	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	0.98	0.98	xxxx	xxxx	0.85
LT Adj:	0.97	0.97	xxxxx	0.96	0.96	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.95	0.95	0.83	0.94	0.94	0.83	0.93	0.96	0.96	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.95	0.95	0.83	0.94	0.94	0.83	0.93	0.91	0.91	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #6 Meadowview Road/Detroit Boulevard


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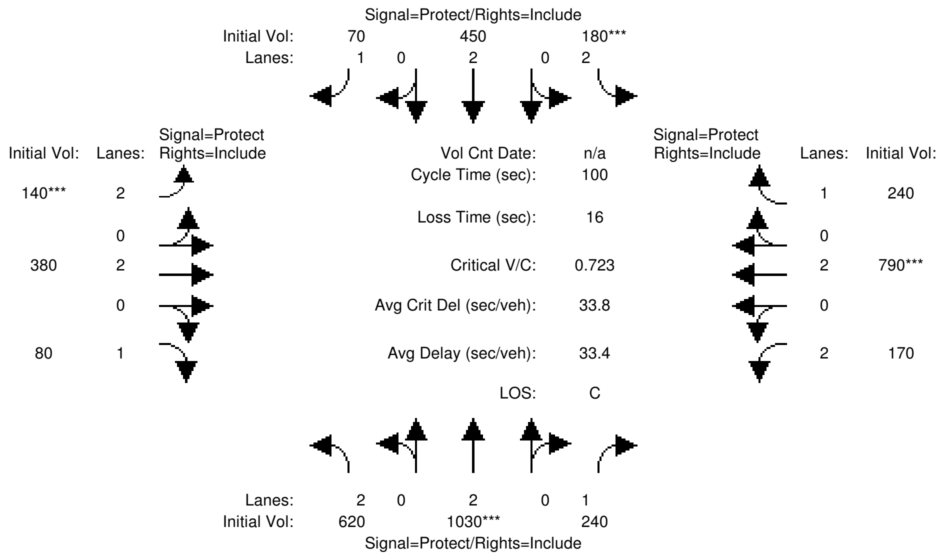
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.20 0.20  0.20  0.09 0.09  0.09  0.07 0.38  0.38  0.17 0.48  0.48
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.3  2.3  11.9   5.7  5.7   1.6   0.8 25.6  25.6  11.1 13.7   2.4
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.4  0.4  16.6   9.2  9.2   0.7   0.3 32.2  32.2  15.6  2.2   0.2
HCM2KQueue:   2.7  2.7  28.6  14.9 14.9   2.3   1.1 57.8  57.8  26.8 15.9   2.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.15  1.17 1.17  1.19  1.20 1.12  1.12  1.15 1.17  1.19
HCM2k70thQ:   3.2  3.2  32.8  17.4 17.4   2.8   1.3 65.0  65.0  30.8 18.5   3.2
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.57 1.57  1.42  1.48 1.48  1.58  1.59 1.34  1.34  1.42 1.48  1.57
HCM2k85thQ:   4.3  4.3  40.4  22.0 22.0   3.6   1.7 77.7  77.7  38.1 23.5   4.2
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.75 1.75  1.50  1.59 1.59  1.76  1.78 1.42  1.42  1.50 1.58  1.75
HCM2k90thQ:   4.7  4.7  42.7  23.6 23.6   4.1   1.9 82.3  82.3  40.3 25.1   4.6
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.02 2.02  1.62  1.76 1.76  2.03  2.06 1.52  1.52  1.64 1.75  2.02
HCM2k95thQ:   5.5  5.5  46.4  26.2 26.2   4.7   2.3 88.1  88.1  43.8 27.8   5.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.51 2.51  1.81  2.02 2.02  2.54  2.62 1.71  1.71  1.83 1.99  2.52
HCM2k98thQ:   6.8  6.8  51.7  30.0 30.0   5.9   2.9 99.0  99.0  48.9 31.7   6.7
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  14.7  6.3 117.5  95.5 10.3  14.2   7.1  467  81.6 107.3  234  21.6
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    489.537 pounds
                      79.305 gallons
Carbon Dioxide:     1527.355 pounds
Carbon Monoxide:     133.794 pounds
Hydrocarbons:         29.132 pounds
Nitrogen Oxides:       3.025 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    480.759 pounds
                      77.883 gallons
Carbon Dioxide:     1499.969 pounds
Carbon Monoxide:     133.094 pounds
Hydrocarbons:         28.994 pounds
Nitrogen Oxides:       2.875 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum AM

Intersection #7: Mack Road/Franklin Boulevard




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5    7     0     5    7     0     5    7     0     5    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     620 1030   240   180  450    70   140  380    80   170  790   240
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:  620 1030   240   180  450    70   140  380    80   170  790   240
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:   620 1030   240   180  450    70   140  380    80   170  790   240
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  620 1030   240   180  450    70   140  380    80   170  790   240
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:  620 1030   240   180  450    70   140  380    80   170  790   240
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  3432 3538  1583  3432 3538  1583  3432 3538  1583  3432 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.18 0.29  0.15  0.05 0.13  0.04  0.04 0.11  0.05  0.05 0.22  0.15
Crit Moves:       ****        ****             ****                  ****
Green/Cycle: 0.28 0.40  0.40  0.07 0.20  0.20  0.06 0.25  0.25  0.12 0.31  0.31
Volume/Cap:  0.65 0.72  0.38  0.72 0.65  0.23  0.72 0.43  0.20  0.43 0.72  0.49
Delay/Veh:   33.3 27.1  21.4  55.4 39.2  34.2  59.1 31.9  29.9  41.9 33.2  28.9
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  33.3 27.1  21.4  55.4 39.2  34.2  59.1 31.9  29.9  41.9 33.2  28.9
LOS by Move:   C    C     C     E    D     C     E    C     C     D    C     C
HCM2kAvgQ:     10   15     5     4    8     2     4    5     2     3   13     6
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        2  0  2  0  1    2  0  2  0  1    2  0  2  0  1    2  0  2  0  1
Lane Group:     L    T     R     L    T     R     L    T     R     L    T     R
#LnsInGrps:     2    2     1     2    2     1     2    2     1     2    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 0.97 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00
Fnl Sat Adj: 0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
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*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.28 0.40  0.40  0.07 0.20  0.20  0.06 0.25  0.25  0.12 0.31  0.31
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           7.8 12.7   4.7   2.5  6.1   1.6   2.0  4.7   1.8   2.3 10.3   5.4
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.7  2.4   0.6   1.8  1.7   0.3   1.7  0.7   0.3   0.7  2.3   0.9
HCM2KQueue:   9.5 15.1   5.3   4.4  7.7   1.9   3.7  5.4   2.0   3.0 12.6   6.4
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.17  1.19  1.19 1.18  1.20  1.19 1.19  1.20  1.19 1.17  1.19
HCM2k70thQ:  11.2 17.6   6.3   5.2  9.1   2.3   4.4  6.4   2.4   3.5 14.8   7.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.48  1.55  1.56 1.53  1.58  1.57 1.55  1.58  1.57 1.50  1.54
HCM2k85thQ:  14.5 22.4   8.2   6.8 11.8   3.0   5.8  8.4   3.2   4.7 18.9   9.8
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.65 1.59  1.71  1.72 1.67  1.76  1.73 1.71  1.76  1.74 1.61  1.69
HCM2k90thQ:  15.7 24.0   9.0   7.5 12.9   3.4   6.4  9.2   3.5   5.2 20.4  10.8
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.85 1.76  1.95  1.97 1.89  2.04  1.99 1.94  2.04  2.01 1.80  1.92
HCM2k95thQ:  17.7 26.5  10.3   8.6 14.6   3.9   7.4 10.5   4.1   6.0 22.7  12.2
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.18 2.01  2.37  2.41 2.25  2.56  2.45 2.36  2.56  2.50 2.08  2.31
HCM2k98thQ:  20.8 30.4  12.5  10.6 17.4   4.9   9.1 12.8   5.1   7.4 26.2  14.7
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 136.5  217  42.3  44.0  104  14.7  34.4 79.9  15.8  39.5  176  48.9
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    157.413 pounds
                      25.501 gallons
Carbon Dioxide:      491.128 pounds
Carbon Monoxide:      39.545 pounds
Hydrocarbons:          7.523 pounds
Nitrogen Oxides:       1.334 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    149.246 pounds
                      24.178 gallons
Carbon Dioxide:      465.647 pounds
Carbon Monoxide:      38.901 pounds
Hydrocarbons:          7.394 pounds
Nitrogen Oxides:       1.203 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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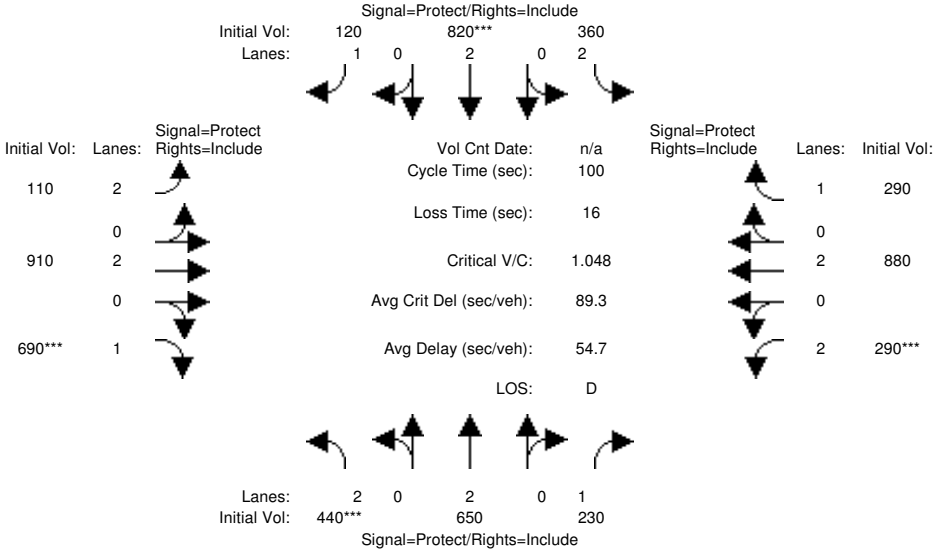
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum PM

Intersection #7: Mack Road/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	440	650	230	360	820	120	110	910	690	290	880	290
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:	440	650	230	360	820	120	110	910	690	290	880	290
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:	440	650	230	360	820	120	110	910	690	290	880	290
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	440	650	230	360	820	120	110	910	690	290	880	290
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:	440	650	230	360	820	120	110	910	690	290	880	290
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3432	3538	1583	3432	3538	1583	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.13	0.18	0.15	0.10	0.23	0.08	0.03	0.26	0.44	0.08	0.25	0.18
Crit Moves:	****				****				****	****		
Green/Cycle:	0.12	0.22	0.22	0.12	0.22	0.22	0.08	0.42	0.42	0.08	0.41	0.41
Volume/Cap:	1.05	0.84	0.66	0.84	1.05	0.34	0.39	0.62	1.05	1.05	0.60	0.44
Delay/Veh:	101.0	45.6	40.6	56.6	84.5	33.4	44.3	23.8	77.6	113.3	23.6	21.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	101.0	45.6	40.6	56.6	84.5	33.4	44.3	23.8	77.6	113.3	23.6	21.5
LOS by Move:	F	D	D	E	F	C	D	C	E	F	C	C
HCM2kAvgQ:	12	13	8	8	21	3	2	12	31	9	12	7
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

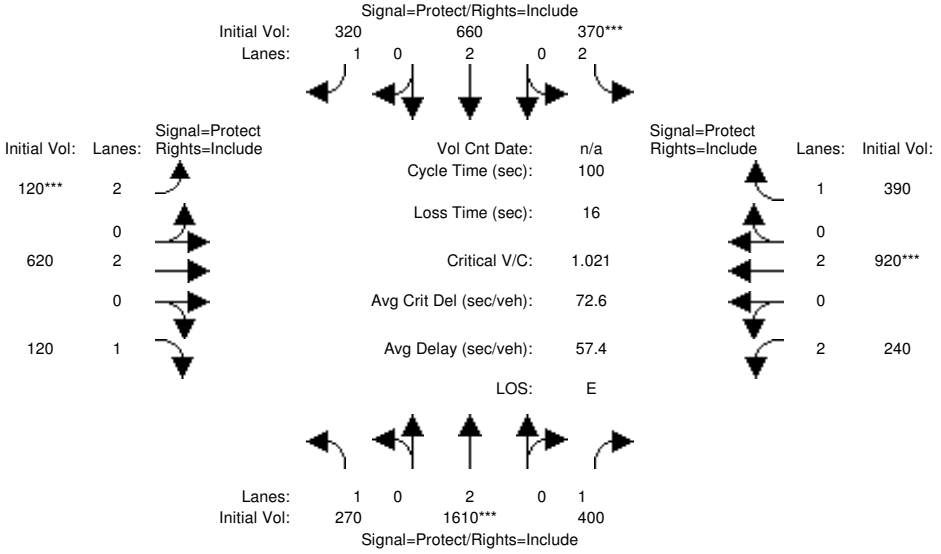
Intersection #7 Mack Road/Franklin Boulevard


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.12 0.22  0.22  0.12 0.22  0.22  0.08 0.42  0.42  0.08 0.41  0.41
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.3  9.1   5.8   5.0 12.0   2.8   1.5 10.5  19.2   4.2 10.0   5.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           6.0  3.6   1.8   3.1  8.7   0.5   0.6  1.6  11.5   4.8  1.5   0.8
HCM2KQueue:  12.3 12.7   7.6   8.1 20.7   3.3   2.1 12.0  30.6   8.9 11.5   6.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.17 1.17  1.18  1.18 1.16  1.19  1.19 1.17  1.15  1.18 1.18  1.18
HCM2k70thQ:  14.5 14.9   9.0   9.6 24.0   4.0   2.5 14.1  35.1  10.5 13.5   7.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.50 1.50  1.53  1.53 1.45  1.57  1.58 1.50  1.41  1.52 1.50  1.54
HCM2k85thQ:  18.5 19.1  11.7  12.4 30.0   5.2   3.3 18.0  43.1  13.6 17.3  10.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.62 1.61  1.67  1.67 1.54  1.74  1.76 1.62  1.49  1.66 1.63  1.69
HCM2k90thQ:  19.9 20.5  12.7  13.6 31.9   5.8   3.7 19.5  45.6  14.8 18.7  11.1
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.80 1.80  1.89  1.88 1.69  2.00  2.03 1.81  1.61  1.87 1.82  1.92
HCM2k95thQ:  22.2 22.9  14.4  15.3 34.9   6.6   4.2 21.7  49.3  16.7 20.9  12.6
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.09 2.08  2.26  2.23 1.90  2.47  2.55 2.10  1.79  2.20 2.11  2.30
HCM2k98thQ:  25.7 26.4  17.2  18.2 39.4   8.2   5.3 25.2  55.0  19.7 24.3  15.1
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 110.7  156  52.6  88.0  208  25.3  26.0  179 178.6  72.8  172  52.1
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    293.311 pounds
                      47.516 gallons
Carbon Dioxide:      915.131 pounds
Carbon Monoxide:      76.508 pounds
Hydrocarbons:         15.511 pounds
Nitrogen Oxides:       2.197 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    282.420 pounds
                      45.752 gallons
Carbon Dioxide:      881.151 pounds
Carbon Monoxide:      75.647 pounds
Hydrocarbons:         15.338 pounds
Nitrogen Oxides:       2.019 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum AM

Intersection #8: Cosumnes River Boulevard/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	270	1610	400	370	660	320	120	620	120	240	920	390
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:	270	1610	400	370	660	320	120	620	120	240	920	390
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:	270	1610	400	370	660	320	120	620	120	240	920	390
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	270	1610	400	370	660	320	120	620	120	240	920	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:	270	1610	400	370	660	320	120	620	120	240	920	390
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
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.:	1769	3538	1583	3432	3538	1583	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.15	0.46	0.25	0.11	0.19	0.20	0.03	0.18	0.08	0.07	0.26	0.25
Crit Moves:		****		****			****				****	
Green/Cycle:	0.23	0.44	0.44	0.10	0.31	0.31	0.05	0.21	0.21	0.09	0.25	0.25
Volume/Cap:	0.66	1.04	0.58	1.04	0.61	0.66	0.70	0.82	0.35	0.82	1.04	0.99
Delay/Veh:	38.6	62.7	22.4	103.8	30.4	33.3	58.8	44.4	34.0	61.3	79.2	79.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.6	62.7	22.4	103.8	30.4	33.3	58.8	44.4	34.0	61.3	79.2	79.1
LOS by Move:	D	E	C	F	C	C	E	D	C	E	E	E
HCM2kAvgQ:	9	36	10	11	10	9	3	12	3	6	23	17
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0 2	0 1	2	0 2	0 1	2	0 2	0 1	2	0 2	0 1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #8 Cosumnes River Boulevard/Franklin Boulevard


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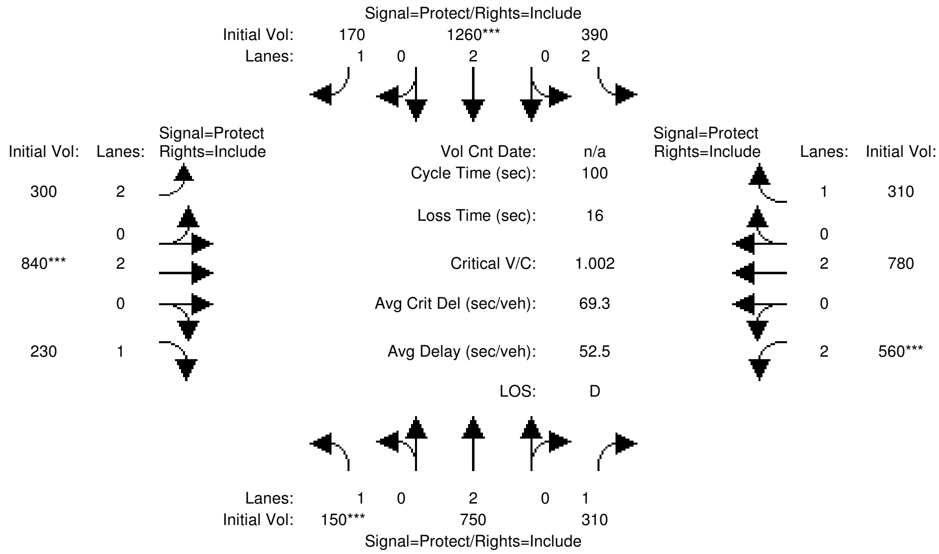
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.23 0.44  0.44  0.10 0.31  0.31  0.05 0.21  0.21  0.09 0.25  0.25
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.8 23.5   8.4   5.3  8.2   7.7   1.7  8.6   2.8   3.4 13.5  10.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.7 12.6   1.3   5.4  1.5   1.8   1.6  3.3   0.5   2.6  9.1   6.7
HCM2KQueue:   8.5 36.2   9.7  10.7  9.7   9.5   3.3 11.9   3.4   6.0 22.5  17.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.14  1.18  1.18 1.18  1.18  1.19 1.17  1.19  1.19 1.16  1.16
HCM2k70thQ:  10.1 41.2  11.4  12.6 11.4  11.2   3.9 14.0   4.0   7.1 26.1  20.3
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.39  1.52  1.51 1.52  1.52  1.57 1.50  1.57  1.55 1.44  1.47
HCM2k85thQ:  13.0 50.3  14.7  16.1 14.7  14.4   5.1 17.9   5.3   9.2 32.5  25.6
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.66 1.47  1.65  1.63 1.65  1.65  1.74 1.62  1.74  1.70 1.53  1.57
HCM2k90thQ:  14.2 53.0  16.0  17.5 15.9  15.6   5.7 19.3   5.9  10.1 34.5  27.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.87 1.58  1.85  1.83 1.85  1.85  2.00 1.81  2.00  1.93 1.67  1.73
HCM2k95thQ:  16.0 57.2  17.9  19.6 17.9  17.6   6.5 21.6   6.7  11.5 37.7  30.2
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.22 1.76  2.17  2.14 2.18  2.18  2.48 2.10  2.47  2.33 1.88  1.96
HCM2k98thQ:  18.9 63.7  21.1  22.9 21.0  20.7   8.1 25.1   8.3  13.9 42.3  34.2
                     Fuel Consumption and Emissions
                       2000 HCM Operations Method
                         Base Volume Alternative
*******************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  61.1  416  75.4  92.9  140  69.4  29.5  148  25.5  59.0  233  97.1
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    317.908 pounds
                      51.501 gallons
Carbon Dioxide:      991.872 pounds
Carbon Monoxide:      83.163 pounds
Hydrocarbons:         16.918 pounds
Nitrogen Oxides:       2.376 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    306.415 pounds
                      49.639 gallons
Carbon Dioxide:      956.015 pounds
Carbon Monoxide:      82.252 pounds
Hydrocarbons:         16.737 pounds
Nitrogen Oxides:       2.185 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum PM

Intersection #8: Cosumnes River Boulevard/Franklin Boulevard



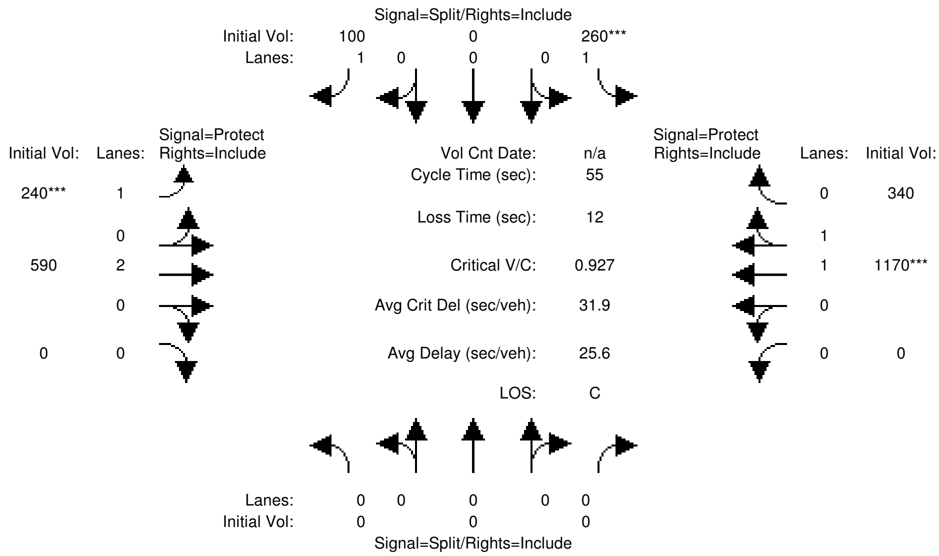

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     150   750   310   390 1260   170   300   840   230   560   780   310
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:  150   750   310   390 1260   170   300   840   230   560   780   310
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:   150   750   310   390 1260   170   300   840   230   560   780   310
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  150   750   310   390 1260   170   300   840   230   560   780   310
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:  150   750   310   390 1260   170   300   840   230   560   780   310
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
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.:  1769 3538  1583  3432 3538  1583  3432 3538  1583  3432 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.08 0.21  0.20  0.11 0.36  0.11  0.09 0.24  0.15  0.16 0.22  0.20
Crit Moves:  ****                   ****             ****        ****
Green/Cycle: 0.08 0.29  0.29  0.15 0.36  0.36  0.11 0.24  0.24  0.16 0.29  0.29
Volume/Cap:  1.00 0.74  0.68  0.74 1.00  0.30  0.77 1.00  0.61  1.00 0.77  0.68
Delay/Veh:  119.8 35.2  35.9  45.9 58.1  23.6  52.1 69.7  37.1  80.4 36.3  36.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh: 119.8 35.2  35.9  45.9 58.1  23.6  52.1 69.7  37.1  80.4 36.3  36.0
LOS by Move:   F    D     D     D    E     C     D    E     D     F    D     D
HCM2kAvgQ:      9   12    10     8   28     4     7   20     7    14   13    10
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  2  0  1    2  0  2  0  1    2  0  2  0  1    2  0  2  0  1
Lane Group:    L    T     R     L    T     R     L    T     R     L    T     R
#LnsInGrps:     1    2     1     2    2     1     2    2     1     2    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00
Fnl Sat Adj: 0.93 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
```

```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.08 0.29  0.29  0.15 0.36  0.36  0.11 0.24  0.24  0.16 0.29  0.29
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.2  9.9   7.6   5.3 18.4   3.4   4.2 12.3   5.7   8.0 10.4   7.6
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           4.3  2.5   1.9   2.3  9.2   0.4   2.4  7.5   1.5   6.0  2.8   2.0
HCM2KQueue:   8.5 12.4   9.6   7.6 27.6   3.8   6.5 19.8   7.2  14.1 13.3   9.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.17  1.18  1.18 1.15  1.19  1.18 1.16  1.18  1.17 1.17  1.18
HCM2k70thQ:  10.1 14.6  11.3   9.0 31.7   4.6   7.8 22.9   8.5  16.5 15.5  11.3
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.50  1.52  1.53 1.42  1.56  1.54 1.46  1.54  1.49 1.49  1.52
HCM2k85thQ:  13.0 18.6  14.6  11.6 39.2   6.0  10.1 28.8  11.0  20.9 19.8  14.6
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.66 1.62  1.65  1.67 1.50  1.73  1.69 1.55  1.68  1.60 1.61  1.65
HCM2k90thQ:  14.1 20.1  15.8  12.7 41.4   6.6  11.1 30.6  12.0  22.5 21.3  15.8
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.87 1.80  1.85  1.89 1.63  1.98  1.92 1.70  1.90  1.77 1.79  1.85
HCM2k95thQ:  16.0 22.4  17.8  14.4 45.0   7.6  12.5 33.6  13.6  25.0 23.7  17.8
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.22 2.08  2.18  2.26 1.82  2.44  2.30 1.92  2.28  2.04 2.06  2.18
HCM2k98thQ:  18.9 25.9  20.9  17.1 50.2   9.4  15.1 37.9  16.3  28.7 27.3  20.9
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  37.5  170  68.8  93.1  315  30.7  72.9  210  51.3 140.1  179  68.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    298.038 pounds
                      48.282 gallons
Carbon Dioxide:      929.877 pounds
Carbon Monoxide:      77.504 pounds
Hydrocarbons:         15.615 pounds
Nitrogen Oxides:       2.277 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    286.550 pounds
                      46.421 gallons
Carbon Dioxide:      894.035 pounds
Carbon Monoxide:      76.593 pounds
Hydrocarbons:         15.433 pounds
Nitrogen Oxides:       2.087 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum AM

Intersection #16: Cosumnes River Boulevard/24th Street




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0    0     0     0    7     0     5    7     0     0    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0   260    0   100   240  590     0     0 1170   340
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   260    0   100   240  590     0     0 1170   340
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   260    0   100   240  590     0     0 1170   340
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0    0     0   260    0   100   240  590     0     0 1170   340
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   260    0   100   240  590     0     0 1170   340
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.93 1.00  0.83  0.93 0.93  1.00  1.00 0.90  0.90
Lanes:       0.00 0.00  0.00  1.00 0.00  1.00  1.00 2.00  0.00  0.00 1.55  0.45
Final Sat.:     0    0     0  1769    0  1583  1769 3538     0     0 2648   770
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.15 0.00  0.06  0.14 0.17  0.00  0.00 0.44  0.44
Crit Moves:                   ****              ****                   ****
Green/Cycle: 0.00 0.00  0.00  0.16 0.00  0.16  0.15 0.62  0.00  0.00 0.48  0.48
Volume/Cap:  0.00 0.00  0.00  0.93 0.00  0.40  0.93 0.27  0.00  0.00 0.93  0.93
Delay/Veh:    0.0  0.0   0.0  57.6  0.0  21.8  59.9  4.8   0.0   0.0 23.0  23.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  57.6  0.0  21.8  59.9  4.8   0.0   0.0 23.0  23.0
LOS by Move:   A    A     A     E    A     C     E    A     A     A    C     C
HCM2kAvgQ:      0    0     0     8    0     2     8    3     0     0   18    18
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:         0  0  0  0  0    1  0  0  0  1    1  0  2  0  0    0  0  1  1  0
Lane Group:  xxxx xxxx  xxxx     L  xxxx     R     L    T   xxxx  xxxx  RT     RT
#LnsInGrps:     0    0     0     1    0     1     1    2     0     0    2     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx  0.98  0.98 0.98 xxxxx  xxxx 0.98  0.98
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx  1.00  xxxx 1.00 xxxxx  xxxx 1.00  1.00
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx  1.00  1.00 1.00 xxxxx  xxxx 1.00  1.00
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx 0.97  0.97
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  0.93 1.00  0.83  0.93 0.98  1.00  1.00 0.95  0.95
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  0.95
Fnl Sat Adj: 1.00 1.00  1.00  0.93 1.00  0.83  0.93 0.93  1.00  1.00 0.90  0.90
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                         2000 HCM Operations Method
                           Base Volume Alternative
*******************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
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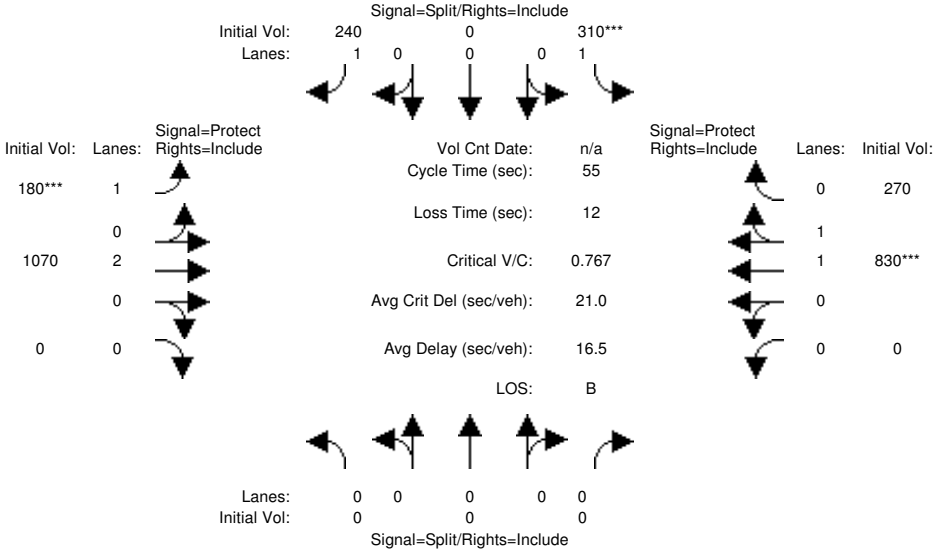
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.16 0.00  0.16  0.15 0.62  0.00  0.00 0.48  0.48
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   3.9  0.0   1.4   3.6  2.1   0.0   0.0 11.4  11.4
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   4.6  0.0   0.6   4.4  0.4   0.0   0.0  6.8   6.8
HCM2KQueue:   0.0  0.0   0.0   8.5  0.0   2.0   8.0  2.5   0.0   0.0 18.2  18.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.20  1.18 1.19  1.20  1.20 1.16  1.16
HCM2k70thQ:   0.0  0.0   0.0  10.0  0.0   2.4   9.5  3.0   0.0   0.0 21.1  21.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.53 1.60  1.58  1.53 1.58  1.60  1.60 1.46  1.46
HCM2k85thQ:   0.0  0.0   0.0  12.9  0.0   3.2  12.3  4.0   0.0   0.0 26.6  26.6
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.66 1.80  1.76  1.67 1.75  1.80  1.80 1.56  1.56
HCM2k90thQ:   0.0  0.0   0.0  14.1  0.0   3.5  13.4  4.4   0.0   0.0 28.4  28.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.87 2.10  2.04  1.88 2.02  2.10  2.10 1.72  1.72
HCM2k95thQ:   0.0  0.0   0.0  15.9  0.0   4.1  15.1  5.1   0.0   0.0 31.2  31.2
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.22 2.70  2.56  2.24 2.52  2.70  2.70 1.95  1.95
HCM2k98thQ:   0.0  0.0   0.0  18.8  0.0   5.1  18.0  6.3   0.0   0.0 35.4  35.4
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  64.1  0.0  22.5  59.3 66.7   0.0   0.0  274  79.7
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     82.048 pounds
                      13.292 gallons
Carbon Dioxide:      255.989 pounds
Carbon Monoxide:      20.131 pounds
Hydrocarbons:          3.669 pounds
Nitrogen Oxides:       0.742 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     77.061 pounds
                      12.484 gallons
Carbon Dioxide:      240.431 pounds
Carbon Monoxide:      19.739 pounds
Hydrocarbons:          3.590 pounds
Nitrogen Oxides:       0.663 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum PM

Intersection #16: Cosumnes River Boulevard/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	7	0	5	7	0	0	7	0
Volume Module:												
Base Vol:	0	0	0	310	0	240	180	1070	0	0	830	270
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	310	0	240	180	1070	0	0	830	270
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	310	0	240	180	1070	0	0	830	270
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	310	0	240	180	1070	0	0	830	270
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	310	0	240	180	1070	0	0	830	270
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.83	0.93	0.93	1.00	1.00	0.90	0.90
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.51	0.49
Final Sat.:	0	0	0	1769	0	1583	1769	3538	0	0	2571	836
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.18	0.00	0.15	0.10	0.30	0.00	0.00	0.32	0.32
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.23	0.00	0.23	0.13	0.55	0.00	0.00	0.42	0.42
Volume/Cap:	0.00	0.00	0.00	0.77	0.00	0.66	0.77	0.55	0.00	0.00	0.77	0.77
Delay/Veh:	0.0	0.0	0.0	28.5	0.0	23.9	37.2	8.2	0.0	0.0	16.2	16.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	28.5	0.0	23.9	37.2	8.2	0.0	0.0	16.2	16.2
LOS by Move:	A	A	A	C	A	C	D	A	A	A	B	B
HCM2kAvgQ:	0	0	0	7	0	5	5	7	0	0	10	10
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	1	0	0	0	1	1	0	2	0	0	0	0	1	1	0
Lane Group:	xxxx	xxxx	xxxx	L	xxxx	R	L	T	xxxx	xxxx	RT	RT
#LnsInGrps:	0	0	0	1	0	1	1	2	0	0	2	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	0.98	0.98	xxxxx	xxxx	0.98	0.98
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	0.96	0.96
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.93	1.00	0.83	0.93	0.98	1.00	1.00	0.94	0.94
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Fnl Sat Adj:	1.00	1.00	1.00	0.93	1.00	0.83	0.93	0.93	1.00	1.00	0.90	0.90
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #16 Cosumnes River Boulevard/24th Street


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*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.23 0.00  0.23  0.13 0.55  0.00  0.00 0.42  0.42
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   4.4  0.0   3.3   2.7  5.5   0.0   0.0  7.6   7.6
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   2.7  0.0   1.8   2.4  1.2   0.0   0.0  2.9   2.9
HCM2KQueue:   0.0  0.0   0.0   7.1  0.0   5.1   5.1  6.7   0.0   0.0 10.5  10.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.19  1.19 1.18  1.20  1.20 1.18  1.18
HCM2k70thQ:   0.0  0.0   0.0   8.4  0.0   6.1   6.0  7.9   0.0   0.0 12.3  12.3
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.54 1.60  1.55  1.55 1.54  1.60  1.60 1.51  1.51
HCM2k85thQ:   0.0  0.0   0.0  10.9  0.0   7.9   7.9 10.3   0.0   0.0 15.8  15.8
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.68 1.80  1.71  1.71 1.69  1.80  1.80 1.64  1.64
HCM2k90thQ:   0.0  0.0   0.0  12.0  0.0   8.7   8.7 11.3   0.0   0.0 17.1  17.1
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.90 2.10  1.95  1.95 1.91  2.10  2.10 1.84  1.84
HCM2k95thQ:   0.0  0.0   0.0  13.5  0.0  10.0   9.9 12.8   0.0   0.0 19.2  19.2
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.28 2.70  2.38  2.38 2.30  2.70  2.70 2.15  2.15
HCM2k98thQ:   0.0  0.0   0.0  16.2  0.0  12.1  12.1 15.4   0.0   0.0 22.5  22.5
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  72.5  0.0  54.6  43.5  171   0.0   0.0  177  57.7
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     69.530 pounds
                      11.264 gallons
Carbon Dioxide:      216.934 pounds
Carbon Monoxide:      16.350 pounds
Hydrocarbons:          2.740 pounds
Nitrogen Oxides:       0.696 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     64.233 pounds
                      10.406 gallons
Carbon Dioxide:      200.408 pounds
Carbon Monoxide:      15.934 pounds
Hydrocarbons:          2.656 pounds
Nitrogen Oxides:       0.612 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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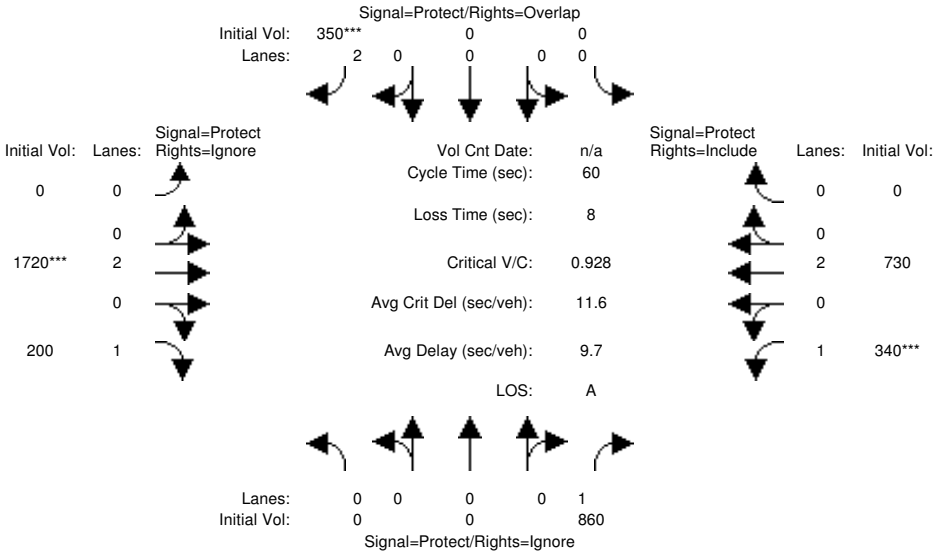
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum AM

Intersection #32:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	4	0	25	0	4	25	0
Volume Module:												
Base Vol:	0	0	860	0	0	350	0	1720	200	340	730	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	860	0	0	350	0	1720	200	340	730	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	350	0	1720	0	340	730	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	350	0	1720	0	340	730	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	350	0	1720	0	340	730	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.73	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	1.00	0.00	0.00	2.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	1900	0	0	2786	0	3538	1900	1769	3538	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.49	0.00	0.19	0.21	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.76	0.00	0.24	0.70	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.64	0.00	0.80	0.29	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	29.7	0.0	3.9	0.0	31.9	3.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	29.7	0.0	3.9	0.0	31.9	3.5	0.0
LOS by Move:	A	A	A	A	A	C	A	A	A	C	A	A
HCM2kAvgQ:	0	0	0	0	0	5	0	9	0	8	3	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	1	0	0	0	0	2	0	0	2	0	1	1	0	2	0	0
Lane Group:	xxxx	xxxx	R	xxxx	xxxx	R	xxxx	T	R	L	T	xxxx
#LnsInGrps:	0	0	1	0	0	2	0	2	1	1	2	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8	8	8	8
% Hev Veh:	2	2	2	2
Grade:	0%	0%	0%	0%
Parking/Hr:	No	No	No	No
Bus Stp/Hr:	0	0	0	0
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >
Cnft Ped/Hr:	0	0	0	0
ExclusiveRT:	Include	Include	Include	Include
% RT Prtct:	0	0	0	0
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.98	xxxx	0.98	xxxxx	0.98	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx
Area Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.83	1.00	0.98	1.00	0.93	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.73	1.00	0.93	1.00	0.93	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >
DelAdjFctr:	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #32


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*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.0  0.0   3.1   0.0  7.0   0.0   5.3  2.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   2.3   0.0  1.7   0.0   3.1  0.4   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   5.4   0.0  8.8   0.0   8.4  2.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.19  1.20 1.18  1.20  1.18 1.19  1.20
HCM2k70thQ:   0.0  0.0   0.0   0.0  0.0   6.4   0.0 10.4   0.0  10.0  3.4   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.60 1.60  1.55  1.60 1.52  1.60  1.53 1.57  1.60
HCM2k85thQ:   0.0  0.0   0.0   0.0  0.0   8.4   0.0 13.4   0.0  12.9  4.5   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.80 1.80  1.71  1.80 1.66  1.80  1.66 1.75  1.80
HCM2k90thQ:   0.0  0.0   0.0   0.0  0.0   9.2   0.0 14.5   0.0  14.0  5.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.10 2.10  1.94  2.10 1.87  2.10  1.88 2.01  2.10
HCM2k95thQ:   0.0  0.0   0.0   0.0  0.0  10.5   0.0 16.4   0.0  15.8  5.7   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.70 2.70  2.36  2.70 2.21  2.70  2.22 2.50  2.70
HCM2k98thQ:   0.0  0.0   0.0   0.0  0.0  12.7   0.0 19.4   0.0  18.8  7.1   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #32
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0  83.1   0.0  201   0.0  80.0 69.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     58.152 pounds
                       9.421 gallons
Carbon Dioxide:      181.435 pounds
Carbon Monoxide:      12.947 pounds
Hydrocarbons:          1.967 pounds
Nitrogen Oxides:       0.596 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     52.777 pounds
                       8.550 gallons
Carbon Dioxide:      164.664 pounds
Carbon Monoxide:      12.533 pounds
Hydrocarbons:          1.882 pounds
Nitrogen Oxides:       0.520 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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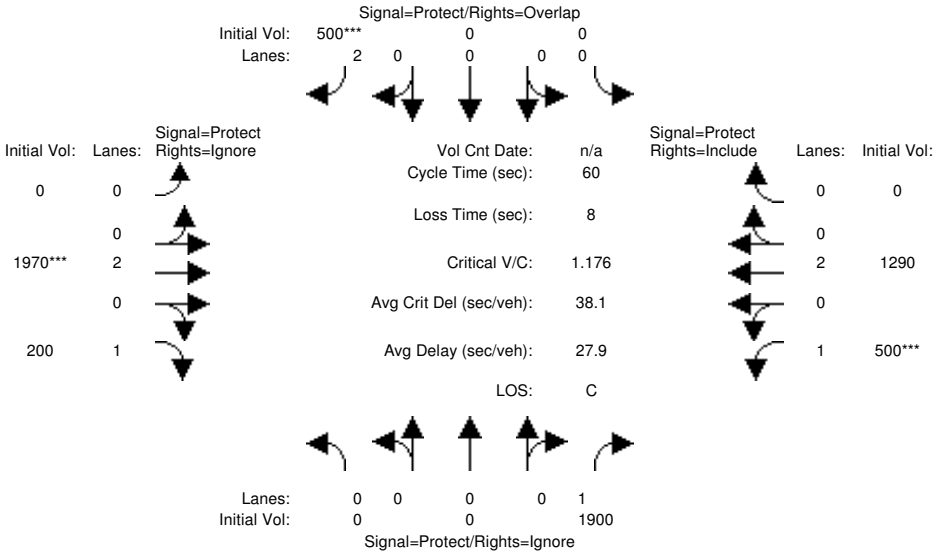
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum PM

Intersection #32:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	4	0	25	0	4	25	0
Volume Module:												
Base Vol:	0	0	1900	0	0	500	0	1970	200	500	1290	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	1900	0	0	500	0	1970	200	500	1290	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	500	0	1970	0	500	1290	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	500	0	1970	0	500	1290	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	500	0	1970	0	500	1290	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.73	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	1.00	0.00	0.00	2.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	1900	0	0	2786	0	3538	1900	1769	3538	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.56	0.00	0.28	0.36	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.76	0.00	0.24	0.70	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	1.06	0.00	0.73	0.00	1.18	0.52	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	81.8	0.0	5.0	0.0	124.8	4.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	81.8	0.0	5.0	0.0	124.8	4.4	0.0
LOS by Move:	A	A	A	A	A	F	A	A	A	F	A	A
HCM2kAvgQ:	0	0	0	0	0	12	0	12	0	22	6	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	1	0	0	0	0	2	0	0	2	0	1	1	0	2	0	0
Lane Group:	xxxx	xxxx		R		xxxx	xxxx		R		xxxx	T		R		L		T		xxxx
#LnsInGrps:	0	0		1		0	0		2		0	2		1		1		2		0
HCM Ops Input Saturation Adj Module:																				
Lane Width:	12	12		12		12	12		12		12	12		12		12		12		12
CrsswalkWid:		8				8			8			8				8				
% Hev Veh:		2				2			2			2				2				
Grade:		0%				0%			0%			0%				0%				
Parking/Hr:		No				No			No			No				No				
Bus Stp/Hr:		0				0			0			0				0				
Area Type:	< < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >																			
Cnft Ped/Hr:		0				0			0			0				0				
ExclusiveRT:		Include				Include			Include							Include				
% RT Prtct:		0				0			0							0				
HCM Ops f(lt) Adj Case Module:																				
f(lt) Case:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx								
HCM Ops Saturation Adj Module:																				
Ln Wid Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx								
Hev Veh Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.98	xxxx	0.98	xxxxx	0.98	0.98	xxxxx								
Grade Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx								
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx								
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx								
Area Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx								
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
LT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx								
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00								
HCM Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.83	1.00	0.98	1.00	0.93	0.98	1.00								
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00								
Fnl Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.73	1.00	0.93	1.00	0.93	0.93	1.00								
Delay Adjustment Factor Module:																				
Coordinated:	< < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >																			
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >																			
DelAdjFctr:	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00								

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #32


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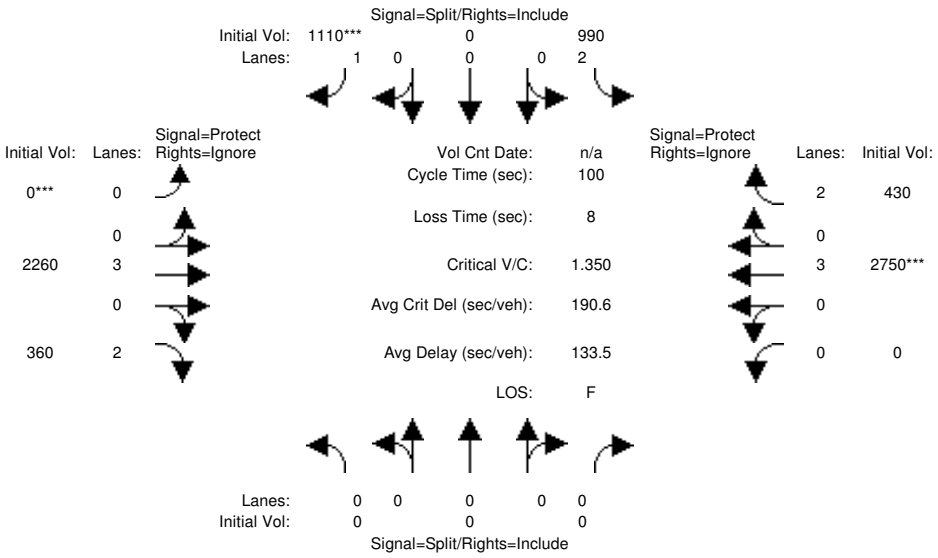
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.0  0.0   4.7   0.0  9.4   0.0   8.3  5.3   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   7.0   0.0  2.6   0.0  13.9  1.1   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0  11.7   0.0 12.0   0.0  22.3  6.4   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.17  1.20 1.17  1.20  1.16 1.19  1.20
HCM2k70thQ:   0.0  0.0   0.0   0.0  0.0  13.8   0.0 14.0   0.0  25.8  7.6   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.60 1.60  1.50  1.60 1.50  1.60  1.44 1.54  1.60
HCM2k85thQ:   0.0  0.0   0.0   0.0  0.0  17.6   0.0 18.0   0.0  32.1  9.9   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.80 1.80  1.62  1.80 1.62  1.80  1.53 1.69  1.80
HCM2k90thQ:   0.0  0.0   0.0   0.0  0.0  19.0   0.0 19.4   0.0  34.1 10.8   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.10 2.10  1.81  2.10 1.81  2.10  1.67 1.92  2.10
HCM2k95thQ:   0.0  0.0   0.0   0.0  0.0  21.2   0.0 21.6   0.0  37.3 12.3   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.70 2.70  2.11  2.70 2.10  2.70  1.88 2.31  2.70
HCM2k98thQ:   0.0  0.0   0.0   0.0  0.0  24.7   0.0 25.1   0.0  41.9 14.8   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #32
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0 126.4   0.0  267   0.0 132.4  152   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    133.370 pounds
                      21.606 gallons
Carbon Dioxide:      416.113 pounds
Carbon Monoxide:      33.012 pounds
Hydrocarbons:          6.189 pounds
Nitrogen Oxides:       1.106 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    125.907 pounds
                      20.397 gallons
Carbon Dioxide:      392.830 pounds
Carbon Monoxide:      32.434 pounds
Hydrocarbons:          6.070 pounds
Nitrogen Oxides:       0.996 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum AM

Intersection #33:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	990	0	1110	0	2260	360	0	2750	430
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	990	0	1110	0	2260	360	0	2750	430
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	990	0	1110	0	2260	0	0	2750	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	990	0	1110	0	2260	0	0	2750	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	990	0	1110	0	2260	0	0	2750	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.89	0.88	1.00	0.89	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	2.00	0.00	3.00	2.00
Final Sat.:	0	0	0	3432	0	1583	0	5083	3344	0	5083	3344
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.29	0.00	0.70	0.00	0.44	0.00	0.00	0.54	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.52	0.00	0.52	0.00	0.40	0.00	0.00	0.40	0.00
Volume/Cap:	0.00	0.00	0.00	0.56	0.00	1.35	0.00	1.11	0.00	0.00	1.35	0.00
Delay/Veh:	0.0	0.0	0.0	16.6	0.0	189.7	0.0	87.1	0.0	0.0	191	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	16.6	0.0	189.7	0.0	87.1	0.0	0.0	191	0.0
LOS by Move:	A	A	A	B	A	F	A	F	A	A	F	A
HCM2kAvgQ:	0	0	0	11	0	70	0	39	0	0	64	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	2	0	0	1	0	0	3	0	2	0	0	3	0	2
Lane Group:	xxxx	xxxx	xxxx	L	xxxx	R	xxxx	T	R	xxxx	T	R
#LnsInGrps:	0	0	0	2	0	1	0	3	2	0	3	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8	8	8	8	8	8
% Hev Veh:	2	2	2	2	2	2
Grade:	0%	0%	0%	0%	0%	0%
Parking/Hr:	No	No	No	No	No	No
Bus Stp/Hr:	0	0	0	0	0	0
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >
Cnft Ped/Hr:	0	0	0	0	0	0
ExclusiveRT:	Include	Include	Include	Include
% RT Prtct:	0	0	0	0	0	0
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	xxxx	0.98	xxxxx	xxxx	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.93	1.00	0.83	1.00	0.98	1.00	1.00	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.88	1.00	0.91	0.88
Fnl Sat Adj:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.89	0.88	1.00	0.89	0.88
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #33


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*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.52 0.00  0.52  0.00 0.40  0.00  0.00 0.40  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   9.6  0.0  30.8   0.0 23.0   0.0   0.0 28.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   1.2  0.0  39.5   0.0 16.5   0.0   0.0 36.2   0.0
HCM2KQueue:   0.0  0.0   0.0  10.8  0.0  70.3   0.0 39.5   0.0   0.0 64.1   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.12  1.20 1.14  1.20  1.20 1.12  1.20
HCM2k70thQ:   0.0  0.0   0.0  12.7  0.0  78.6   0.0 44.9   0.0   0.0 71.8   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.51 1.60  1.33  1.60 1.38  1.60  1.60 1.34  1.60
HCM2k85thQ:   0.0  0.0   0.0  16.3  0.0  93.5   0.0 54.5   0.0   0.0 85.6   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.63 1.80  1.41  1.80 1.46  1.80  1.80 1.42  1.80
HCM2k90thQ:   0.0  0.0   0.0  17.6  0.0  99.3   0.0 57.5   0.0   0.0 90.8   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.83 2.10  1.51  2.10 1.57  2.10  2.10 1.52  2.10
HCM2k95thQ:   0.0  0.0   0.0  19.7  0.0 106.4   0.0 61.9   0.0   0.0 97.3   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.14 2.70  1.70  2.70 1.75  2.70  2.70 1.71  2.70
HCM2k98thQ:   0.0  0.0   0.0  23.1  0.0 119.9   0.0 69.0   0.0   0.0  109   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #33
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 167.2  0.0 446.6   0.0  610   0.0   0.0  898   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    751.684 pounds
                     121.773 gallons
Carbon Dioxide:     2345.254 pounds
Carbon Monoxide:     205.065 pounds
Hydrocarbons:         44.442 pounds
Nitrogen Oxides:       4.774 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    737.372 pounds
                     119.454 gallons
Carbon Dioxide:     2300.600 pounds
Carbon Monoxide:     203.914 pounds
Hydrocarbons:         44.216 pounds
Nitrogen Oxides:       4.519 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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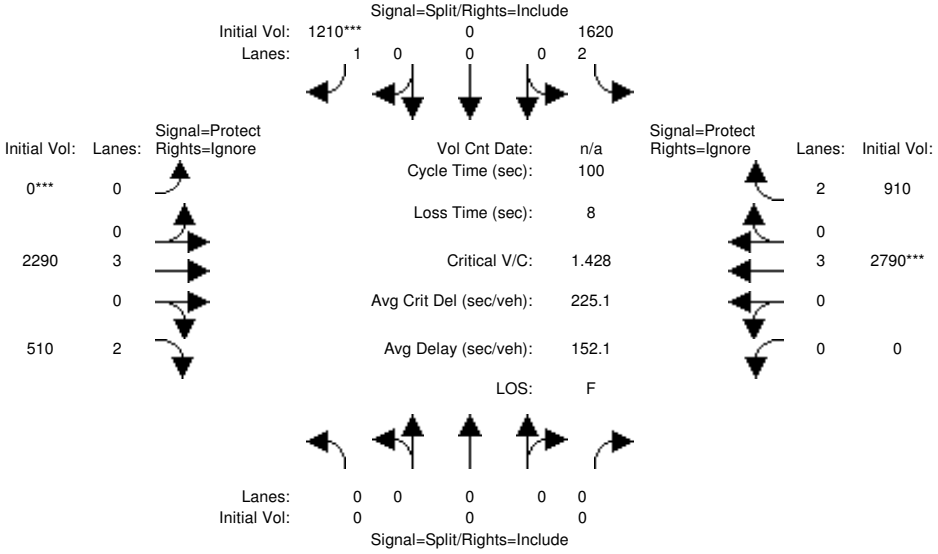
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum PM

Intersection #33:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	1620	0	1210	0	2290	510	0	2790	910
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	1620	0	1210	0	2290	510	0	2790	910
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	1620	0	1210	0	2290	0	0	2790	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1620	0	1210	0	2290	0	0	2790	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	1620	0	1210	0	2290	0	0	2790	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.89	0.88	1.00	0.89	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	2.00	0.00	3.00	2.00
Final Sat.:	0	0	0	3432	0	1583	0	5083	3344	0	5083	3344
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.47	0.00	0.76	0.00	0.45	0.00	0.00	0.55	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.54	0.00	0.54	0.00	0.38	0.00	0.00	0.38	0.00
Volume/Cap:	0.00	0.00	0.00	0.88	0.00	1.43	0.00	1.17	0.00	0.00	1.43	0.00
Delay/Veh:	0.0	0.0	0.0	25.8	0.0	222.5	0.0	114	0.0	0.0	226	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	25.8	0.0	222.5	0.0	114	0.0	0.0	226	0.0
LOS by Move:	A	A	A	C	A	F	A	F	A	A	F	A
HCM2kAvgQ:	0	0	0	26	0	82	0	44	0	0	70	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	2	0	0	1	0	0	3	0	2	0	0	3	0	2
Lane Group:	xxxx	xxxx	xxxx	L	xxxx	R	xxxx	T	R	xxxx	T	R
#LnsInGrps:	0	0	0	2	0	1	0	3	2	0	3	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	xxxx	0.98	xxxxx	xxxx	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.93	1.00	0.83	1.00	0.98	1.00	1.00	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.88	1.00	0.91	0.88
Fnl Sat Adj:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.89	0.88	1.00	0.89	0.88
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #33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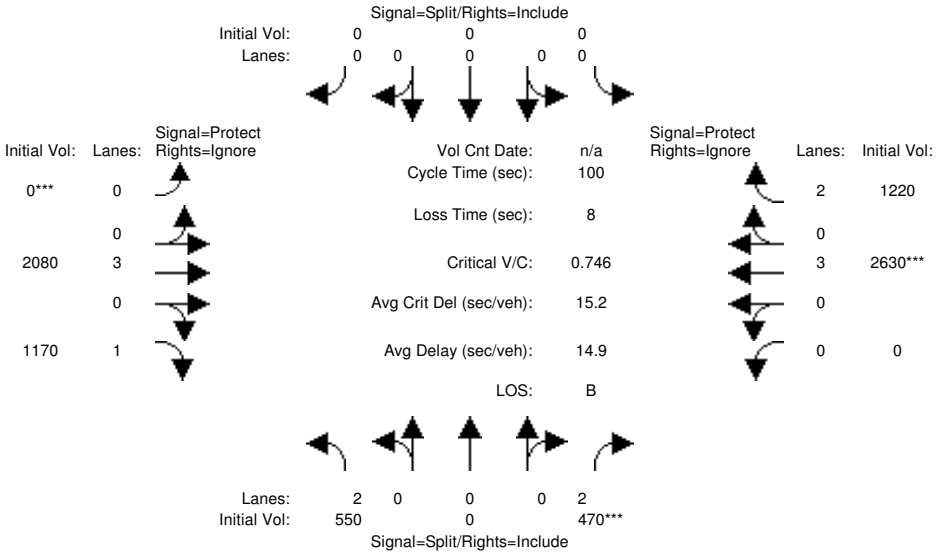
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.54 0.00  0.54  0.00 0.38  0.00  0.00 0.38  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0  20.4  0.0  33.6   0.0 23.3   0.0   0.0 28.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   5.4  0.0  48.4   0.0 20.5   0.0   0.0 41.4   0.0
HCM2KQueue:   0.0  0.0   0.0  25.8  0.0  82.0   0.0 43.8   0.0   0.0 69.7   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.15 1.20  1.11  1.20 1.13  1.20  1.20 1.12  1.20
HCM2k70thQ:   0.0  0.0   0.0  29.7  0.0  91.3   0.0 49.6   0.0   0.0 77.9   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.43 1.60  1.32  1.60 1.37  1.60  1.60 1.33  1.60
HCM2k85thQ:   0.0  0.0   0.0  36.8  0.0 108.2   0.0 60.0   0.0   0.0 92.7   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.51 1.80  1.41  1.80 1.44  1.80  1.80 1.41  1.80
HCM2k90thQ:   0.0  0.0   0.0  38.9  0.0 115.4   0.0 63.3   0.0   0.0 98.5   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.64 2.10  1.51  2.10 1.55  2.10  2.10 1.51  2.10
HCM2k95thQ:   0.0  0.0   0.0  42.4  0.0 123.6   0.0 68.0   0.0   0.0  105   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  1.84 2.70  1.70  2.70 1.73  2.70  2.70 1.70  2.70
HCM2k98thQ:   0.0  0.0   0.0  47.4  0.0 139.6   0.0 75.9   0.0   0.0  119   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #33
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 356.3  0.0 596.7   0.0  641   0.0   0.0  952   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    939.905 pounds
                     152.265 gallons
Carbon Dioxide:     2932.503 pounds
Carbon Monoxide:     257.520 pounds
Hydrocarbons:         56.130 pounds
Nitrogen Oxides:       5.882 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    923.633 pounds
                     149.629 gallons
Carbon Dioxide:     2881.736 pounds
Carbon Monoxide:     256.205 pounds
Hydrocarbons:         55.874 pounds
Nitrogen Oxides:       5.585 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum AM

Intersection #34:




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     550     0   470     0     0     0     0  2080  1170     0  2630  1220
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     0   470     0     0     0     0  2080  1170     0  2630  1220
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Volume:   550     0   470     0     0     0     0  2080     0     0  2630     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  550     0   470     0     0     0     0  2080     0     0  2630     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
FinalVolume:  550     0   470     0     0     0     0  2080     0     0  2630     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.90  1.00  0.73  1.00  1.00  1.00  1.00  0.89  1.00  1.00  0.89  0.88
Lanes:       2.00  0.00  2.00  0.00  0.00  0.00  0.00  3.00  1.00  0.00  3.00  2.00
Final Sat.:  3432     0  2786     0     0     0     0  5083  1900     0  5083  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.16  0.00  0.17  0.00  0.00  0.00  0.00  0.41  0.00  0.00  0.52  0.00
Crit Moves:             ****                    ****                    ****
Green/Cycle: 0.23  0.00  0.23  0.00  0.00  0.00  0.00  0.69  0.00  0.00  0.69  0.00
Volume/Cap:  0.71  0.00  0.75  0.00  0.00  0.00  0.00  0.59  0.00  0.00  0.75  0.00
Delay/Veh:   38.7   0.0  40.9   0.0   0.0   0.0   0.0   8.2   0.0   0.0  10.6   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  38.7   0.0  40.9   0.0   0.0   0.0   0.0   8.2   0.0   0.0  10.6   0.0
LOS by Move:    D     A     D     A     A     A     A     A     A     A     B     A
HCM2kAvgQ:      9     0     9     0     0     0     0    12     0     0    20     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       2  0  0  0  2     0  0  0  0  0     0  0  3  0  1     0  0  3  0  2
Lane Group:    L  xxxx    R   xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:    2     0     2     0     0     0     0     3     1     0     3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrsswalkWid:          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:      Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 1.00  0.83  1.00 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 0.97 1.00  0.88  1.00 1.00  1.00  1.00 0.91  1.00  1.00 0.91  0.88
Fnl Sat Adj: 0.90 1.00  0.73  1.00 1.00  1.00  1.00 0.89  1.00  1.00 0.89  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #34
```

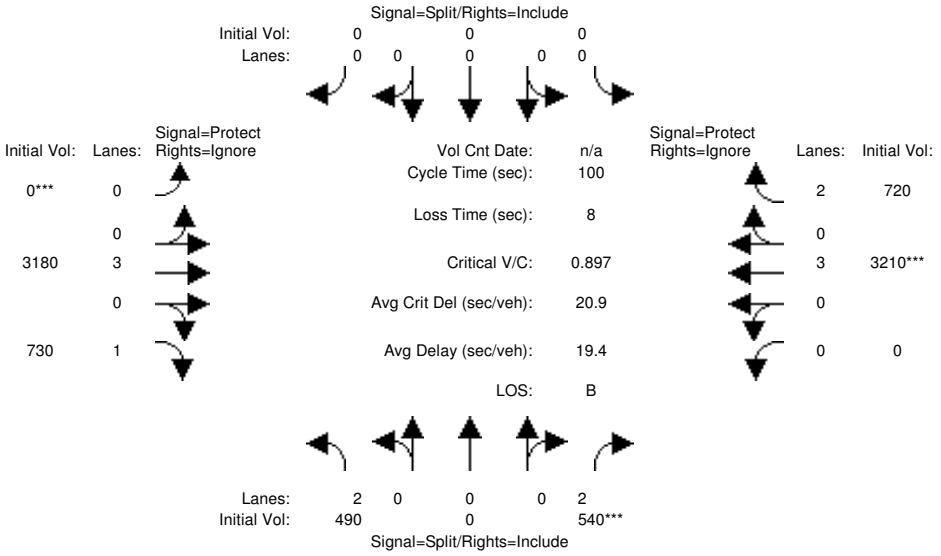


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.23 0.00  0.23  0.00 0.00  0.00  0.00 0.69  0.00  0.00 0.69  0.00
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           7.3  0.0   6.9   0.0  0.0   0.0   0.0 11.0   0.0   0.0 17.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           2.1  0.0   2.4   0.0  0.0   0.0   0.0  1.4   0.0   0.0  2.7   0.0
HCM2KQueue:   9.4  0.0   9.3   0.0  0.0   0.0   0.0 12.4   0.0   0.0 19.7   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.18  1.20 1.20  1.20  1.20 1.17  1.20  1.20 1.16  1.20
HCM2k70thQ:  11.1  0.0  11.0   0.0  0.0   0.0   0.0 14.5   0.0   0.0 22.9   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.60  1.52  1.60 1.60  1.60  1.60 1.50  1.60  1.60 1.46  1.60
HCM2k85thQ:  14.2  0.0  14.2   0.0  0.0   0.0   0.0 18.5   0.0   0.0 28.7   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.65 1.80  1.65  1.80 1.80  1.80  1.80 1.62  1.80  1.80 1.55  1.80
HCM2k90thQ:  15.5  0.0  15.4   0.0  0.0   0.0   0.0 20.0   0.0   0.0 30.6   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.86 2.10  1.86  2.10 2.10  2.10  2.10 1.80  2.10  2.10 1.70  2.10
HCM2k95thQ:  17.4  0.0  17.3   0.0  0.0   0.0   0.0 22.3   0.0   0.0 33.6   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.19 2.70  2.19  2.70 2.70  2.70  2.70 2.09  2.70  2.70 1.92  2.70
HCM2k98thQ:  20.5  0.0  20.4   0.0  0.0   0.0   0.0 25.8   0.0   0.0 37.9   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #34
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 126.7  0.0 109.4   0.0  0.0   0.0   0.0  270   0.0   0.0  417   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    128.383 pounds
                      20.798 gallons
Carbon Dioxide:      400.555 pounds
Carbon Monoxide:      29.879 pounds
Hydrocarbons:          4.966 pounds
Nitrogen Oxides:       1.247 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    118.324 pounds
                      19.169 gallons
Carbon Dioxide:      369.172 pounds
Carbon Monoxide:      29.099 pounds
Hydrocarbons:          4.805 pounds
Nitrogen Oxides:       1.098 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum PM

Intersection #34:




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     490     0   540     0     0     0     0  3180   730     0  3210   720
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:  490     0   540     0     0     0     0  3180   730     0  3210   720
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Volume:   490     0   540     0     0     0     0  3180     0     0  3210     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  490     0   540     0     0     0     0  3180     0     0  3210     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
FinalVolume:  490     0   540     0     0     0     0  3180     0     0  3210     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.90  1.00  0.73  1.00  1.00  1.00  1.00  0.89  1.00  1.00  0.89  0.88
Lanes:       2.00  0.00  2.00  0.00  0.00  0.00  0.00  3.00  1.00  0.00  3.00  2.00
Final Sat.:  3432     0  2786     0     0     0     0  5083  1900     0  5083  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.14  0.00  0.19  0.00  0.00  0.00  0.00  0.63  0.00  0.00  0.63  0.00
Crit Moves:             ****                    ****                    ****
Green/Cycle: 0.22  0.00  0.22  0.00  0.00  0.00  0.00  0.70  0.00  0.00  0.70  0.00
Volume/Cap:  0.66  0.00  0.90  0.00  0.00  0.00  0.00  0.89  0.00  0.00  0.90  0.00
Delay/Veh:   38.1   0.0  54.3   0.0   0.0   0.0   0.0  14.8   0.0   0.0  15.3   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  38.1   0.0  54.3   0.0   0.0   0.0   0.0  14.8   0.0   0.0  15.3   0.0
LOS by Move:    D     A     D     A     A     A     A     B     A     A     B     A
HCM2kAvgQ:      8     0    13     0     0     0     0    32     0     0    33     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       2  0  0  0  2     0  0  0  0  0     0  0  3  0  1     0  0  3  0  2
Lane Group:    L  xxxx    R   xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:    2     0     2     0     0     0     0     3     1     0     3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrsswalkWid:          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:      Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 1.00  0.83  1.00 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 0.97 1.00  0.88  1.00 1.00  1.00  1.00 0.91  1.00  1.00 0.91  0.88
Fnl Sat Adj: 0.90 1.00  0.73  1.00 1.00  1.00  1.00 0.89  1.00  1.00 0.89  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #34
```



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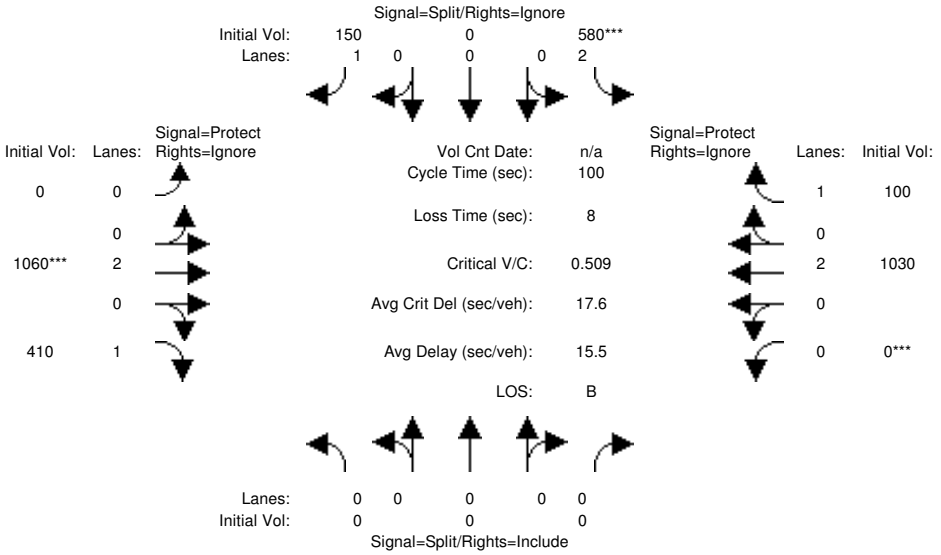
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.22 0.00  0.22  0.00 0.00  0.00  0.00 0.70  0.00  0.00 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.4  0.0   8.3   0.0  0.0   0.0   0.0 25.6   0.0   0.0 26.2   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           1.8  0.0   4.4   0.0  0.0   0.0   0.0  6.0   0.0   0.0  6.3   0.0
HCM2KQueue:   8.2  0.0  12.7   0.0  0.0   0.0   0.0 31.6   0.0   0.0 32.6   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.17  1.20 1.20  1.20  1.20 1.15  1.20  1.20 1.14  1.20
HCM2k70thQ:   9.7  0.0  14.8   0.0  0.0   0.0   0.0 36.2   0.0   0.0 37.3   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.53 1.60  1.50  1.60 1.60  1.60  1.60 1.40  1.60  1.60 1.40  1.60
HCM2k85thQ:  12.5  0.0  18.9   0.0  0.0   0.0   0.0 44.4   0.0   0.0 45.7   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.67 1.80  1.61  1.80 1.80  1.80  1.80 1.48  1.80  1.80 1.48  1.80
HCM2k90thQ:  13.6  0.0  20.4   0.0  0.0   0.0   0.0 46.8   0.0   0.0 48.2   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.88 2.10  1.80  2.10 2.10  2.10  2.10 1.60  2.10  2.10 1.60  2.10
HCM2k95thQ:  15.4  0.0  22.7   0.0  0.0   0.0   0.0 50.7   0.0   0.0 52.1   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.23 2.70  2.08  2.70 2.70  2.70  2.70 1.79  2.70  2.70 1.78  2.70
HCM2k98thQ:  18.3  0.0  26.3   0.0  0.0   0.0   0.0 56.5   0.0   0.0 58.0   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #34
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 112.0  0.0 131.3   0.0  0.0   0.0   0.0  629   0.0   0.0  645   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    193.460 pounds
                      31.341 gallons
Carbon Dioxide:      603.596 pounds
Carbon Monoxide:      46.235 pounds
Hydrocarbons:          8.006 pounds
Nitrogen Oxides:       1.870 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    179.832 pounds
                      29.133 gallons
Carbon Dioxide:      561.075 pounds
Carbon Monoxide:      45.164 pounds
Hydrocarbons:          7.790 pounds
Nitrogen Oxides:       1.655 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #1: Pocket Road/I-5 SB Ramps




```
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     7     0     0     7     0     0     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0   580     0   150     0 1060   410     0 1030   100
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   580     0   150     0 1060   410     0 1030   100
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:     0     0     0   580     0     0     0 1060     0     0 1030     0
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
Reduced Vol:    0     0     0   580     0     0     0 1060     0     0 1030     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00  1.00 1.00  0.00
FinalVolume:    0     0     0   580     0     0     0 1060     0     0 1030     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.90 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
Lanes:       0.00 0.00  0.00  2.00 0.00  1.00  0.00 2.00  1.00  0.00 2.00  1.00
Final Sat.:     0     0     0  3432     0  1900     0 3538  1900     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.17 0.00  0.00  0.00 0.30  0.00  0.00 0.29  0.00
Crit Moves:                   ****                  ****        ****
Green/Cycle: 0.00 0.00  0.00  0.33 0.00  0.00  0.00 0.59  0.00  0.00 0.59  0.00
Volume/Cap:  0.00 0.00  0.00  0.51 0.00  0.00  0.00 0.51  0.00  0.00 0.49  0.00
Delay/Veh:    0.0  0.0   0.0  27.3  0.0   0.0   0.0 12.3   0.0   0.0 12.1   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   0.0  0.0   0.0  27.3  0.0   0.0   0.0 12.3   0.0   0.0 12.1   0.0
LOS by Move:    A     A     A     C     A     A     A     B     A     A     B     A
HCM2kAvgQ:      0     0     0     8     0     0     0    10     0     0    10     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:       0  0  0  0  0    2  0  0  0  1    0  0  2  0  1    0  0  2  0  1
Lane Group:  xxxx xxxx  xxxx    L  xxxx    R   xxxx   T     R   xxxx   T     R
#LnsInGrps:     0     0     0     2     0     1     0     2     1     0     2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:     Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:  xxxx xxxx  xxxx     1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: xxxx xxxx xxxxx  0.98 xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    xxxx xxxx xxxxx  1.00 xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      xxxx xxxx xxxxx  0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 1.00 1.00  1.00  0.93 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  0.97 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 1.00 1.00  1.00  0.90 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > >
DelAdjFctr:  0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
********************************************************************************
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.59	0.00	0.00	0.59	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.0	0.0	0.0	6.7	0.0	0.0	0.0	9.1	0.0	0.0	8.7	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Q2:	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
HCM2KQueue:	0.0	0.0	0.0	7.7	0.0	0.0	0.0	10.1	0.0	0.0	9.7	0.0
70th%Factor:	1.20	1.20	1.20	1.18	1.20	1.20	1.20	1.18	1.20	1.20	1.18	1.20
HCM2k70thQ:	0.0	0.0	0.0	9.1	0.0	0.0	0.0	11.9	0.0	0.0	11.4	0.0
85th%Factor:	1.60	1.60	1.60	1.53	1.60	1.60	1.60	1.51	1.60	1.60	1.52	1.60
HCM2k85thQ:	0.0	0.0	0.0	11.8	0.0	0.0	0.0	15.3	0.0	0.0	14.7	0.0
90th%Factor:	1.80	1.80	1.80	1.67	1.80	1.80	1.80	1.64	1.80	1.80	1.65	1.80
HCM2k90thQ:	0.0	0.0	0.0	12.9	0.0	0.0	0.0	16.6	0.0	0.0	16.0	0.0
95th%Factor:	2.10	2.10	2.10	1.89	2.10	2.10	2.10	1.84	2.10	2.10	1.85	2.10
HCM2k95thQ:	0.0	0.0	0.0	14.5	0.0	0.0	0.0	18.7	0.0	0.0	18.0	0.0
98th%Factor:	2.70	2.70	2.70	2.25	2.70	2.70	2.70	2.16	2.70	2.70	2.17	2.70
HCM2k98thQ:	0.0	0.0	0.0	17.3	0.0	0.0	0.0	21.9	0.0	0.0	21.1	0.0

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #1 Pocket Road/I-5 SB Ramps

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Run Speed:		30 MPH			30 MPH			30 MPH			30 MPH	
NumOfStops:	0.0	0.0	0.0	116.6	0.0	0.0	0.0	156	0.0	0.0	150	0.0

Name: year 1995 composite fleet
Fuel Consumption: 60.786 pounds
9.847 gallons
Carbon Dioxide: 189.652 pounds
Carbon Monoxide: 14.202 pounds
Hydrocarbons: 2.382 pounds
Nitrogen Oxides: 0.582 pounds

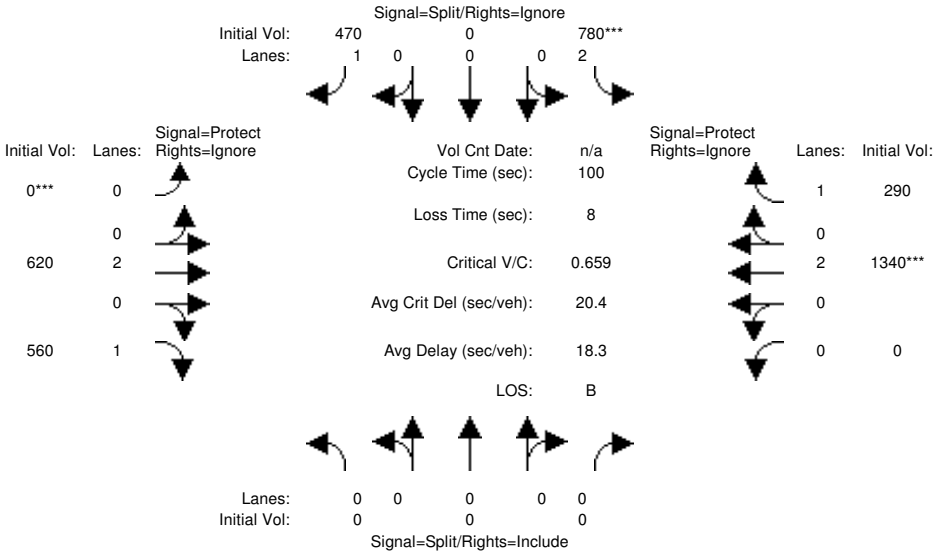
Name: year 2000 composite fleet
Fuel Consumption: 56.114 pounds
9.090 gallons
Carbon Dioxide: 175.076 pounds
Carbon Monoxide: 13.840 pounds
Hydrocarbons: 2.308 pounds
Nitrogen Oxides: 0.514 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design Base Volume Alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj PM

Intersection #1: Pocket Road/I-5 SB Ramps



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	7	0	0	7	0	0	7	0
Volume Module:												
Base Vol:	0	0	0	780	0	470	0	620	560	0	1340	290
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	780	0	470	0	620	560	0	1340	290
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	780	0	0	0	620	0	0	1340	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	780	0	0	0	620	0	0	1340	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	780	0	0	0	620	0	0	1340	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3432	0	1900	0	3538	1900	0	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.18	0.00	0.00	0.38	0.00
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.57	0.00	0.00	0.57	0.00
Volume/Cap:	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.30	0.00	0.00	0.66	0.00
Delay/Veh:	0.0	0.0	0.0	29.1	0.0	0.0	0.0	11.0	0.0	0.0	15.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	29.1	0.0	0.0	0.0	11.0	0.0	0.0	15.3	0.0
LOS by Move:	A	A	A	C	A	A	A	B	A	A	B	A
HCM2kAvgQ:	0	0	0	11	0	0	0	5	0	0	15	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	2	0	0	1	0	0	2	0	1	0	0	2	0	1
Lane Group:	xxxx	xxxx	xxxx	L	xxxx	R	xxxx	T	R	xxxx	T	R
#LnsInGrps:	0	0	0	2	0	1	0	2	1	0	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	xxxxx	xxxx	0.98	xxxxx	xxxx	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.93	1.00	1.00	1.00	0.98	1.00	1.00	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #1 Pocket Road/I-5 SB Ramps


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.35 0.00  0.00  0.00 0.57  0.00  0.00 0.57  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   9.5  0.0   0.0   0.0  4.7   0.0   0.0 13.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   1.8  0.0   0.0   0.0  0.4   0.0   0.0  1.9   0.0
HCM2KQueue:   0.0  0.0   0.0  11.3  0.0   0.0   0.0  5.1   0.0   0.0 15.3   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.20  1.20 1.19  1.20  1.20 1.17  1.20
HCM2k70thQ:   0.0  0.0   0.0  13.2  0.0   0.0   0.0  6.1   0.0   0.0 17.8   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.51 1.60  1.60  1.60 1.55  1.60  1.60 1.48  1.60
HCM2k85thQ:   0.0  0.0   0.0  17.0  0.0   0.0   0.0  7.9   0.0   0.0 22.6   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.63 1.80  1.80  1.80 1.71  1.80  1.80 1.59  1.80
HCM2k90thQ:   0.0  0.0   0.0  18.3  0.0   0.0   0.0  8.7   0.0   0.0 24.2   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.82 2.10  2.10  2.10 1.95  2.10  2.10 1.76  2.10
HCM2k95thQ:   0.0  0.0   0.0  20.5  0.0   0.0   0.0 10.0   0.0   0.0 26.8   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.12 2.70  2.70  2.70 2.38  2.70  2.70 2.01  2.70
HCM2k98thQ:   0.0  0.0   0.0  23.9  0.0   0.0   0.0 12.1   0.0   0.0 30.7   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #1 Pocket Road/I-5 SB Ramps
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 165.3  0.0   0.0   0.0 79.9   0.0   0.0  229   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     68.190 pounds
                      11.047 gallons
Carbon Dioxide:      212.754 pounds
Carbon Monoxide:      16.202 pounds
Hydrocarbons:          2.799 pounds
Nitrogen Oxides:       0.642 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     63.318 pounds
                      10.258 gallons
Carbon Dioxide:      197.553 pounds
Carbon Monoxide:      15.823 pounds
Hydrocarbons:          2.722 pounds
Nitrogen Oxides:       0.568 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #2: Meadowview Road/I-5 NB Ramps

```
                                    Signal=Split/Rights=Include
                     Initial Vol:      0           0           0
                           Lanes:      0    0      0      0    0

                  Signal=Protect                                         Signal=Protect
Initial Vol:  Lanes:  Rights=Ignore          Vol Cnt Date:        n/a    Rights=Ignore    Lanes:  Initial Vol:
                                        Cycle Time (sec):         100
    0          0                                                                             1        720
                                          Loss Time (sec):          8
               0                                                                             0
 1230***       2                              Critical V/C:       0.888                      2        470
               0                     Avg Crit Del (sec/veh):       33.3                      0
   410         1                        Avg Delay (sec/veh):       29.3                      0        0***
                                                        LOS:        C

                           Lanes:      0    0      1!     0    1
                     Initial Vol:   660***         0          290
                                    Signal=Split/Rights=Include
```

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0    7     0     0    0     0     0    7     0     0    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      660    0   290     0    0     0     0 1230   410     0  470   720
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:   660    0   290     0    0     0     0 1230   410     0  470   720
User Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:    660    0   290     0    0     0     0 1230     0     0  470     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   660    0   290     0    0     0     0 1230     0     0  470     0
PCE Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:      1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
FinalVolume:   660    0   290     0    0     0     0 1230     0     0  470     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:     1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:   0.90 1.00  0.90  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
Lanes:        0.82 0.00  1.18  0.00 0.00  0.00  0.00 2.00  1.00  0.00 2.00  1.00
Final Sat.:   1407    0  2025     0    0     0     0 3538  1900     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:      0.47 0.00  0.14  0.00 0.00  0.00  0.00 0.35  0.00  0.00 0.13  0.00
Crit Moves:   ****                                   ****        ****
Green/Cycle:  0.53 0.00  0.53  0.00 0.00  0.00  0.00 0.39  0.00  0.00 0.39  0.00
Volume/Cap:   0.89 0.00  0.27  0.00 0.00  0.00  0.00 0.89  0.00  0.00 0.34  0.00
Delay/Veh:    30.2  0.0  13.0   0.0  0.0   0.0   0.0 35.7   0.0   0.0 21.5   0.0
User DelAdj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:   30.2  0.0  13.0   0.0  0.0   0.0   0.0 35.7   0.0   0.0 21.5   0.0
LOS by Move:    C    A     B     A    A     A     A    D     A     A    C     A
HCM2kAvgQ:      25    0     4     0    0     0     0   22     0     0    5     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:         0  0  1! 0  1    0  0  0  0  0    0  0  2  0  1    0  0  2  0  1
Lane Group:    LTR  LTR   LTR  xxxx xxxx  xxxx  xxxx   T     R  xxxx   T     R
#LnsInGrps:      1    1     2     0    0     0     0    2     1     0    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:     12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:          8                8                8                8
% Hev Veh:            2                2                2                2
Grade:               0%               0%               0%               0%
Parking/Hr:          No               No               No               No
Bus Stp/Hr:           0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:           0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      4 xxxx     4  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj:  0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:     1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:       0.95 xxxx  0.95  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:       0.97 xxxx  0.97  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj:  0.90 1.00  0.90  1.00 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj:  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 Sat Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj:  0.90 1.00  0.90  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > >
DelAdjFctr:   1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
```



```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.53 0.00  0.53  0.00 0.00  0.00  0.00 0.39  0.00  0.00 0.39  0.00
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:          19.9  0.0   3.8   0.0  0.0   0.0   0.0 16.8   0.0   0.0  4.8   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           5.5  0.0   0.4   0.0  0.0   0.0   0.0  5.2   0.0   0.0  0.5   0.0
HCM2KQueue:  25.4  0.0   4.1   0.0  0.0   0.0   0.0 22.0   0.0   0.0  5.3   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.15 1.20  1.19  1.20 1.20  1.20  1.20 1.16  1.20  1.20 1.19  1.20
HCM2k70thQ:  29.3  0.0   4.9   0.0  0.0   0.0   0.0 25.5   0.0   0.0  6.3   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.43 1.60  1.56  1.60 1.60  1.60  1.60 1.44  1.60  1.60 1.55  1.60
HCM2k85thQ:  36.3  0.0   6.4   0.0  0.0   0.0   0.0 31.8   0.0   0.0  8.3   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.51 1.80  1.73  1.80 1.80  1.80  1.80 1.53  1.80  1.80 1.71  1.80
HCM2k90thQ:  38.4  0.0   7.1   0.0  0.0   0.0   0.0 33.7   0.0   0.0  9.1   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.65 2.10  1.98  2.10 2.10  2.10  2.10 1.68  2.10  2.10 1.95  2.10
HCM2k95thQ:  41.8  0.0   8.2   0.0  0.0   0.0   0.0 36.9   0.0   0.0 10.4   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 1.84 2.70  2.43  2.70 2.70  2.70  2.70 1.88  2.70  2.70 2.36  2.70
HCM2k98thQ:  46.8  0.0  10.0   0.0  0.0   0.0   0.0 41.5   0.0   0.0 12.6   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 146.6  0.0  39.9   0.0  0.0   0.0   0.0  287   0.0   0.0 82.4   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     87.327 pounds
                      14.147 gallons
Carbon Dioxide:      272.460 pounds
Carbon Monoxide:      21.694 pounds
Hydrocarbons:          4.048 pounds
Nitrogen Oxides:       0.761 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     82.433 pounds
                      13.354 gallons
Carbon Dioxide:      257.192 pounds
Carbon Monoxide:      21.308 pounds
Hydrocarbons:          3.971 pounds
Nitrogen Oxides:       0.683 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #2: Meadowview Road/I-5 NB Ramps

Signal=Split/Rights=Include

Initial Vol:	0		0		0
Lanes:	0	0	0	0	0

Initial Vol:	Lanes:	Signal=Protect Rights=Ignore			Signal=Protect Rights=Ignore	Lanes:	Initial Vol:
			Vol Cnt Date:	n/a			
			Cycle Time (sec):	100			
0	0					1	780
			Loss Time (sec):	8			
	0					0	
1200***	2		Critical V/C:	0.842		2	970
	0		Avg Crit Del (sec/veh):	29.8		0	
200	1		Avg Delay (sec/veh):	27.7		0	0***
			LOS:	C			

Lanes:	0	0	1!	0	1
Initial Vol:	660***		0		190

Signal=Split/Rights=Include

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0    7     0     0    0     0     0    7     0     0    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     660    0   190     0    0     0     0 1200   200     0  970   780
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:  660    0   190     0    0     0     0 1200   200     0  970   780
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   660    0   190     0    0     0     0 1200     0     0  970     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  660    0   190     0    0     0     0 1200     0     0  970     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
FinalVolume:  660    0   190     0    0     0     0 1200     0     0  970     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.91 1.00  0.91  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
Lanes:       0.87 0.00  1.13  0.00 0.00  0.00  0.00 2.00  1.00  0.00 2.00  1.00
Final Sat.:  1514    0  1950     0    0     0     0 3538  1900     0 3538  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.44 0.00  0.10  0.00 0.00  0.00  0.00 0.34  0.00  0.00 0.27  0.00
Crit Moves:  ****                                   ****        ****
Green/Cycle: 0.52 0.00  0.52  0.00 0.00  0.00  0.00 0.40  0.00  0.00 0.40  0.00
Volume/Cap:  0.84 0.00  0.19  0.00 0.00  0.00  0.00 0.84  0.00  0.00 0.68  0.00
Delay/Veh:   27.2  0.0  12.9   0.0  0.0   0.0   0.0 31.7   0.0   0.0 25.9   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  27.2  0.0  12.9   0.0  0.0   0.0   0.0 31.7   0.0   0.0 25.9   0.0
LOS by Move:   C    A     B     A    A     A     A    C     A     A    C     A
HCM2kAvgQ:     22    0     3     0    0     0     0   20     0     0   14     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        0  0  1! 0  1    0  0  0  0  0    0  0  2  0  1    0  0  2  0  1
Lane Group:   LTR  LTR   LTR  xxxx xxxx  xxxx  xxxx   T     R   xxxx   T     R
#LnsInGrps:     1    1     2     0    0     0     0    2     1     0    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     4 xxxx     4  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: 1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      0.97 xxxx  0.97  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.96 xxxx  0.96  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.91 1.00  0.91  1.00 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.95  1.00  1.00 0.95  1.00
Fnl Sat Adj: 0.91 1.00  0.91  1.00 1.00  1.00  1.00 0.93  1.00  1.00 0.93  1.00
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
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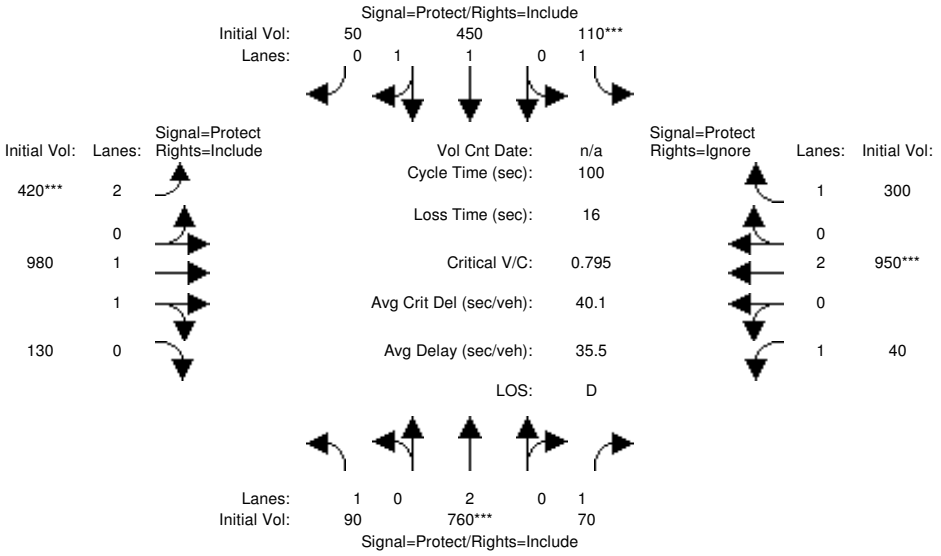
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.52 0.00  0.52  0.00 0.00  0.00  0.00 0.40  0.00  0.00 0.40  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:          17.9  0.0   2.5   0.0  0.0   0.0   0.0 15.9   0.0   0.0 11.7   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           4.3  0.0   0.2   0.0  0.0   0.0   0.0  4.2   0.0   0.0  2.0   0.0
HCM2KQueue:  22.2  0.0   2.7   0.0  0.0   0.0   0.0 20.0   0.0   0.0 13.7   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.16 1.20  1.19  1.20 1.20  1.20  1.20 1.16  1.20  1.20 1.17  1.20
HCM2k70thQ:  25.7  0.0   3.3   0.0  0.0   0.0   0.0 23.2   0.0   0.0 16.0   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.44 1.60  1.57  1.60 1.60  1.60  1.60 1.45  1.60  1.60 1.49  1.60
HCM2k85thQ:  32.1  0.0   4.3   0.0  0.0   0.0   0.0 29.1   0.0   0.0 20.4   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.53 1.80  1.75  1.80 1.80  1.80  1.80 1.55  1.80  1.80 1.60  1.80
HCM2k90thQ:  34.1  0.0   4.8   0.0  0.0   0.0   0.0 31.0   0.0   0.0 21.9   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.67 2.10  2.02  2.10 2.10  2.10  2.10 1.70  2.10  2.10 1.78  2.10
HCM2k95thQ:  37.2  0.0   5.5   0.0  0.0   0.0   0.0 34.0   0.0   0.0 24.3   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 1.88 2.70  2.51  2.70 2.70  2.70  2.70 1.91  2.70  2.70 2.05  2.70
HCM2k98thQ:  41.8  0.0   6.9   0.0  0.0   0.0   0.0 38.3   0.0   0.0 28.0   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #2 Meadowview Road/I-5 NB Ramps
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 141.2  0.0  25.4   0.0  0.0   0.0   0.0  271   0.0   0.0  200   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     96.162 pounds
                      15.578 gallons
Carbon Dioxide:      300.024 pounds
Carbon Monoxide:      23.764 pounds
Hydrocarbons:          4.390 pounds
Nitrogen Oxides:       0.853 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     90.577 pounds
                      14.673 gallons
Carbon Dioxide:      282.601 pounds
Carbon Monoxide:      23.324 pounds
Hydrocarbons:          4.302 pounds
Nitrogen Oxides:       0.763 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj AM

Intersection #3: Meadowview Road/Freeport Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	90	760	70	110	450	50	420	980	130	40	950	300
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	760	70	110	450	50	420	980	130	40	950	300
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	90	760	70	110	450	50	420	980	130	40	950	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	760	70	110	450	50	420	980	130	40	950	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	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	90	760	70	110	450	50	420	980	130	40	950	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.92	0.92	0.90	0.91	0.91	0.93	0.93	1.00
Lanes:	1.00	2.00	1.00	1.00	1.80	0.20	2.00	1.77	0.23	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	1769	3136	348	3432	3067	407	1769	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.05	0.21	0.04	0.06	0.14	0.14	0.12	0.32	0.32	0.02	0.27	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.27	0.27	0.08	0.26	0.26	0.15	0.43	0.43	0.07	0.34	0.00
Volume/Cap:	0.56	0.80	0.16	0.80	0.56	0.56	0.80	0.75	0.75	0.34	0.80	0.00
Delay/Veh:	47.8	38.6	28.0	71.7	33.0	33.0	49.0	26.5	26.5	46.3	33.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.8	38.6	28.0	71.7	33.0	33.0	49.0	26.5	26.5	46.3	33.8	0.0
LOS by Move:	D	D	C	E	C	C	D	C	C	D	C	A
HCM2kAvgQ:	4	13	2	5	8	8	9	16	16	2	16	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	1	0	1	1	0	2	0	1	1	0	1	0	2	0	1
Lane Group:	L		T		R	L		RT		RT	L		RT		RT	L		T		R
#LnsInGrps:	1		2		1	1		2		2	2		2		2	1		2		1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	0.85	xxxx	0.99	0.99	xxxx	0.98	0.98	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.97	0.97	0.93	0.96	0.96	0.93	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.92	0.92	0.90	0.91	0.91	0.93	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #3 Meadowview Road/Freeport Boulevard


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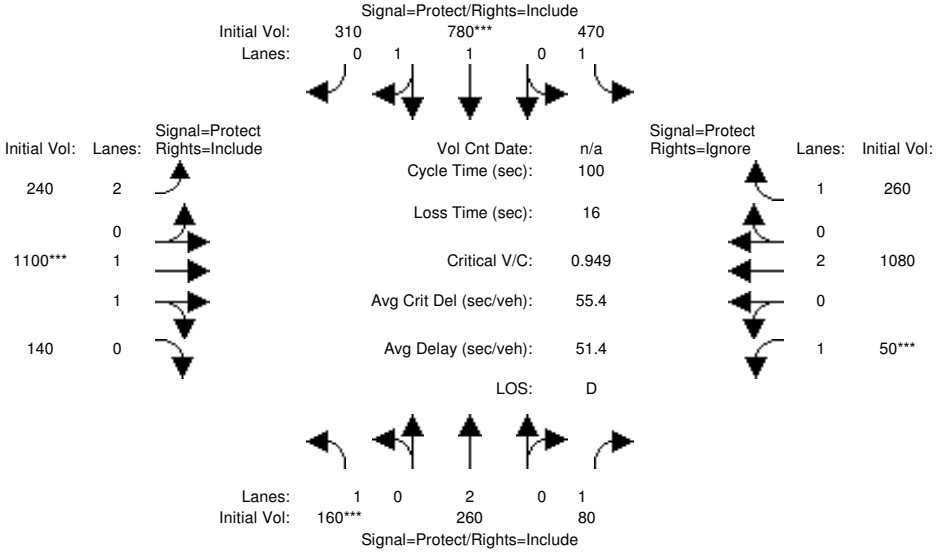
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.09 0.27  0.27  0.08 0.26  0.26  0.15 0.43  0.43  0.07 0.34  0.00
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.4 10.3   1.5   3.0  6.3   6.3   5.8 13.7  13.7   1.1 12.6   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Q2:           1.1  3.1   0.2   2.3  1.2   1.2   2.8  2.7   2.7   0.5  3.2   0.0
HCM2KQueue:   3.5 13.5   1.7   5.3  7.5   7.5   8.6 16.4  16.4   1.6 15.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.17  1.20  1.19 1.18  1.18  1.18 1.17  1.17  1.20 1.17  1.20
HCM2k70thQ:   4.2 15.8   2.0   6.3  8.9   8.9  10.1 19.2  19.2   1.9 18.5   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.57 1.49  1.58  1.55 1.53  1.53  1.53 1.47  1.47  1.58 1.48  1.60
HCM2k85thQ:   5.5 20.1   2.7   8.3 11.6  11.6  13.1 24.2  24.2   2.5 23.4   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.74 1.60  1.77  1.71 1.67  1.67  1.66 1.58  1.58  1.77 1.58  1.80
HCM2k90thQ:   6.1 21.6   3.0   9.1 12.6  12.6  14.2 25.9  25.9   2.7 25.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.99 1.78  2.05  1.95 1.89  1.89  1.87 1.74  1.74  2.05 1.75  2.10
HCM2k95thQ:   7.0 24.0   3.4  10.4 14.3  14.3  16.1 28.6  28.6   3.2 27.7   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.46 2.06  2.58  2.36 2.26  2.26  2.22 1.98  1.98  2.59 2.00  2.70
HCM2k98thQ:   8.7 27.6   4.3  12.6 17.1  17.1  19.0 32.6  32.6   4.0 31.6   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  21.5  177  13.4  27.0 97.6  10.8 101.2  207  27.5   9.6  215   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    151.455 pounds
                      24.536 gallons
Carbon Dioxide:      472.539 pounds
Carbon Monoxide:      38.239 pounds
Hydrocarbons:          7.331 pounds
Nitrogen Oxides:       1.272 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    143.867 pounds
                      23.306 gallons
Carbon Dioxide:      448.865 pounds
Carbon Monoxide:      37.640 pounds
Hydrocarbons:          7.211 pounds
Nitrogen Oxides:       1.149 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #3: Meadowview Road/Freeport Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	160	260	80	470	780	310	240	1100	140	50	1080	260
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	260	80	470	780	310	240	1100	140	50	1080	260
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	160	260	80	470	780	310	240	1100	140	50	1080	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	160	260	80	470	780	310	240	1100	140	50	1080	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	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	160	260	80	470	780	310	240	1100	140	50	1080	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.89	0.89	0.90	0.92	0.92	0.93	0.93	1.00
Lanes:	1.00	2.00	1.00	1.00	1.43	0.57	2.00	1.77	0.23	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	1769	2423	963	3432	3085	393	1769	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.09	0.07	0.05	0.27	0.32	0.32	0.07	0.36	0.36	0.03	0.31	0.00
Crit Moves:	****				****			****			****	
Green/Cycle:	0.09	0.09	0.09	0.33	0.33	0.33	0.08	0.37	0.37	0.05	0.34	0.00
Volume/Cap:	0.97	0.80	0.55	0.80	0.97	0.97	0.90	0.97	0.97	0.57	0.90	0.00
Delay/Veh:	107.3	57.7	47.9	38.1	53.7	53.7	76.5	50.3	50.3	54.7	41.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	107.3	57.7	47.9	38.1	53.7	53.7	76.5	50.3	50.3	54.7	41.0	0.0
LOS by Move:	F	E	D	D	D	D	E	D	D	D	D	A
HCM2kAvgQ:	9	6	3	15	23	23	7	26	26	2	20	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	1	0	1	1	0	2	0	1	1	0	2	0	1
Lane Group:	L	T	R	L	RT	RT	L	RT	RT	L	T	R
#LnsInGrps:	1	2	1	1	2	2	2	2	2	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	xxxxx
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	xxxx	xxxxx
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	0.85	xxxx	0.96	0.96	xxxx	0.98	0.98	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.94	0.94	0.93	0.96	0.96	0.93	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	0.95	0.97	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.89	0.89	0.90	0.92	0.92	0.93	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

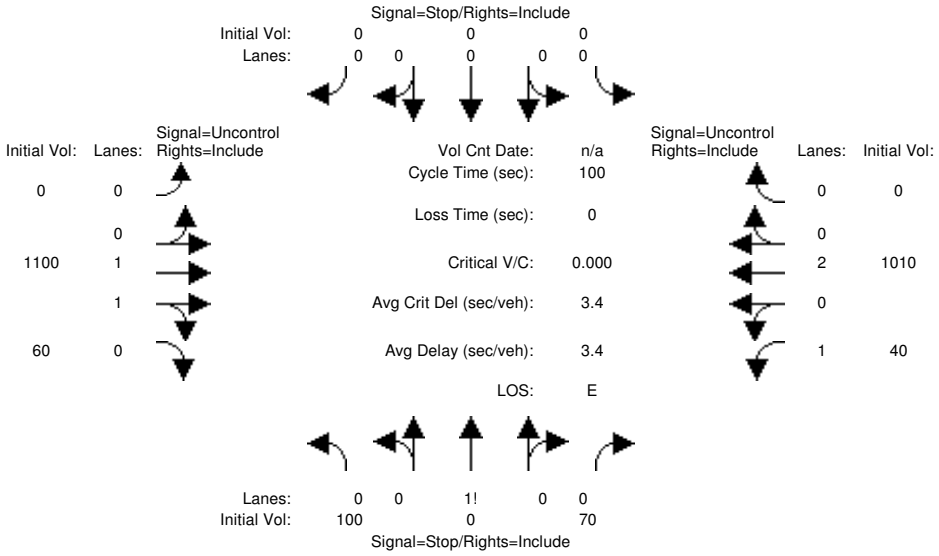
Intersection #3 Meadowview Road/Freeport Boulevard


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.09 0.09  0.09  0.33 0.33  0.33  0.08 0.37  0.37  0.05 0.34  0.00
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.4  3.7   2.1  11.9 15.7  15.7   3.4 17.9  17.9   1.4 15.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00
Q2:           4.2  2.5   1.1   3.3  7.5   7.5   3.2  8.0   8.0   1.1  5.4   0.0
HCM2KQueue:   8.6  6.2   3.2  15.2 23.3  23.3   6.6 25.8  25.8   2.4 20.4   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.19  1.19  1.17 1.16  1.16  1.18 1.15  1.15  1.19 1.16  1.20
HCM2k70thQ:  10.2  7.4   3.8  17.7 26.9  26.9   7.8 29.8  29.8   2.9 23.7   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.54  1.57  1.48 1.44  1.44  1.54 1.43  1.43  1.58 1.45  1.60
HCM2k85thQ:  13.2  9.6   5.0  22.4 33.5  33.5  10.1 36.9  36.9   3.8 29.6   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.66 1.69  1.74  1.59 1.52  1.52  1.69 1.51  1.51  1.75 1.54  1.80
HCM2k90thQ:  14.3 10.6   5.6  24.1 35.5  35.5  11.1 39.0  39.0   4.2 31.5   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.87 1.92  2.00  1.76 1.66  1.66  1.92 1.64  1.64  2.02 1.69  2.10
HCM2k95thQ:  16.2 12.0   6.4  26.7 38.7  38.7  12.6 42.4  42.4   4.9 34.6   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.21 2.32  2.48  2.01 1.87  1.87  2.30 1.84  1.84  2.53 1.91  2.70
HCM2k98thQ:  19.1 14.5   8.0  30.5 43.4  43.4  15.2 47.5  47.5   6.1 39.0   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #3 Meadowview Road/Freeport Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  39.9 63.7  19.1 106.9  192  76.5  59.5  271  34.5  12.2  257   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    226.782 pounds
                      36.739 gallons
Carbon Dioxide:      707.561 pounds
Carbon Monoxide:      58.879 pounds
Hydrocarbons:         11.822 pounds
Nitrogen Oxides:       1.751 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    217.871 pounds
                      35.295 gallons
Carbon Dioxide:      679.757 pounds
Carbon Monoxide:      58.172 pounds
Hydrocarbons:         11.682 pounds
Nitrogen Oxides:       1.603 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum w/proj AM

Intersection #4: Meadowview Road/Manorside Drive



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	100	0	70	0	0	0	0	1100	60	40	1010	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:	100	0	70	0	0	0	0	1100	60	40	1010	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:	100	0	70	0	0	0	0	1100	60	40	1010	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	100	0	70	0	0	0	0	1100	60	40	1010	0
Critical Gap Module:												
Critical Gp:	6.8	6.5	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	1715	2220	580	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1160	xxxx	xxxxx
Potent Cap.:	81	43	458	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	598	xxxx	xxxxx
Move Cap.:	77	40	458	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	598	xxxx	xxxxx
Total Cap:	190	143	xxxxx	146	130	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.53	0.00	0.15	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.07	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	11.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	250	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	4.4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	45.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	E	*	*	*	*	*	*	*	*	*	*
ApproachDel:		45.2		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		E		*			*			*		

HevVeh:	2%	2%	2%	2%
Grade:	0%	0%	0%	0%
Peds/Hour:	0	0	0	0

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Two-Stage Gap Acceptance [Median Type: TWLTL][Median Storage: 1 car]

Two-Stage Gap Acceptance - Stage One Module:

Cnflict Vol:	1130	1130	xxxxx	1090	1090	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx
Potent Cap.:	270	277	xxxxx	230	289	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx
Move Cap.:	270	277	xxxxx	214	270	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx

Two-Stage Gap Acceptance - Stage Two Module:

Cnflict Vol:	585	1090	xxxxx	550	1160	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx
Potent Cap.:	520	289	xxxxx	487	268	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx
Move Cap.:	485	270	xxxxx	412	268	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx

Peak Hour Delay Signal Warrant Report

Intersection #4 Meadowview Road/Manorside Drive

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 1 0	1	0	2 0 0
Initial Vol:	100	0	70	0	0	0	0	1100	60	40	1010	0
ApproachDel:		45.2		xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=170]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2380]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an


```
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
********************************************************************************
Base Volume Alternative: Peak Hour Warrant Met
------------|---------------||---------------||---------------||---------------|
Approach:       North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:        0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:  100    0    70     0    0     0     0 1100    60    40 1010     0
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              2210
Minor Approach Volume:            170
Minor Approach Volume Threshold: 12 [less than minimum of 100]
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
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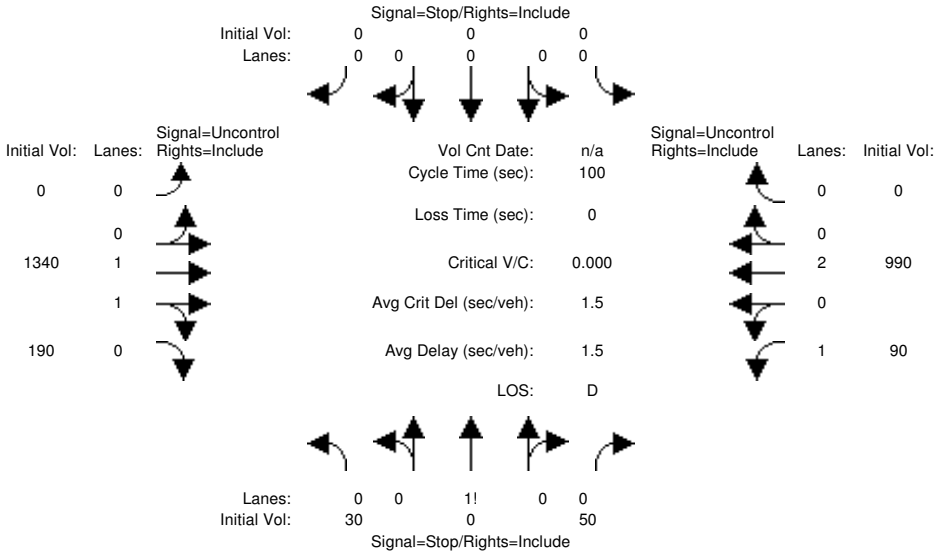
Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum w/proj PM

Intersection #4: Meadowview Road/Manorside Drive




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      30    0    50     0    0     0     0 1340   190    90  990     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:   30    0    50     0    0     0     0 1340   190    90  990     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:    30    0    50     0    0     0     0 1340   190    90  990     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   30    0    50     0    0     0     0 1340   190    90  990     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.8  6.5   6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: 2110 2605   765  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1530 xxxx xxxxx
Potent Cap.:   44   24   346  xxxx xxxx xxxxx  xxxx xxxx xxxxx   431 xxxx xxxxx
Move Cap.:     37   19   346  xxxx xxxx xxxxx  xxxx xxxx xxxxx   431 xxxx xxxxx
Total Cap:    127  102 xxxxx   106   62 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  0.24 0.00  0.14  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.21 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.8 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  15.5 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     C    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  211 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  1.7 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 32.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    D     *     *    *     *     *    *     *     *    *     *
ApproachDel:      32.2           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:       D               *                *                *
----------|---------------|---------------|---------------|---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet         12 feet         12 feet         12 feet
Time Period: 0.25 hour
----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance [Median Type: TWLTL][Median Storage: 1 car]
----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage One Module:
Cnflict Vol:1435  1435 xxxxx 1170  1170 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 186   197 xxxxx  205   265 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   186   197 xxxxx  162   210 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
----------|---------------|---------------|---------------|---------------|
Two-Stage Gap Acceptance - Stage Two Module:
Cnflict Vol: 675  1170 xxxxx  670  1530 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Potent Cap.: 467   265 xxxxx  413   177 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Move Cap.:   370   210 xxxxx  353   177 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #4 Meadowview Road/Manorside Drive
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:       0  0  1! 0  0    0  0  0  0  0    0  0  1  1  0    1  0  2  0  0
Initial Vol:   30    0    50     0    0     0     0 1340   190    90  990     0
ApproachDel:      32.2           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.7]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=80]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=2690]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
```


"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #4 Meadowview Road/Manorside Drive

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0 1!	0 0	0	0 0	0 0	0	0 1	1 0	1	0 2	0 0
Initial Vol:	30	0	50	0	0	0	0	1340	190	90	990	0

Major Street Volume: 2610
Minor Approach Volume: 80
Minor Approach Volume Threshold: -46 [less than minimum of 100]

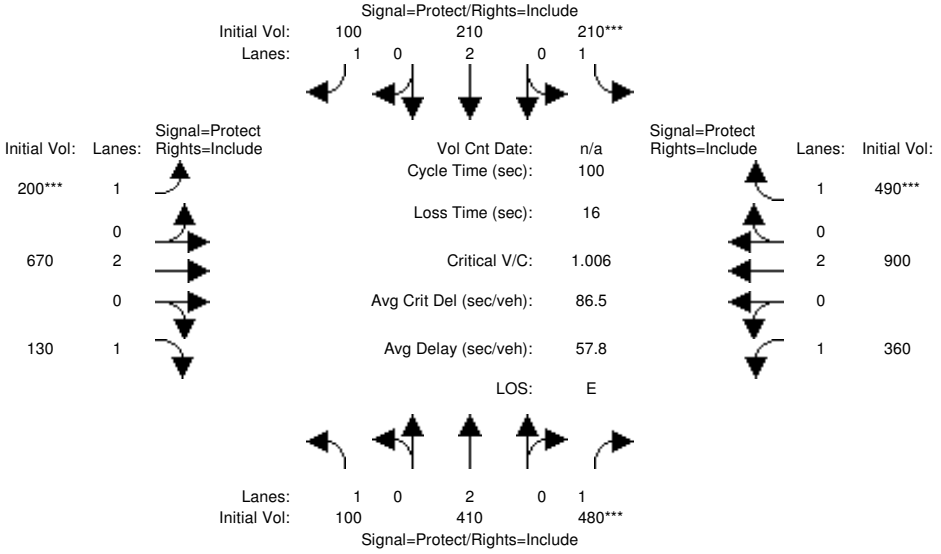
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #5: Meadowview Road/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	100	410	480	210	210	100	200	670	130	360	900	490
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:	100	410	480	210	210	100	200	670	130	360	900	490
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:	100	410	480	210	210	100	200	670	130	360	900	490
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	410	480	210	210	100	200	670	130	360	900	490
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:	100	410	480	210	210	100	200	670	130	360	900	490
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	1769	3538	1583	1769	3538	1583	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.06	0.12	0.30	0.12	0.06	0.06	0.11	0.19	0.08	0.20	0.25	0.31
Crit Moves:			****	****			****					****
Green/Cycle:	0.19	0.30	0.30	0.12	0.23	0.23	0.11	0.20	0.20	0.22	0.31	0.31
Volume/Cap:	0.30	0.38	1.01	1.01	0.26	0.27	1.01	0.93	0.41	0.93	0.83	1.01
Delay/Veh:	35.5	27.8	77.5	107.8	31.5	31.9	109.6	58.6	35.5	68.2	37.4	76.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.5	27.8	77.5	107.8	31.5	31.9	109.6	58.6	35.5	68.2	37.4	76.8
LOS by Move:	D	C	E	F	C	C	F	E	D	E	D	E
HCM2kAvgQ:	3	5	21	11	3	3	11	15	4	15	16	22
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	2	0	1	1	0	2	0	1
Lane Group:	L		T		R	L		T		R	L		T		R	L		T		R
#LnsInGrps:	1		2		1	1		2		1	1		2		1	1		2		1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12		12		12	12		12		12	12		12		12	12		12		12
CrsswalkWid:			8					8					8					8		
% Hev Veh:			2					2					2					2		
Grade:			0%					0%					0%					0%		
Parking/Hr:			No					No					No					No		
Bus Stp/Hr:			0					0					0					0		
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >																			
Cnft Ped/Hr:			0					0					0					0		
ExclusiveRT:			Include					Include					Include					Include		
% RT Prtct:			0					0					0					0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >																			
Signal Type:	< < < < < < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > > > >																			
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #5 Meadowview Road/24th Street


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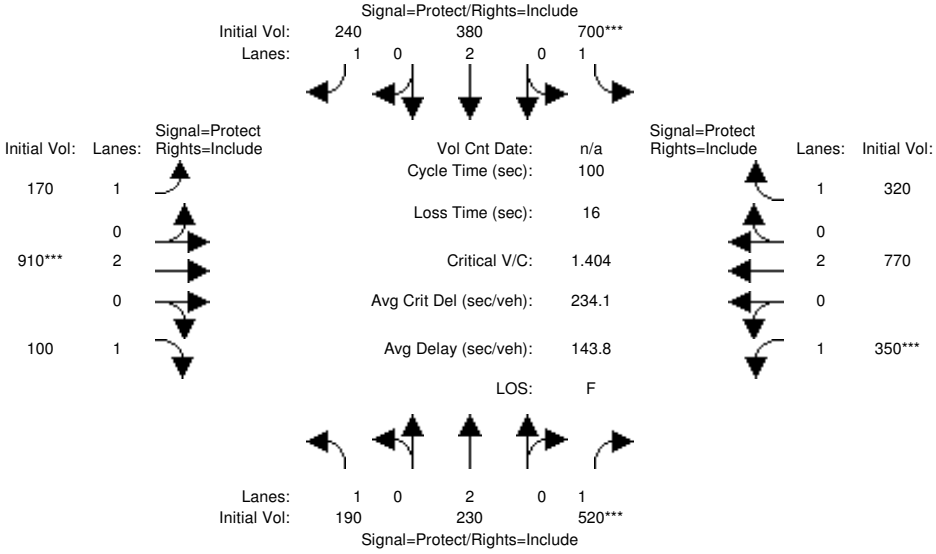
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.19 0.30  0.30  0.12 0.23  0.23  0.11 0.20  0.20  0.22 0.31  0.31
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.4  4.7  13.3   5.8  2.5   2.3   5.6  9.6   3.1   9.8 12.2  13.6
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.4  0.6   7.9   5.2  0.3   0.4   5.1  5.3   0.7   5.3  3.7   8.0
HCM2KQueue:   2.8  5.4  21.2  11.0  2.8   2.6  10.6 14.9   3.8  15.1 15.9  21.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.16  1.18 1.19  1.19  1.18 1.17  1.19  1.17 1.17  1.16
HCM2k70thQ:   3.4  6.4  24.6  13.0  3.4   3.2  12.5 17.4   4.5  17.7 18.5  25.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.57 1.55  1.45  1.51 1.57  1.57  1.51 1.48  1.56  1.48 1.48  1.45
HCM2k85thQ:   4.4  8.3  30.8  16.6  4.5   4.2  16.0 22.1   5.9  22.4 23.5  31.2
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.75 1.71  1.54  1.63 1.75  1.75  1.64 1.59  1.73  1.59 1.58  1.54
HCM2k90thQ:   4.9  9.1  32.7  18.0  5.0   4.6  17.4 23.7   6.6  24.0 25.1  33.2
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.01 1.95  1.68  1.83 2.01  2.02  1.83 1.76  1.99  1.76 1.75  1.68
HCM2k95thQ:   5.7 10.4  35.8  20.1  5.7   5.3  19.5 26.3   7.5  26.6 27.8  36.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.51 2.36  1.90  2.13 2.50  2.52  2.14 2.02  2.45  2.01 1.99  1.89
HCM2k98thQ:   7.1 12.6  40.3  23.5  7.1   6.7  22.8 30.1   9.3  30.5 31.7  40.8
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #5 Meadowview Road/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  21.5 81.0 120.3  52.5 42.9  20.5  50.0  165  28.2  88.4  209 122.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    225.191 pounds
                      36.481 gallons
Carbon Dioxide:      702.595 pounds
Carbon Monoxide:      58.943 pounds
Hydrocarbons:         12.009 pounds
Nitrogen Oxides:       1.673 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    217.121 pounds
                      35.174 gallons
Carbon Dioxide:      677.416 pounds
Carbon Monoxide:      58.304 pounds
Hydrocarbons:         11.881 pounds
Nitrogen Oxides:       1.540 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj PM

Intersection #5: Meadowview Road/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	190	230	520	700	380	240	170	910	100	350	770	320
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:	190	230	520	700	380	240	170	910	100	350	770	320
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:	190	230	520	700	380	240	170	910	100	350	770	320
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	190	230	520	700	380	240	170	910	100	350	770	320
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:	190	230	520	700	380	240	170	910	100	350	770	320
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	1769	3538	1583	1769	3538	1583	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.11	0.07	0.33	0.40	0.11	0.15	0.10	0.26	0.06	0.20	0.22	0.20
Crit Moves:			****	****				****		****		
Green/Cycle:	0.21	0.23	0.23	0.28	0.30	0.30	0.10	0.18	0.18	0.14	0.22	0.22
Volume/Cap:	0.50	0.28	1.40	1.40	0.36	0.50	0.97	1.40	0.34	1.40	0.97	0.90
Delay/Veh:	35.7	31.6	235.7	229.5	27.5	29.6	103.2	232	36.3	247.1	62.6	62.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.7	31.6	235.7	229.5	27.5	29.6	103.2	232	36.3	247.1	62.6	62.2
LOS by Move:	D	C	F	F	C	C	F	F	D	F	E	E
HCM2kAvgQ:	6	3	36	48	5	6	9	33	3	25	17	13
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	1	0	2	0	1	1	0	2	0	1	1	0	2	0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	1	2	1	1	2	1	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #5 Meadowview Road/24th Street


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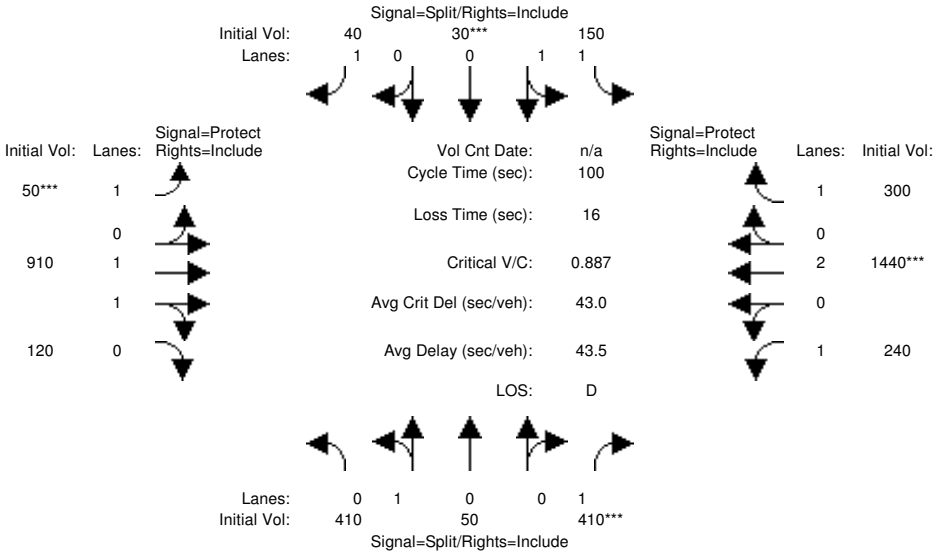
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.21 0.23  0.23  0.28 0.30  0.30  0.10 0.18  0.18  0.14 0.22  0.22
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.6  2.8  14.4  19.4  4.3   5.5   4.7 13.3   2.4   9.7 11.2   8.6
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.0  0.4  21.7  28.3  0.5   1.0   4.3 20.2   0.5  15.4  6.3   4.5
HCM2KQueue:   5.6  3.1  36.1  47.7  4.9   6.5   9.0 33.5   2.9  25.1 17.5  13.1
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.14  1.13 1.19  1.19  1.18 1.14  1.19  1.15 1.16  1.17
HCM2k70thQ:   6.7  3.7  41.2  53.9  5.8   7.7  10.6 38.3   3.5  29.0 20.4  15.4
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.57  1.39  1.36 1.55  1.54  1.52 1.40  1.57  1.43 1.47  1.49
HCM2k85thQ:   8.7  4.9  50.2  65.0  7.6  10.0  13.7 46.8   4.6  36.0 25.7  19.6
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.70 1.74  1.47  1.44 1.71  1.69  1.66 1.47  1.75  1.51 1.57  1.61
HCM2k90thQ:   9.6  5.5  53.0  68.6  8.4  10.9  14.9 49.4   5.1  38.1 27.4  21.1
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.94 2.00  1.58  1.54 1.96  1.92  1.86 1.59  2.01  1.65 1.73  1.79
HCM2k95thQ:  10.9  6.3  57.1  73.6  9.6  12.4  16.7 53.4   5.9  41.5 30.2  23.5
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.35 2.49  1.76  1.73 2.39  2.31  2.20 1.78  2.50  1.84 1.96  2.06
HCM2k98thQ:  13.2  7.8  63.7  82.3 11.7  14.9  19.8 59.5   7.3  46.4 34.3  27.1
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #5 Meadowview Road/24th Street
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  41.8 47.1 148.3 208.0 74.3  49.4  42.4  250  21.8  93.7  191  77.7
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    547.714 pounds
                      88.730 gallons
Carbon Dioxide:     1708.866 pounds
Carbon Monoxide:     149.927 pounds
Hydrocarbons:         32.730 pounds
Nitrogen Oxides:       3.348 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    538.285 pounds
                      87.202 gallons
Carbon Dioxide:     1679.450 pounds
Carbon Monoxide:     149.177 pounds
Hydrocarbons:         32.581 pounds
Nitrogen Oxides:       3.188 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj AM

Intersection #6: Meadowview Road/Detroit Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	7	0	0	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	410	50	410	150	30	40	50	910	120	240	1440	300
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:	410	50	410	150	30	40	50	910	120	240	1440	300
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:	410	50	410	150	30	40	50	910	120	240	1440	300
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	410	50	410	150	30	40	50	910	120	240	1440	300
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:	410	50	410	150	30	40	50	910	120	240	1440	300
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.83	0.94	0.94	0.83	0.93	0.91	0.91	0.93	0.93	0.83
Lanes:	0.89	0.11	1.00	1.67	0.33	1.00	1.00	1.77	0.23	1.00	2.00	1.00
Final Sat.:	1588	194	1583	2979	596	1583	1769	3069	405	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.26	0.26	0.26	0.05	0.05	0.03	0.03	0.30	0.30	0.14	0.41	0.19
Crit Moves:			****		****		****				****	
Green/Cycle:	0.28	0.28	0.28	0.07	0.07	0.07	0.05	0.34	0.34	0.15	0.44	0.44
Volume/Cap:	0.92	0.92	0.93	0.72	0.72	0.36	0.57	0.88	0.88	0.88	0.93	0.43
Delay/Veh:	57.6	57.6	60.2	55.2	55.2	46.4	54.7	39.4	39.4	68.1	36.2	19.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.6	57.6	60.2	55.2	55.2	46.4	54.7	39.4	39.4	68.1	36.2	19.8
LOS by Move:	E	E	E	E	E	D	D	D	D	E	D	B
HCM2kAvgQ:	18	18	16	4	4	2	2	19	19	10	27	7
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	1	0	0	1	1	1	0	0	1	1	0	1	1	0	2	0	1
Lane Group:	LT	LT	R	LT	LT	R	L	RT	RT	L	T	R
#LnsInGrps:	1	1	1	2	2	1	1	2	2	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4	4	xxxx	4	4	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	0.98	0.98	xxxx	xxxx	0.85
LT Adj:	0.96	0.96	xxxxx	0.96	0.96	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.94	0.94	0.83	0.94	0.94	0.83	0.93	0.96	0.96	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.94	0.94	0.83	0.94	0.94	0.83	0.93	0.91	0.91	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #6 Meadowview Road/Detroit Boulevard


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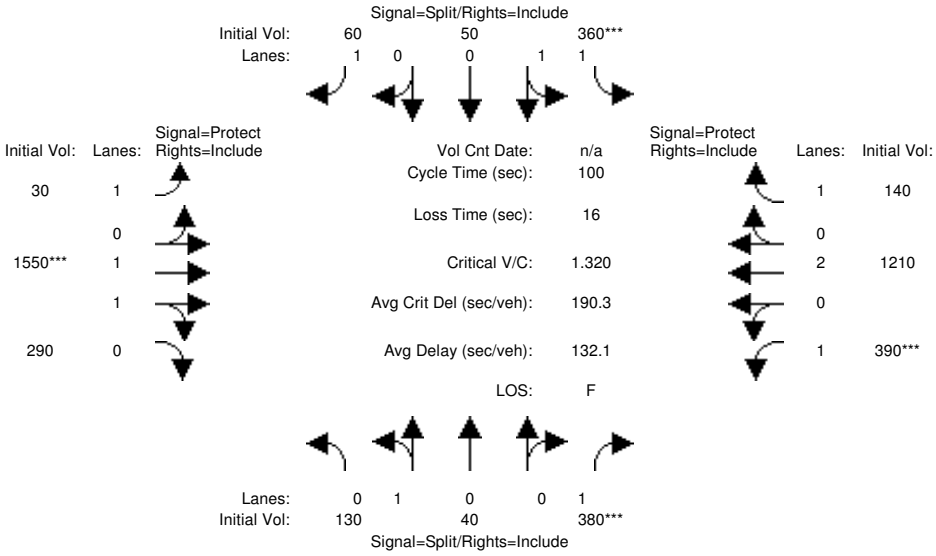
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.28 0.28  0.28  0.07 0.07  0.07  0.05 0.34  0.34  0.15 0.44  0.44
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:          12.4 12.4  11.1   2.4  2.4   1.1   1.4 14.2  14.2   6.5 19.9   5.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           5.5  5.5   5.4   1.8  1.8   0.5   1.1  4.9   4.9   3.8  6.6   0.7
HCM2KQueue:  17.9 17.9  16.4   4.3  4.3   1.6   2.4 19.1  19.1  10.4 26.5   6.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.16 1.16  1.17  1.19 1.19  1.20  1.19 1.16  1.16  1.18 1.15  1.18
HCM2k70thQ:  20.9 20.9  19.2   5.1  5.1   1.9   2.9 22.2  22.2  12.2 30.5   7.7
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.47 1.47  1.47  1.56 1.56  1.58  1.58 1.46  1.46  1.51 1.42  1.54
HCM2k85thQ:  26.3 26.3  24.2   6.6  6.6   2.5   3.8 27.8  27.8  15.7 37.7  10.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.56 1.56  1.58  1.72 1.72  1.77  1.75 1.55  1.55  1.64 1.51  1.69
HCM2k90thQ:  28.0 28.0  25.9   7.3  7.3   2.8   4.2 29.6  29.6  17.0 39.9  11.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.72 1.72  1.74  1.97 1.97  2.05  2.02 1.71  1.71  1.84 1.64  1.92
HCM2k95thQ:  30.9 30.9  28.6   8.4  8.4   3.3   4.9 32.6  32.6  19.0 43.4  12.5
------------|---------------||---------------||---------------||---------------|
98th%Factor: 1.95 1.95  1.98  2.42 2.42  2.58  2.53 1.93  1.93  2.15 1.83  2.31
HCM2k98thQ:  35.0 35.0  32.6  10.3 10.3   4.1   6.1 36.8  36.8  22.3 48.5  15.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  99.5 12.1  99.6  36.7  7.3   9.5  12.2  215  28.3  58.7  340  51.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    178.611 pounds
                      28.935 gallons
Carbon Dioxide:      557.266 pounds
Carbon Monoxide:      45.822 pounds
Hydrocarbons:          9.024 pounds
Nitrogen Oxides:       1.432 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    170.759 pounds
                      27.663 gallons
Carbon Dioxide:      532.769 pounds
Carbon Monoxide:      45.200 pounds
Hydrocarbons:          8.900 pounds
Nitrogen Oxides:       1.303 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #6: Meadowview Road/Detroit Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	7	0	0	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	130	40	380	360	50	60	30	1550	290	390	1210	140
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:	130	40	380	360	50	60	30	1550	290	390	1210	140
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:	130	40	380	360	50	60	30	1550	290	390	1210	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	130	40	380	360	50	60	30	1550	290	390	1210	140
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:	130	40	380	360	50	60	30	1550	290	390	1210	140
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.83	0.94	0.94	0.83	0.93	0.91	0.91	0.93	0.93	0.83
Lanes:	0.76	0.24	1.00	1.76	0.24	1.00	1.00	1.68	0.32	1.00	2.00	1.00
Final Sat.:	1371	422	1583	3133	435	1583	1769	2909	544	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.24	0.11	0.11	0.04	0.02	0.53	0.53	0.22	0.34	0.09
Crit Moves:			****	****				****		****		
Green/Cycle:	0.18	0.18	0.18	0.09	0.09	0.09	0.07	0.40	0.40	0.17	0.50	0.50
Volume/Cap:	0.52	0.52	1.32	1.32	1.32	0.44	0.23	1.32	1.32	1.32	0.69	0.18
Delay/Veh:	38.5	38.5	207.0	210.3	210	45.5	44.7	179	178.7	207.3	20.3	13.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.5	38.5	207.0	210.3	210	45.5	44.7	179	178.7	207.3	20.3	13.9
LOS by Move:	D	D	F	F	F	D	D	F	F	F	C	B
HCM2kAvgQ:	5	5	25	15	15	2	1	60	60	26	16	2
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	1	0	0	1	1	1	0	0	1	1	0	1	0	2	0	1
Lane Group:	LT		LT	R	LT		LT	R	L	RT	RT	L	T	R
#LnsInGrps:	1		1	1	2		2	1	1	2	2	1	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12		12	12	12		12	12	12	12	12	12
CrsswalkWid:	8				8			8			8	
% Hev Veh:	2				2			2			2	
Grade:	0%				0%			0%			0%	
Parking/Hr:	No				No			No			No	
Bus Stp/Hr:	0				0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0				0			0			0	
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0				0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	4		4	xxxx	4	4	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	0.98	0.98	xxxx	xxxx	0.85
LT Adj:	0.96	0.96	xxxxx	0.96	0.96	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.94	0.94	0.83	0.94	0.94	0.83	0.93	0.96	0.96	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Fnl Sat Adj:	0.94	0.94	0.83	0.94	0.94	0.83	0.93	0.91	0.91	0.93	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #6 Meadowview Road/Detroit Boulevard


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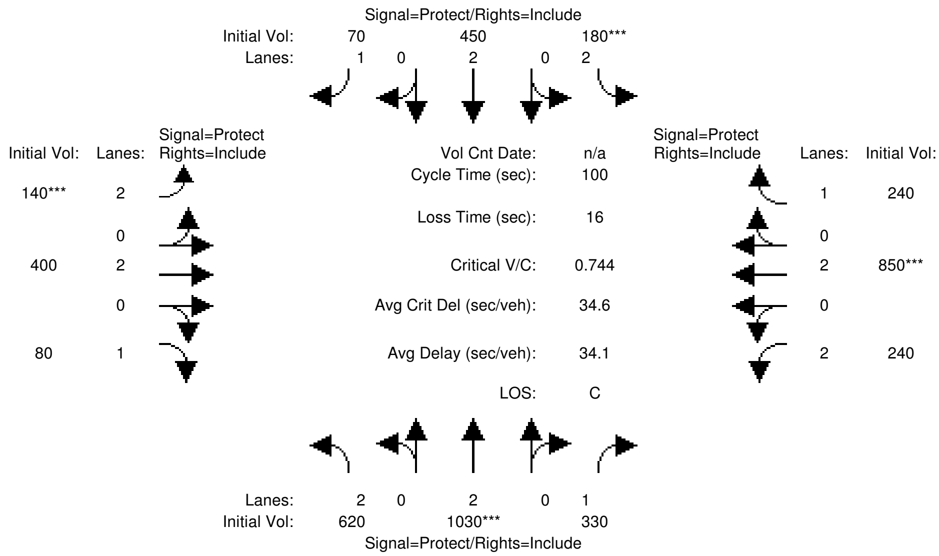
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.18 0.18  0.18  0.09 0.09  0.09  0.07 0.40  0.40  0.17 0.50  0.50
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.3  4.3  10.6   5.7  5.7   1.6   0.8 26.9  26.9  10.8 13.5   2.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.0  1.0  14.7   9.0  9.0   0.7   0.3 33.0  33.0  15.0  2.1   0.2
HCM2KQueue:   5.3  5.3  25.3  14.7 14.7   2.3   1.1 59.9  59.9  25.9 15.6   2.4
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.15  1.17 1.17  1.19  1.20 1.12  1.12  1.15 1.17  1.19
HCM2k70thQ:   6.3  6.3  29.2  17.2 17.2   2.7   1.3 67.2  67.2  29.8 18.2   2.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.55  1.43  1.48 1.48  1.58  1.59 1.34  1.34  1.43 1.48  1.58
HCM2k85thQ:   8.2  8.2  36.1  21.9 21.9   3.6   1.7 80.3  80.3  36.9 23.0   3.7
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.71 1.71  1.51  1.59 1.59  1.76  1.78 1.42  1.42  1.51 1.58  1.76
HCM2k90thQ:   9.0  9.0  38.3  23.4 23.4   4.0   1.9 85.0  85.0  39.1 24.7   4.1
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.95 1.95  1.65  1.76 1.76  2.03  2.06 1.52  1.52  1.64 1.75  2.03
HCM2k95thQ:  10.3 10.3  41.6  26.0 26.0   4.7   2.2 91.1  91.1  42.5 27.3   4.8
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.37 2.37  1.84  2.02 2.02  2.54  2.62 1.71  1.71  1.84 2.00  2.53
HCM2k98thQ:  12.5 12.5  46.6  29.8 29.8   5.8   2.8  102 102.4  47.5 31.2   6.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #6 Meadowview Road/Detroit Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  29.4  9.0 102.3  92.8 12.9  14.2   7.1  495  92.5 104.2  231  19.3
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    482.953 pounds
                      78.238 gallons
Carbon Dioxide:     1506.813 pounds
Carbon Monoxide:     131.784 pounds
Hydrocarbons:         28.624 pounds
Nitrogen Oxides:       3.011 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    473.956 pounds
                      76.781 gallons
Carbon Dioxide:     1478.744 pounds
Carbon Monoxide:     131.066 pounds
Hydrocarbons:         28.482 pounds
Nitrogen Oxides:       2.857 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #7: Mack Road/Franklin Boulevard




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      620 1030   330   180  450    70   140  400    80   240  850   240
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:  620 1030   330   180  450    70   140  400    80   240  850   240
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:   620 1030   330   180  450    70   140  400    80   240  850   240
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  620 1030   330   180  450    70   140  400    80   240  850   240
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:  620 1030   330   180  450    70   140  400    80   240  850   240
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  3432 3538  1583  3432 3538  1583  3432 3538  1583  3432 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.18 0.29  0.21  0.05 0.13  0.04  0.04 0.11  0.05  0.07 0.24  0.15
Crit Moves:       ****        ****              ****                  ****
Green/Cycle: 0.27 0.39  0.39  0.07 0.19  0.19  0.05 0.23  0.23  0.14 0.32  0.32
Volume/Cap:  0.67 0.74  0.53  0.74 0.67  0.23  0.74 0.48  0.22  0.48 0.74  0.47
Delay/Veh:   34.3 28.3  24.3  57.4 40.0  34.6  61.3 33.6  31.2  40.1 32.8  27.7
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  34.3 28.3  24.3  57.4 40.0  34.6  61.3 33.6  31.2  40.1 32.8  27.7
LOS by Move:   C    C     C     E    D     C     E    C     C     D    C     C
HCM2kAvgQ:     10   16     8     4    8     2     4    6     2     4   14     6
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        2  0  2  0  1    2  0  2  0  1    2  0  2  0  1    2  0  2  0  1
Lane Group:    L    T     R     L    T     R     L    T     R     L    T     R
#LnsInGrps:     2    2     1     2    2     1     2    2     1     2    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                 8                 8
% Hev Veh:           2                2                 2                 2
Grade:              0%               0%                0%                0%
Parking/Hr:         No               No                No                No
Bus Stp/Hr:          0                0                 0                 0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                 0                 0
ExclusiveRT:     Include          Include           Include           Include
% RT Prtct:          0                0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 0.97 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00
Fnl Sat Adj: 0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
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*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.27 0.39  0.39  0.07 0.19  0.19  0.05 0.23  0.23  0.14 0.32  0.32
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           7.9 12.9   7.0   2.5  6.1   1.6   2.0  5.1   1.8   3.2 11.1   5.3
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.8  2.6   1.1   1.9  1.8   0.3   1.8  0.9   0.3   0.9  2.6   0.9
HCM2KQueue:   9.7 15.5   8.2   4.5  7.9   1.9   3.8  6.0   2.1   4.1 13.6   6.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.17  1.18  1.19 1.18  1.20  1.19 1.19  1.19  1.19 1.17  1.19
HCM2k70thQ:  11.5 18.1   9.6   5.3  9.3   2.3   4.5  7.1   2.5   4.8 16.0   7.3
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.48  1.53  1.56 1.53  1.58  1.56 1.55  1.58  1.56 1.49  1.54
HCM2k85thQ:  14.8 23.0  12.5   7.0 12.1   3.1   5.9  9.2   3.3   6.3 20.3   9.5
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.65 1.58  1.67  1.72 1.67  1.76  1.73 1.70  1.76  1.73 1.60  1.69
HCM2k90thQ:  16.0 24.6  13.6   7.7 13.2   3.4   6.6 10.1   3.6   7.0 21.8  10.5
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.85 1.75  1.88  1.97 1.89  2.04  1.99 1.93  2.03  1.98 1.78  1.93
HCM2k95thQ:  18.0 27.2  15.3   8.8 14.9   4.0   7.6 11.5   4.2   8.0 24.3  11.9
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.17 2.00  2.23  2.41 2.25  2.56  2.45 2.33  2.55  2.43 2.05  2.32
HCM2k98thQ:  21.1 31.1  18.2  10.8 17.7   5.0   9.3 13.9   5.3   9.9 28.0  14.4
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 137.9  221  63.4  44.1  104  14.8  34.5 86.4  16.1  55.2  189  47.9
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    168.327 pounds
                      27.269 gallons
Carbon Dioxide:      525.180 pounds
Carbon Monoxide:      42.358 pounds
Hydrocarbons:          8.079 pounds
Nitrogen Oxides:       1.423 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    159.694 pounds
                      25.870 gallons
Carbon Dioxide:      498.245 pounds
Carbon Monoxide:      41.677 pounds
Hydrocarbons:          7.942 pounds
Nitrogen Oxides:       1.283 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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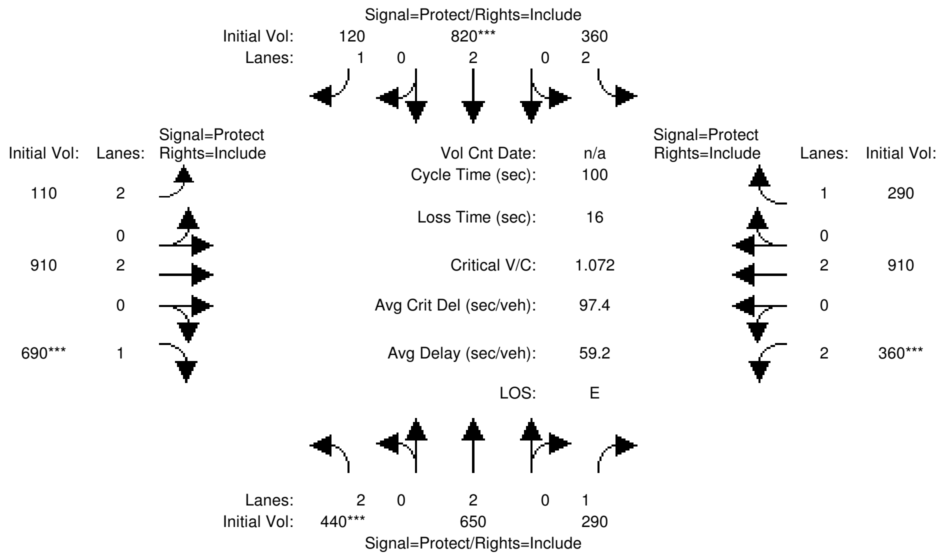
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj PM

Intersection #7: Mack Road/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	440	650	290	360	820	120	110	910	690	360	910	290
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:	440	650	290	360	820	120	110	910	690	360	910	290
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:	440	650	290	360	820	120	110	910	690	360	910	290
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	440	650	290	360	820	120	110	910	690	360	910	290
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:	440	650	290	360	820	120	110	910	690	360	910	290
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3432	3538	1583	3432	3538	1583	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.13	0.18	0.18	0.10	0.23	0.08	0.03	0.26	0.44	0.10	0.26	0.18
Crit Moves:	****				****				****	****		
Green/Cycle:	0.12	0.21	0.21	0.12	0.22	0.22	0.08	0.41	0.41	0.10	0.42	0.42
Volume/Cap:	1.07	0.86	0.86	0.86	1.07	0.35	0.39	0.63	1.07	1.07	0.61	0.43
Delay/Veh:	109.1	47.7	56.9	59.3	92.9	33.9	44.4	24.6	86.2	114.8	23.2	20.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	109.1	47.7	56.9	59.3	92.9	33.9	44.4	24.6	86.2	114.8	23.2	20.9
LOS by Move:	F	D	E	E	F	C	D	C	F	F	C	C
HCM2kAvgQ:	13	13	11	8	21	3	2	12	32	11	12	6
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	2 0	2 0	1	2 0	2 0	1	2 0	2 0	1	2 0	2 0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	2	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < Actuated > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #7 Mack Road/Franklin Boulevard


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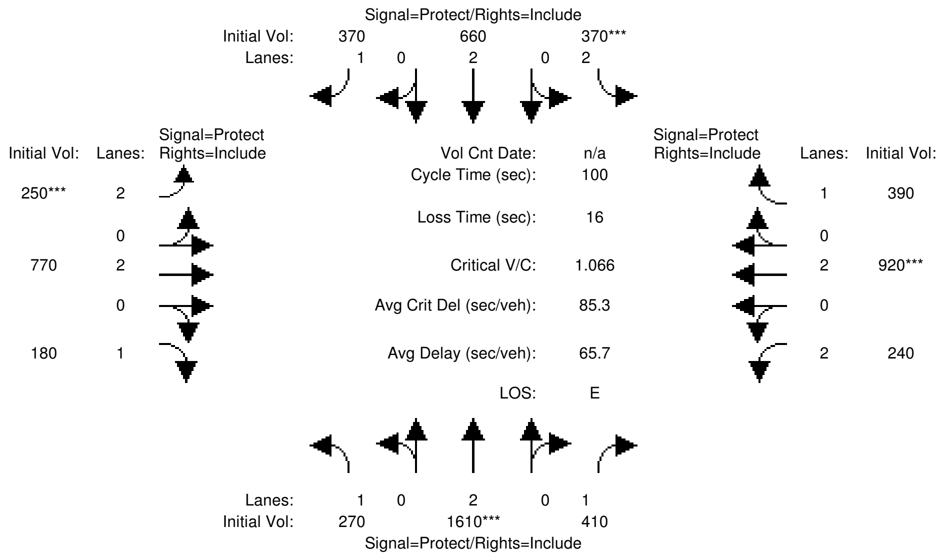
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.12 0.21  0.21  0.12 0.22  0.22  0.08 0.41  0.41  0.10 0.42  0.42
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.3  9.2   7.8   5.1 12.0   2.8   1.5 10.6  19.2   5.2 10.3   5.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           6.4  3.9   3.7   3.3  9.4   0.5   0.6  1.6  12.6   5.7  1.5   0.8
HCM2KQueue:  12.7 13.1  11.5   8.3 21.4   3.4   2.1 12.3  31.8  10.8 11.8   6.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.17 1.17  1.18  1.18 1.16  1.19  1.19 1.17  1.15  1.18 1.17  1.19
HCM2k70thQ:  14.9 15.3  13.5   9.9 24.8   4.0   2.5 14.4  36.4  12.7 13.9   7.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.50 1.49  1.50  1.53 1.45  1.57  1.58 1.50  1.40  1.51 1.50  1.54
HCM2k85thQ:  19.0 19.5  17.3  12.7 30.9   5.3   3.3 18.4  44.7  16.3 17.8   9.9
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.61 1.61  1.63  1.66 1.54  1.74  1.76 1.62  1.48  1.63 1.62  1.69
HCM2k90thQ:  20.4 21.0  18.7  13.9 32.9   5.8   3.7 19.8  47.1  17.7 19.2  10.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.80 1.79  1.82  1.88 1.68  2.00  2.03 1.80  1.60  1.83 1.81  1.92
HCM2k95thQ:  22.8 23.4  20.9  15.7 36.0   6.7   4.3 22.1  51.0  19.8 21.5  12.4
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.08 2.07  2.11  2.23 1.89  2.47  2.55 2.09  1.79  2.14 2.10  2.31
HCM2k98thQ:  26.3 27.0  24.3  18.6 40.5   8.3   5.4 25.6  56.8  23.1 24.9  14.9
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #7 Mack Road/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 111.1  157  69.8  88.3  209  25.4  26.1  182 181.5  90.7  177  51.3
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    319.978 pounds
                      51.836 gallons
Carbon Dioxide:      998.331 pounds
Carbon Monoxide:      83.897 pounds
Hydrocarbons:         17.151 pounds
Nitrogen Oxides:       2.352 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    308.763 pounds
                      50.020 gallons
Carbon Dioxide:      963.342 pounds
Carbon Monoxide:      83.010 pounds
Hydrocarbons:         16.974 pounds
Nitrogen Oxides:       2.167 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #8: Cosumnes River Boulevard/Franklin Boulevard




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     270 1610   410   370  660   370   250  770   180   240  920   390
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:  270 1610   410   370  660   370   250  770   180   240  920   390
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:   270 1610   410   370  660   370   250  770   180   240  920   390
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  270 1610   410   370  660   370   250  770   180   240  920   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:  270 1610   410   370  660   370   250  770   180   240  920   390
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
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.:  1769 3538  1583  3432 3538  1583  3432 3538  1583  3432 3538  1583
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.15 0.46  0.26  0.11 0.19  0.23  0.07 0.22  0.11  0.07 0.26  0.25
Crit Moves:       ****        ****             ****                  ****
Green/Cycle: 0.21 0.43  0.43  0.10 0.32  0.32  0.07 0.24  0.24  0.08 0.24  0.24
Volume/Cap:  0.73 1.07  0.61  1.07 0.58  0.73  1.07 0.92  0.48  0.92 1.07  1.01
Delay/Veh:   44.3 71.8  23.8 112.0 29.3  35.7 124.0 52.6  33.9  81.3 87.8  86.3
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  44.3 71.8  23.8 112.0 29.3  35.7 124.0 52.6  33.9  81.3 87.8  86.3
LOS by Move:   D    E     C     F    C     D     F    D     C     F    F     F
HCM2kAvgQ:      9   38    10    11    9    12     8   16     5     7   23    18
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  2  0  1    2  0  2  0  1    2  0  2  0  1    2  0  2  0  1
Lane Group:    L    T     R     L    T     R     L    T     R     L    T     R
#LnsInGrps:     1    2     1     2    2     1     2    2     1     2    2     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00  xxxx xxxx  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85  xxxx xxxx  0.85
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83  0.93 0.98  0.83
Usr Sat Adj: 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 Sat Adj: 1.00 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00  0.97 0.95  1.00
Fnl Sat Adj: 0.93 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83  0.90 0.93  0.83
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                         2000 HCM Operations Method
                           Base Volume Alternative
********************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
```



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*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.21 0.43  0.43  0.10 0.32  0.32  0.07 0.24  0.24  0.08 0.24  0.24
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           7.0 23.5   8.8   5.3  8.1   9.1   3.6 11.0   4.3   3.4 13.5  10.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           2.3 14.1   1.5   5.7  1.3   2.4   4.5  5.3   0.9   3.3  9.9   7.2
HCM2KQueue:   9.3 37.6  10.3  11.0  9.4  11.5   8.1 16.3   5.2   6.7 23.3  18.1
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.14  1.18  1.18 1.18  1.17  1.18 1.17  1.19  1.18 1.16  1.16
HCM2k70thQ:  11.0 42.9  12.1  12.9 11.1  13.5   9.6 19.0   6.2   8.0 27.0  21.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.39  1.51  1.51 1.52  1.50  1.53 1.47  1.55  1.54 1.44  1.46
HCM2k85thQ:  14.1 52.2  15.6  16.6 14.3  17.3  12.4 24.0   8.1  10.4 33.6  26.5
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.65 1.46  1.64  1.63 1.65  1.62  1.67 1.58  1.71  1.69 1.52  1.56
HCM2k90thQ:  15.4 55.0  16.9  17.9 15.5  18.7  13.5 25.7   8.9  11.4 35.6  28.2
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.86 1.57  1.84  1.83 1.86  1.82  1.88 1.74  1.95  1.91 1.66  1.72
HCM2k95thQ:  17.3 59.3  18.9  20.0 17.5  20.9  15.3 28.4  10.1  12.9 38.8  31.1
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.19 1.76  2.15  2.13 2.18  2.11  2.24 1.99  2.37  2.30 1.87  1.95
HCM2k98thQ:  20.4 66.1  22.2  23.4 20.6  24.3  18.2 32.3  12.3  15.5 43.6  35.2
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  63.0  423  79.3  93.2  138  82.2  62.8  188  38.8  59.6  235  97.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    375.803 pounds
                      60.880 gallons
Carbon Dioxide:     1172.506 pounds
Carbon Monoxide:      99.145 pounds
Hydrocarbons:         20.448 pounds
Nitrogen Oxides:       2.718 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    363.515 pounds
                      58.889 gallons
Carbon Dioxide:     1134.167 pounds
Carbon Monoxide:      98.170 pounds
Hydrocarbons:         20.253 pounds
Nitrogen Oxides:       2.513 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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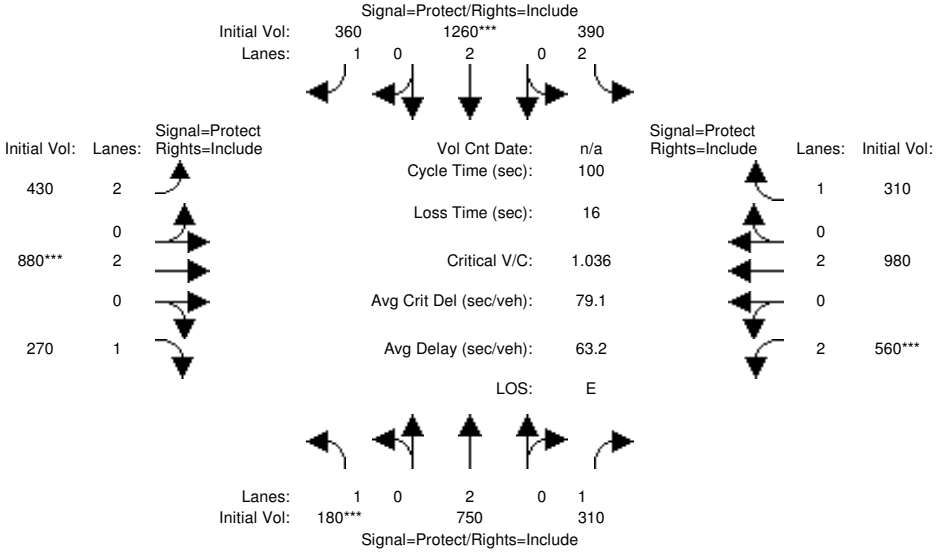
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #8: Cosumnes River Boulevard/Franklin Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	180	750	310	390	1260	360	430	880	270	560	980	310
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:	180	750	310	390	1260	360	430	880	270	560	980	310
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:	180	750	310	390	1260	360	430	880	270	560	980	310
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	180	750	310	390	1260	360	430	880	270	560	980	310
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:	180	750	310	390	1260	360	430	880	270	560	980	310
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
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.:	1769	3538	1583	3432	3538	1583	3432	3538	1583	3432	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.10	0.21	0.20	0.11	0.36	0.23	0.13	0.25	0.17	0.16	0.28	0.20
Crit Moves:	****				****			****			****	
Green/Cycle:	0.10	0.29	0.29	0.15	0.34	0.34	0.12	0.24	0.24	0.16	0.27	0.27
Volume/Cap:	1.04	0.74	0.68	0.74	1.04	0.66	1.01	1.04	0.71	1.04	1.01	0.72
Delay/Veh:	123.0	35.0	35.7	45.7	68.2	30.9	90.3	78.4	40.9	90.3	68.0	38.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	123.0	35.0	35.7	45.7	68.2	30.9	90.3	78.4	40.9	90.3	68.0	38.4
LOS by Move:	F	D	D	D	E	C	F	E	D	F	E	D
HCM2kAvgQ:	10	12	10	8	29	10	12	22	9	15	23	10
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	2	0	2	0	1	2	0	2	0	1	2	0	2	0	1
Lane Group:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
#LnsInGrps:	1	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1	2	2	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	xxxx	0.85
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Fnl Sat Adj:	0.93	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83	0.90	0.93	0.83
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #8 Cosumnes River Boulevard/Franklin Boulevard


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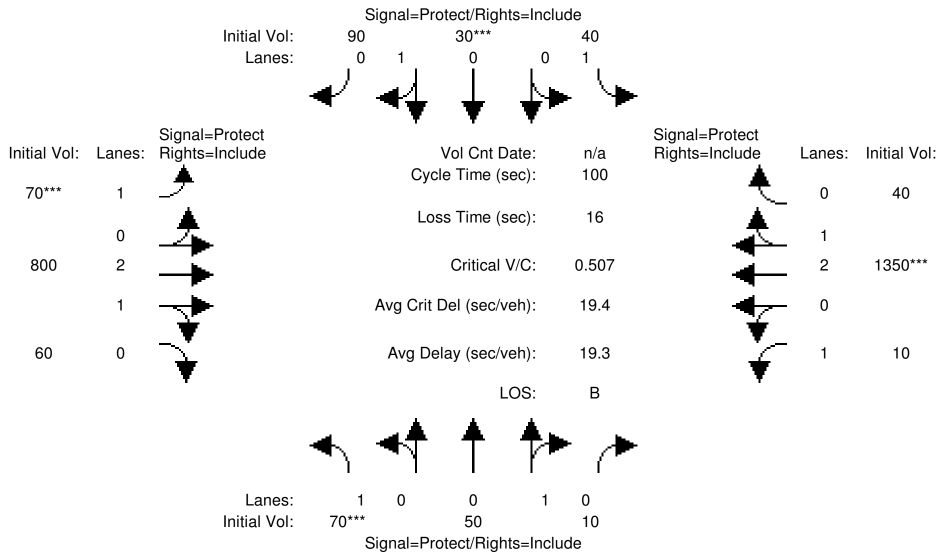
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.10 0.29  0.29  0.15 0.34  0.34  0.12 0.24  0.24  0.16 0.27  0.27
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           5.0  9.9   7.6   5.3 18.4   8.5   6.2 12.9   6.9   8.0 14.3   7.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           5.1  2.5   1.9   2.2 10.6   1.8   5.4  8.7   2.1   6.7  8.4   2.2
HCM2KQueue:  10.1 12.4   9.6   7.6 29.1  10.3  11.6 21.5   9.0  14.7 22.7  10.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.17  1.18  1.18 1.15  1.18  1.17 1.16  1.18  1.17 1.16  1.18
HCM2k70thQ:  11.9 14.5  11.3   8.9 33.4  12.1  13.6 24.9  10.6  17.2 26.3  11.7
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.51 1.50  1.52  1.53 1.41  1.51  1.50 1.45  1.52  1.48 1.44  1.52
HCM2k85thQ:  15.4 18.5  14.5  11.6 41.1  15.6  17.4 31.1  13.7  21.8 32.7  15.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.64 1.62  1.65  1.67 1.49  1.64  1.62 1.54  1.66  1.59 1.53  1.64
HCM2k90thQ:  16.6 20.0  15.7  12.7 43.4  16.9  18.8 33.1  14.9  23.4 34.7  16.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.84 1.80  1.85  1.89 1.62  1.84  1.82 1.68  1.86  1.77 1.67  1.84
HCM2k95thQ:  18.7 22.3  17.7  14.3 47.1  18.9  21.0 36.2  16.8  25.9 37.9  18.4
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.16 2.09  2.18  2.26 1.81  2.15  2.11 1.89  2.20  2.02 1.87  2.16
HCM2k98thQ:  21.9 25.8  20.8  17.1 52.5  22.2  24.4 40.7  19.8  29.7 42.6  21.6
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #8 Cosumnes River Boulevard/Franklin Boulevard
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  45.2  169  68.6  93.0  321  76.4 107.7  222  61.8 140.9  246  70.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    378.749 pounds
                      61.357 gallons
Carbon Dioxide:     1181.697 pounds
Carbon Monoxide:      99.690 pounds
Hydrocarbons:         20.481 pounds
Nitrogen Oxides:       2.767 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    365.997 pounds
                      59.292 gallons
Carbon Dioxide:     1141.911 pounds
Carbon Monoxide:      98.678 pounds
Hydrocarbons:         20.279 pounds
Nitrogen Oxides:       2.554 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj AM

Intersection #14: Cosumnes River Boulevard/Street A




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5     7     0     5     7     0     5     7     0     5     7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      70    50    10    40    30    90    70   800    60    10  1350    40
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:   70    50    10    40    30    90    70   800    60    10  1350    40
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:    70    50    10    40    30    90    70   800    60    10  1350    40
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:   70    50    10    40    30    90    70   800    60    10  1350    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:   70    50    10    40    30    90    70   800    60    10  1350    40
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.96  0.96  0.93 0.87  0.87  0.93 0.88  0.88  0.93 0.89  0.89
Lanes:       1.00 0.83  0.17  1.00 0.25  0.75  1.00 2.79  0.21  1.00 2.91  0.09
Final Sat.:  1769 1513   303  1769  413  1240  1769 4681   351  1769 4917   146
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.03  0.03  0.02 0.07  0.07  0.04 0.17  0.17  0.01 0.27  0.27
Crit Moves:  ****                  ****        ****                   ****
Green/Cycle: 0.08 0.13  0.13  0.09 0.14  0.14  0.08 0.48  0.48  0.14 0.54  0.54
Volume/Cap:  0.51 0.26  0.26  0.25 0.51  0.51  0.51 0.36  0.36  0.04 0.51  0.51
Delay/Veh:   47.3 39.8  39.8  43.0 41.4  41.4  47.3 16.5  16.5  37.2 14.7  14.7
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  47.3 39.8  39.8  43.0 41.4  41.4  47.3 16.5  16.5  37.2 14.7  14.7
LOS by Move:   D    D     D     D    D     D     D    B     B     D    B     B
HCM2kAvgQ:      3    2     2     1    4     4     3    6     6     0   10    10
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  0  1  0    1  0  0  1  0    1  0  2  1  0    1  0  2  1  0
Lane Group:    L   RT     RT     L   RT     RT     L   RT     RT     L   RT     RT
#LnsInGrps:     1    1     1     1    1     1     1    3     3     1    3     3
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx 0.98  0.98  xxxx 0.89  0.89  xxxx 0.99  0.99  xxxx 1.00  1.00
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.96  0.96  0.93 0.87  0.87  0.93 0.97  0.97  0.93 0.98  0.98
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.91  0.91  1.00 0.91  0.91
Fnl Sat Adj: 0.93 0.96  0.96  0.93 0.87  0.87  0.93 0.88  0.88  0.93 0.89  0.89
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #14 Cosumnes River Boulevard/Street A
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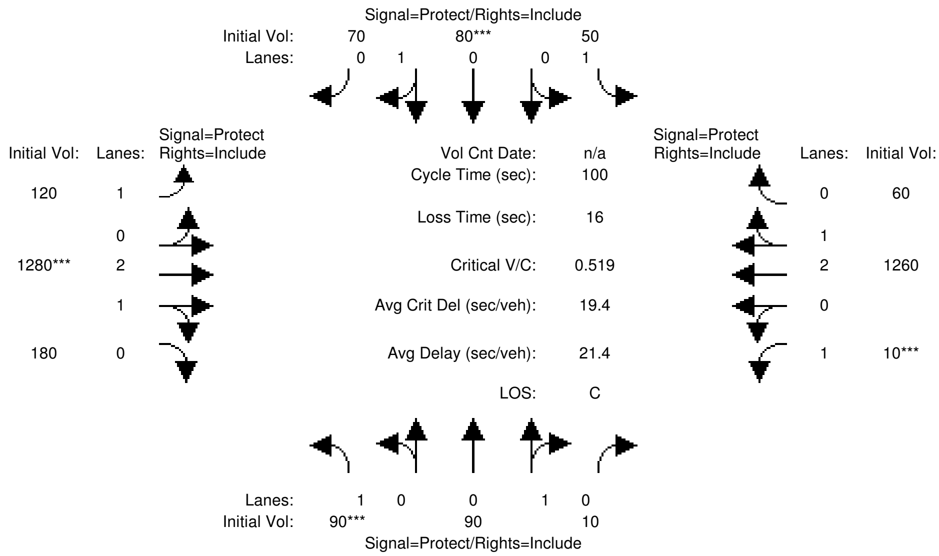
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.08 0.13  0.13  0.09 0.14  0.14  0.08 0.48  0.48  0.14 0.54  0.54
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.9  1.5   1.5   1.0  3.1   3.1   1.9  5.5   5.5   0.2  8.9   8.9
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.9  0.3   0.3   0.3  1.0   1.0   0.9  0.6   0.6   0.0  1.0   1.0
HCM2KQueue:   2.8  1.8   1.8   1.4  4.0   4.0   2.8  6.1   6.1   0.3 10.0  10.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.20  1.20  1.20 1.19  1.19  1.19 1.19  1.19  1.20 1.18  1.18
HCM2k70thQ:   3.3  2.2   2.2   1.6  4.8   4.8   3.3  7.2   7.2   0.3 11.7  11.7
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.57 1.58  1.58  1.59 1.56  1.56  1.57 1.55  1.55  1.60 1.52  1.52
HCM2k85thQ:   4.4  2.9   2.9   2.1  6.3   6.3   4.4  9.3   9.3   0.5 15.1  15.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.75 1.76  1.76  1.77 1.73  1.73  1.75 1.70  1.70  1.79 1.64  1.64
HCM2k90thQ:   4.9  3.2   3.2   2.4  7.0   7.0   4.9 10.3  10.3   0.5 16.4  16.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.01 2.04  2.04  2.06 1.98  1.98  2.01 1.93  1.93  2.09 1.84  1.84
HCM2k95thQ:   5.6  3.8   3.8   2.8  8.0   8.0   5.6 11.7  11.7   0.6 18.4  18.4
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.51 2.57  2.57  2.60 2.43  2.43  2.51 2.33  2.33  2.68 2.16  2.16
HCM2k98thQ:   7.0  4.7   4.7   3.5  9.8   9.8   7.0 14.1  14.1   0.8 21.6  21.6
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #14 Cosumnes River Boulevard/Street A
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  16.8 11.3   2.3   9.3  6.9  20.8  16.8  126   9.4   2.2  214   6.3
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     66.902 pounds
                      10.838 gallons
Carbon Dioxide:      208.734 pounds
Carbon Monoxide:      15.984 pounds
Hydrocarbons:          2.797 pounds
Nitrogen Oxides:       0.617 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     62.267 pounds
                      10.087 gallons
Carbon Dioxide:      194.272 pounds
Carbon Monoxide:      15.623 pounds
Hydrocarbons:          2.723 pounds
Nitrogen Oxides:       0.548 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #14: Cosumnes River Boulevard/Street A




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5    7     0     5    7     0     5    7     0     5    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      90   90    10    50   80    70   120 1280   180    10 1260    60
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   90    10    50   80    70   120 1280   180    10 1260    60
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   90    10    50   80    70   120 1280   180    10 1260    60
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   90   90    10    50   80    70   120 1280   180    10 1260    60
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   90    10    50   80    70   120 1280   180    10 1260    60
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.97  0.97  0.93 0.91  0.91  0.93 0.88  0.88  0.93 0.89  0.89
Lanes:       1.00 0.90  0.10  1.00 0.53  0.47  1.00 2.63  0.37  1.00 2.86  0.14
Final Sat.:  1769 1651   183  1769  924   808  1769 4376   615  1769 4818   229
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.05 0.05  0.05  0.03 0.09  0.09  0.07 0.29  0.29  0.01 0.26  0.26
Crit Moves:  ****                  ****              ****        ****
Green/Cycle: 0.09 0.15  0.15  0.11 0.16  0.16  0.12 0.54  0.54  0.05 0.47  0.47
Volume/Cap:  0.54 0.37  0.37  0.27 0.54  0.54  0.56 0.54  0.54  0.11 0.56  0.56
Delay/Veh:   47.0 39.3  39.3  42.0 40.9  40.9  44.8 15.4  15.4  46.0 19.6  19.6
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  47.0 39.3  39.3  42.0 40.9  40.9  44.8 15.4  15.4  46.0 19.6  19.6
LOS by Move:   D    D     D     D    D     D     D    B     B     D    B     B
HCM2kAvgQ:      3    3     3     2    5     5     4   11    11     0   11    11
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:         1  0  0  1  0    1  0  0  1  0    1  0  2  1  0    1  0  2  1  0
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L   RT     RT
#LnsInGrps:     1    1     1     1    1     1     1    3     3     1    3     3
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx 0.99  0.99  xxxx 0.93  0.93  xxxx 0.98  0.98  xxxx 0.99  0.99
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.97  0.97  0.93 0.91  0.91  0.93 0.96  0.96  0.93 0.97  0.97
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.91  0.91  1.00 0.91  0.91
Fnl Sat Adj: 0.93 0.97  0.97  0.93 0.91  0.91  0.93 0.88  0.88  0.93 0.89  0.89
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                         2000 HCM Operations Method
                           Base Volume Alternative
********************************************************************************
Intersection #14 Cosumnes River Boulevard/Street A
```

```
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.09 0.15  0.15  0.11 0.16  0.16  0.12 0.54  0.54  0.05 0.47  0.47
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.4  2.5   2.5   1.3  3.8   3.8   3.1  9.7   9.7   0.3  9.7   9.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.1  0.6   0.6   0.4  1.1   1.1   1.2  1.2   1.2   0.1  1.2   1.2
HCM2KQueue:   3.5  3.1   3.1   1.6  5.0   5.0   4.3 10.9  10.9   0.4 10.9  10.9
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.19  1.19  1.20 1.19  1.19  1.19 1.18  1.18  1.20 1.18  1.18
HCM2k70thQ:   4.1  3.7   3.7   2.0  5.9   5.9   5.1 12.8  12.8   0.5 12.9  12.9
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.57 1.57  1.57  1.58 1.55  1.55  1.56 1.51  1.51  1.60 1.51  1.51
HCM2k85thQ:   5.4  4.8   4.8   2.6  7.7   7.7   6.7 16.4  16.4   0.6 16.5  16.5
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.74 1.74  1.74  1.77 1.71  1.71  1.72 1.63  1.63  1.79 1.63  1.63
HCM2k90thQ:   6.0  5.4   5.4   2.9  8.5   8.5   7.4 17.8  17.8   0.7 17.9  17.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.00 2.01  2.01  2.05 1.96  1.96  1.97 1.83  1.83  2.09 1.83  1.83
HCM2k95thQ:   6.9  6.2   6.2   3.4  9.7   9.7   8.5 19.9  19.9   0.8 20.0  20.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.47 2.49  2.49  2.58 2.38  2.38  2.42 2.13  2.13  2.67 2.13  2.13
HCM2k98thQ:   8.5  7.7   7.7   4.2 11.8  11.8  10.4 23.2  23.2   1.0 23.3  23.3
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #14 Cosumnes River Boulevard/Street A
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  21.5 20.3   2.3  11.5 18.4  16.1  28.3  209  29.4   2.4  228  10.8
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     89.440 pounds
                      14.489 gallons
Carbon Dioxide:      279.053 pounds
Carbon Monoxide:      21.579 pounds
Hydrocarbons:          3.835 pounds
Nitrogen Oxides:       0.818 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     83.523 pounds
                      13.531 gallons
Carbon Dioxide:      260.591 pounds
Carbon Monoxide:      21.117 pounds
Hydrocarbons:          3.741 pounds
Nitrogen Oxides:       0.728 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #15: Cosumnes River Boulevard/Street B

Signal=Protect/Rights=Include
Initial Vol: 40 10 20***
Lanes: 0 1 0 0 1

Initial Vol:	Lanes:	Signal=Protect Rights=Include			Signal=Protect Rights=Include	Lanes:	Initial Vol:
			Vol Cnt Date:	n/a			
			Cycle Time (sec):	100			
20***	1					0	30
			Loss Time (sec):	16			
	0					1	
780	2		Critical V/C:	0.418		2	1290***
	1		Avg Crit Del (sec/veh):	14.7		0	
70	0		Avg Delay (sec/veh):	17.4		1	100
			LOS:	B			

Lanes: 1 0 0 1 0
Initial Vol: 50 10*** 100
Signal=Protect/Rights=Include

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5    7     0     5    7     0     5    7     0     5    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      50   10   100    20   10    40    20  780    70   100 1290    30
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   10   100    20   10    40    20  780    70   100 1290    30
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   10   100    20   10    40    20  780    70   100 1290    30
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   50   10   100    20   10    40    20  780    70   100 1290    30
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   10   100    20   10    40    20  780    70   100 1290    30
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.85  0.85  0.93 0.86  0.86  0.93 0.88  0.88  0.93 0.89  0.89
Lanes:       1.00 0.09  0.91  1.00 0.20  0.80  1.00 2.75  0.25  1.00 2.93  0.07
Final Sat.:  1769  146  1463  1769  328  1311  1769 4609   414  1769 4953   115
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.03 0.07  0.07  0.01 0.03  0.03  0.01 0.17  0.17  0.06 0.26  0.26
Crit Moves:       ****        ****             ****                  ****
Green/Cycle: 0.08 0.15  0.15  0.05 0.12  0.12  0.05 0.48  0.48  0.16 0.59  0.59
Volume/Cap:  0.33 0.44  0.44  0.23 0.26  0.26  0.23 0.35  0.35  0.35 0.44  0.44
Delay/Veh:   44.4 39.7  39.7  46.9 40.7  40.7  46.9 16.6  16.6  38.2 11.7  11.7
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  44.4 39.7  39.7  46.9 40.7  40.7  46.9 16.6  16.6  38.2 11.7  11.7
LOS by Move:   D    D     D     D    D     D     D    B     B     D    B     B
HCM2kAvgQ:      2    4     4     1    2     2     1    6     6     3    8     8
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  0  1  0    1  0  0  1  0    1  0  2  1  0    1  0  2  1  0
Lane Group:    L   RT     RT    L   RT     RT    L   RT     RT    L   RT     RT
#LnsInGrps:     1    1     1     1    1     1     1    3     3     1    3     3
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx 0.86  0.86  xxxx 0.88  0.88  xxxx 0.99  0.99  xxxx 1.00  1.00
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.85  0.85  0.93 0.86  0.86  0.93 0.97  0.97  0.93 0.98  0.98
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.91  0.91  1.00 0.91  0.91
Fnl Sat Adj: 0.93 0.85  0.85  0.93 0.86  0.86  0.93 0.88  0.88  0.93 0.89  0.89
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                         2000 HCM Operations Method
                           Base Volume Alternative
********************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
```



```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.08 0.15  0.15  0.05 0.12  0.12  0.05 0.48  0.48  0.16 0.59  0.59
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.3  2.8   2.8   0.5  1.3   1.3   0.5  5.4   5.4   2.5  7.5   7.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.5  0.8   0.8   0.3  0.3   0.3   0.3  0.5   0.5   0.5  0.8   0.8
HCM2KQueue:   1.8  3.5   3.5   0.8  1.6   1.6   0.8  6.0   6.0   3.0  8.3   8.3
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.19  1.20 1.20  1.20  1.20 1.19  1.19  1.19 1.18  1.18
HCM2k70thQ:   2.1  4.2   4.2   1.0  1.9   1.9   1.0  7.1   7.1   3.6  9.8   9.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.58 1.57  1.57  1.59 1.58  1.58  1.59 1.55  1.55  1.57 1.53  1.53
HCM2k85thQ:   2.8  5.5   5.5   1.3  2.5   2.5   1.3  9.3   9.3   4.7 12.7  12.7
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.77 1.74  1.74  1.78 1.77  1.77  1.78 1.70  1.70  1.74 1.66  1.66
HCM2k90thQ:   3.2  6.1   6.1   1.5  2.8   2.8   1.5 10.2  10.2   5.3 13.8  13.8
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.04 1.99  1.99  2.07 2.05  2.05  2.07 1.93  1.93  2.01 1.88  1.88
HCM2k95thQ:   3.7  7.1   7.1   1.7  3.3   3.3   1.7 11.6  11.6   6.0 15.6  15.6
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.57 2.46  2.46  2.64 2.58  2.58  2.64 2.33  2.33  2.49 2.23  2.23
HCM2k98thQ:   4.6  8.7   8.7   2.2  4.1   4.1   2.2 14.0  14.0   7.5 18.5  18.5
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  11.8  2.3  22.7   4.8  2.3   9.1   4.8  123  11.0  22.3  180   4.2
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     60.662 pounds
                       9.827 gallons
Carbon Dioxide:      189.265 pounds
Carbon Monoxide:      14.341 pounds
Hydrocarbons:          2.465 pounds
Nitrogen Oxides:       0.566 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     56.252 pounds
                       9.113 gallons
Carbon Dioxide:      175.507 pounds
Carbon Monoxide:      13.999 pounds
Hydrocarbons:          2.394 pounds
Nitrogen Oxides:       0.501 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj PM

Intersection #15: Cosumnes River Boulevard/Street B

Signal=Protect/Rights=Include
Initial Vol: 40 10 10***
Lanes: 0 1 0 0 1

Initial Vol:	Lanes:	Signal=Protect Rights=Include			Signal=Protect Rights=Include	Lanes:	Initial Vol:
			Vol Cnt Date:	n/a			
50	1		Cycle Time (sec):	100		0	20
	0		Loss Time (sec):	16		1	
1170***	2		Critical V/C:	0.589		2	1190
	1		Avg Crit Del (sec/veh):	27.8		0	
110	0		Avg Delay (sec/veh):	25.2		1	170***
			LOS:	C			

Lanes: 1 0 0 1 0
Initial Vol: 110 10*** 210
Signal=Protect/Rights=Include

```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5    7     0     5    7     0     5    7     0     5    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     110   10   210    10   10    40    50 1170   110   170 1190    20
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:  110   10   210    10   10    40    50 1170   110   170 1190    20
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:   110   10   210    10   10    40    50 1170   110   170 1190    20
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  110   10   210    10   10    40    50 1170   110   170 1190    20
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:  110   10   210    10   10    40    50 1170   110   170 1190    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.84  0.84  0.93 0.86  0.86  0.93 0.88  0.88  0.93 0.89  0.89
Lanes:       1.00 0.05  0.95  1.00 0.20  0.80  1.00 2.74  0.26  1.00 2.95  0.05
Final Sat.:  1769   73  1523  1769  328  1311  1769 4586   431  1769 4984    84
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.06 0.14  0.14  0.01 0.03  0.03  0.03 0.26  0.26  0.10 0.24  0.24
Crit Moves:       ****        ****                   ****        ****
Green/Cycle: 0.13 0.22  0.22  0.05 0.14  0.14  0.10 0.41  0.41  0.16 0.47  0.47
Volume/Cap:  0.48 0.62  0.62  0.11 0.21  0.21  0.29 0.62  0.62  0.62 0.51  0.51
Delay/Veh:   42.1 38.4  38.4  46.0 38.2  38.2  42.8 23.8  23.8  43.7 18.7  18.7
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  42.1 38.4  38.4  46.0 38.2  38.2  42.8 23.8  23.8  43.7 18.7  18.7
LOS by Move:   D    D     D     D    D     D     D    C     C     D    B     B
HCM2kAvgQ:      4    7     7     0    1     1     2   12    12     6   10    10
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  0  1  0    1  0  0  1  0    1  0  2  1  0    1  0  2  1  0
Lane Group:    L   RT    RT     L   RT    RT     L   RT    RT     L   RT    RT
#LnsInGrps:     1    1     1     1    1     1     1    3     3     1    3     3
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx 0.86  0.86  xxxx 0.88  0.88  xxxx 0.99  0.99  xxxx 1.00  1.00
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.84  0.84  0.93 0.86  0.86  0.93 0.97  0.97  0.93 0.98  0.98
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 0.91  0.91  1.00 0.91  0.91
Fnl Sat Adj: 0.93 0.84  0.84  0.93 0.86  0.86  0.93 0.88  0.88  0.93 0.89  0.89
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
       Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                            2000 HCM Operations Method
                              Base Volume Alternative
*******************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
```

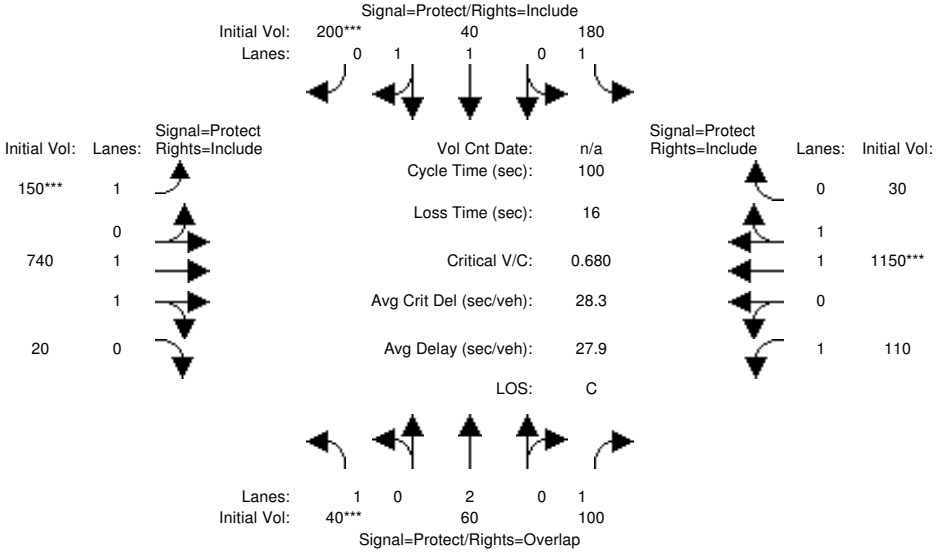


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.13 0.22  0.22  0.05 0.14  0.14  0.10 0.41  0.41  0.16 0.47  0.47
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.8  5.5   5.5   0.3  1.2   1.2   1.3 10.3  10.3   4.4  8.6   8.6
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.9  1.5   1.5   0.1  0.3   0.3   0.4  1.6   1.6   1.5  1.0   1.0
HCM2KQueue:   3.7  7.0   7.0   0.4  1.5   1.5   1.7 11.8  11.8   5.9  9.6   9.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.18  1.18  1.20 1.20  1.20  1.20 1.17  1.17  1.19 1.18  1.18
HCM2k70thQ:   4.4  8.3   8.3   0.5  1.8   1.8   2.0 13.9  13.9   7.0 11.3  11.3
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.56 1.54  1.54  1.60 1.59  1.59  1.58 1.50  1.50  1.55 1.52  1.52
HCM2k85thQ:   5.8 10.8  10.8   0.6  2.4   2.4   2.7 17.8  17.8   9.1 14.6  14.6
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.73 1.68  1.68  1.79 1.77  1.77  1.77 1.62  1.62  1.70 1.65  1.65
HCM2k90thQ:   6.5 11.8  11.8   0.7  2.6   2.6   3.0 19.2  19.2  10.0 15.8  15.8
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.99 1.91  1.91  2.09 2.05  2.05  2.05 1.81  1.81  1.93 1.85  1.85
HCM2k95thQ:   7.4 13.4  13.4   0.8  3.1   3.1   3.4 21.4  21.4  11.4 17.8  17.8
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.45 2.28  2.28  2.67 2.59  2.59  2.58 2.10  2.10  2.34 2.18  2.18
HCM2k98thQ:   9.1 16.0  16.0   1.0  3.9   3.9   4.3 24.9  24.9  13.7 20.9  20.9
                     Fuel Consumption and Emissions
                       2000 HCM Operations Method
                         Base Volume Alternative
*******************************************************************************
Intersection #15 Cosumnes River Boulevard/Street B
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  25.6  2.3  47.3   2.4  2.2   8.8  11.6  231  21.7  39.7  207   3.5
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     92.703 pounds
                      15.018 gallons
Carbon Dioxide:      289.233 pounds
Carbon Monoxide:      22.716 pounds
Hydrocarbons:          4.145 pounds
Nitrogen Oxides:       0.827 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     87.066 pounds
                      14.105 gallons
Carbon Dioxide:      271.644 pounds
Carbon Monoxide:      22.274 pounds
Hydrocarbons:          4.056 pounds
Nitrogen Oxides:       0.739 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #16: Cosumnes River Boulevard/24th Street



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Min. Green:	5		7	0	5		7	0	5		7	0	5		7	0
Volume Module:																
Base Vol:	40		60	100	180		40	200	150		740	20	110		1150	30
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:	40		60	100	180		40	200	150		740	20	110		1150	30
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:	40		60	100	180		40	200	150		740	20	110		1150	30
Reduct Vol:	0		0	0	0		0	0	0		0	0	0		0	0
Reduced Vol:	40		60	100	180		40	200	150		740	20	110		1150	30
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:	40		60	100	180		40	200	150		740	20	110		1150	30
Saturation Flow Module:																
Sat/Lane:	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900
Adjustment:	0.93		0.93	0.83	0.93		0.81	0.81	0.93		0.93	0.93	0.93		0.93	0.93
Lanes:	1.00		2.00	1.00	1.00		1.00	1.00	1.00		1.95	0.05	1.00		1.95	0.05
Final Sat.:	1769		3538	1583	1769		1548	1548	1769		3431	93	1769		3434	90
Capacity Analysis Module:																
Vol/Sat:	0.02		0.02	0.06	0.10		0.03	0.13	0.08		0.22	0.22	0.06		0.33	0.33
Crit Moves:	****							****	****						****	
Green/Cycle:	0.05		0.10	0.23	0.14		0.19	0.19	0.12		0.47	0.47	0.14		0.48	0.48
Volume/Cap:	0.45		0.18	0.27	0.73		0.14	0.69	0.69		0.46	0.46	0.46		0.69	0.69
Delay/Veh:	49.8		41.8	31.9	51.6		34.0	44.1	51.6		18.2	18.2	41.3		21.4	21.4
User DelAdj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
AdjDel/Veh:	49.8		41.8	31.9	51.6		34.0	44.1	51.6		18.2	18.2	41.3		21.4	21.4
LOS by Move:	D		D	C	D		C	D	D		B	B	D		C	C
HCM2kAvgQ:	2		1	3	7		1	7	6		8	8	4		16	16
HCM Ops Adjusted Lane Utilization Module:																
Lanes:	1	0	2	0 1	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Lane Group:	L		T	R	L		RT	RT	L		RT	RT	L		RT	RT
#LnsInGrps:	1		2	1	1		2	2	1		2	2	1		2	2
HCM Ops Input Saturation Adj Module:																
Lane Width:	12		12	12	12		12	12	12		12	12	12		12	12
CrsswalkWid:	8				8				8				8			
% Hev Veh:	2				2				2				2			
Grade:	0%				0%				0%				0%			
Parking/Hr:	No				No				No				No			
Bus Stp/Hr:	0				0				0				0			
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >															
Cnft Ped/Hr:	0				0				0				0			
ExclusiveRT:	Include				Include				Include				Include			
% RT Prtct:	0				0				0				0			
HCM Ops f(lt) Adj Case Module:																
f(lt) Case:	1	xxxx	xxxx		1	xxxx	xxxx		1	xxxx	xxxx		1	xxxx	xxxx	
HCM Ops Saturation Adj Module:																
Ln Wid Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Hev Veh Adj:	0.98		0.98	0.98	0.98		0.98	0.98	0.98		0.98	0.98	0.98		0.98	0.98
Grade Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Parking Adj:	xxxx	xxxx		1.00	xxxx	1.00		1.00	xxxx	1.00		1.00	xxxx	1.00		1.00
Bus Stp Adj:	xxxx	xxxx		1.00	xxxx	1.00		1.00	xxxx	1.00		1.00	xxxx	1.00		1.00
Area Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
RT Adj:	xxxx	xxxx		0.85	xxxx	0.88		0.88	xxxx	1.00		1.00	xxxx	1.00		1.00
LT Adj:	0.95	xxxx	xxxxx		0.95	xxxx	xxxxx		0.95	xxxx	xxxxx		0.95	xxxx	xxxxx	
PedBike Adj:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
HCM Sat Adj:	0.93		0.98	0.83	0.93		0.86	0.86	0.93		0.98	0.98	0.93		0.98	0.98
Usr Sat Adj:	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 Sat Adj:	1.00		0.95	1.00	1.00		0.95	0.95	1.00		0.95	0.95	1.00		0.95	0.95
Fnl Sat Adj:	0.93		0.93	0.83	0.93		0.81	0.81	0.93		0.93	0.93	0.93		0.93	0.93
Delay Adjustment Factor Module:																
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >															
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >															
DelAdjFctr:	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #16 Cosumnes River Boulevard/24th Street


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*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.05 0.10  0.23  0.14 0.19  0.19  0.12 0.47  0.47  0.14 0.48  0.48
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.1  0.8   2.3   4.8  1.0   5.5   4.0  7.5   7.5   2.8 13.4  13.4
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.7  0.2   0.4   2.1  0.2   1.9   1.9  0.8   0.8   0.8  2.1   2.1
HCM2KQueue:   1.8  1.0   2.7   6.9  1.1   7.4   5.9  8.4   8.4   3.6 15.6  15.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.19  1.18 1.20  1.18  1.19 1.18  1.18  1.19 1.17  1.17
HCM2k70thQ:   2.2  1.2   3.2   8.2  1.4   8.8   6.9  9.9   9.9   4.3 18.2  18.2
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.58 1.59  1.57  1.54 1.59  1.53  1.55 1.53  1.53  1.57 1.48  1.48
HCM2k85thQ:   2.9  1.6   4.2  10.6  1.8  11.4   9.1 12.8  12.8   5.7 23.0  23.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.77 1.78  1.75  1.68 1.78  1.68  1.70 1.66  1.66  1.73 1.58  1.58
HCM2k90thQ:   3.2  1.8   4.6  11.6  2.0  12.4   9.9 13.9  13.9   6.3 24.7  24.7
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.04 2.07  2.02  1.91 2.06  1.90  1.93 1.88  1.88  1.99 1.75  1.75
HCM2k95thQ:   3.7  2.1   5.3  13.2  2.3  14.1  11.3 15.7  15.7   7.2 27.3  27.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.57 2.62  2.52  2.29 2.62  2.27  2.34 2.23  2.23  2.46 2.00  2.00
HCM2k98thQ:   4.7  2.7   6.7  15.8  3.0  16.8  13.7 18.6  18.6   8.9 31.2  31.2
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   9.7 13.8  20.5  43.1  8.4  46.7  36.0  125   3.4  25.4  224   5.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     89.677 pounds
                      14.528 gallons
Carbon Dioxide:      279.792 pounds
Carbon Monoxide:      22.178 pounds
Hydrocarbons:          4.114 pounds
Nitrogen Oxides:       0.783 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     84.524 pounds
                      13.693 gallons
Carbon Dioxide:      263.716 pounds
Carbon Monoxide:      21.774 pounds
Hydrocarbons:          4.032 pounds
Nitrogen Oxides:       0.702 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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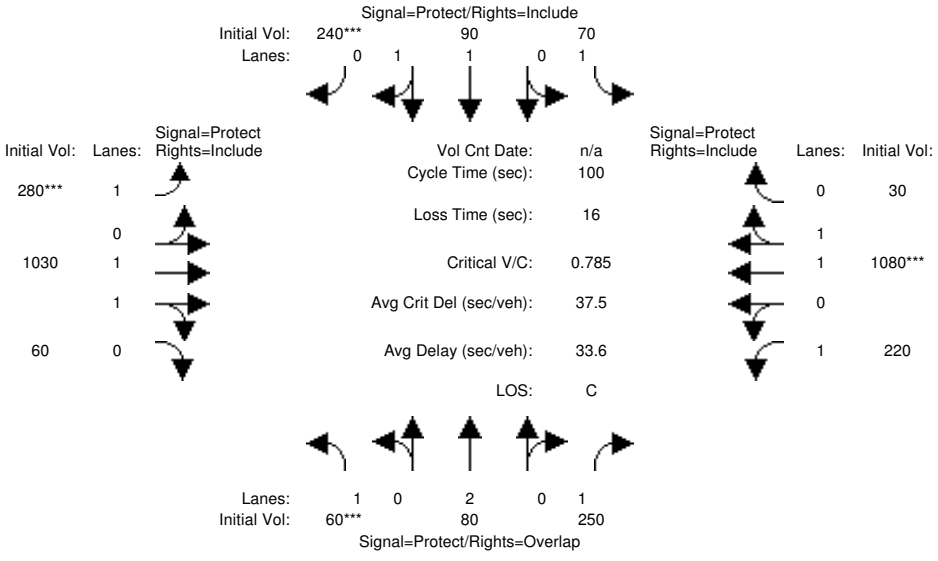
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #16: Cosumnes River Boulevard/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	60	80	250	70	90	240	280	1030	60	220	1080	30
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:	60	80	250	70	90	240	280	1030	60	220	1080	30
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:	60	80	250	70	90	240	280	1030	60	220	1080	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	80	250	70	90	240	280	1030	60	220	1080	30
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:	60	80	250	70	90	240	280	1030	60	220	1080	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.83	0.83	0.93	0.92	0.92	0.93	0.93	0.93
Lanes:	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.89	0.11	1.00	1.95	0.05
Final Sat.:	1769	3538	1583	1769	1576	1576	1769	3316	193	1769	3428	95
Capacity Analysis Module:												
Vol/Sat:	0.03	0.02	0.16	0.04	0.06	0.15	0.16	0.31	0.31	0.12	0.32	0.32
Crit Moves:	****					****	****				****	
Green/Cycle:	0.05	0.14	0.31	0.10	0.19	0.19	0.20	0.43	0.43	0.17	0.40	0.40
Volume/Cap:	0.68	0.16	0.51	0.39	0.30	0.79	0.79	0.73	0.73	0.73	0.79	0.79
Delay/Veh:	65.9	37.9	28.9	43.5	34.7	48.4	49.6	25.7	25.7	47.9	29.6	29.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.9	37.9	28.9	43.5	34.7	48.4	49.6	25.7	25.7	47.9	29.6	29.6
LOS by Move:	E	D	C	D	C	D	D	C	C	D	C	C
HCM2kAvgQ:	3	1	7	2	3	10	10	16	16	8	18	18
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	2	0	1	1	0	1	1	0	1	0	1	1	0	1	0	1	1	0
Lane Group:	L	T	R	L	RT	RT	L	RT	RT	L	RT	RT
#LnsInGrps:	1	2	1	1	2	2	1	2	2	1	2	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	xxxx	0.85	xxxx	0.89	0.89	xxxx	0.99	0.99	xxxx	1.00	1.00
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.98	0.83	0.93	0.87	0.87	0.93	0.97	0.97	0.93	0.98	0.98
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Fnl Sat Adj:	0.93	0.93	0.83	0.93	0.83	0.83	0.93	0.92	0.92	0.93	0.93	0.93
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #16 Cosumnes River Boulevard/24th Street


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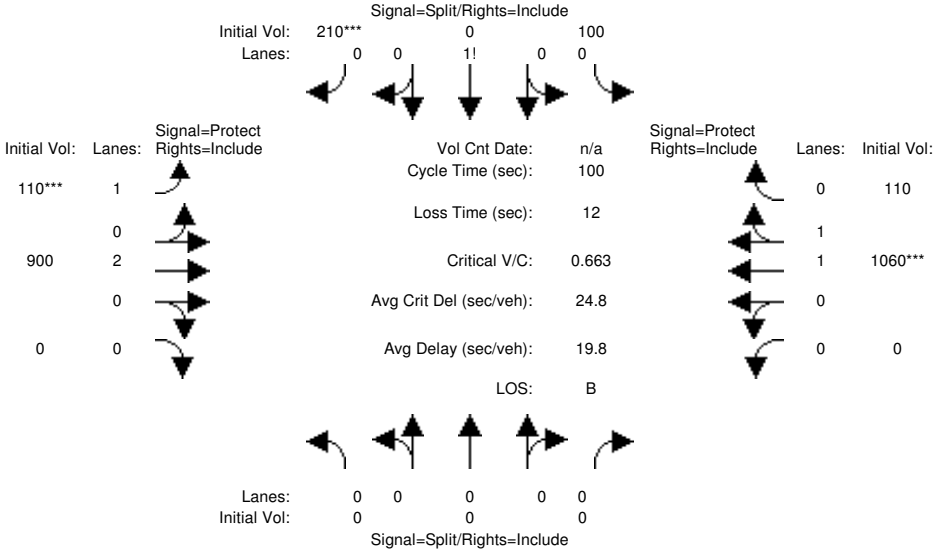
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.05 0.14  0.31  0.10 0.19  0.19  0.20 0.43  0.43  0.17 0.40  0.40
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           1.6  1.0   5.7   1.8  2.3   6.7   7.4 13.2  13.2   5.8 14.3  14.3
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.5  0.2   1.0   0.6  0.4   2.8   2.9  2.4   2.4   2.2  3.3   3.3
HCM2KQueue:   3.1  1.2   6.7   2.4  2.7   9.5  10.3 15.7  15.7   8.0 17.5  17.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.20  1.18  1.19 1.19  1.18  1.18 1.17  1.17  1.18 1.16  1.16
HCM2k70thQ:   3.7  1.5   7.9   2.9  3.2  11.2  12.1 18.3  18.3   9.4 20.4  20.4
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.57 1.59  1.54  1.58 1.57  1.52  1.51 1.48  1.48  1.53 1.47  1.47
HCM2k85thQ:   4.9  1.9  10.3   3.8  4.2  14.5  15.6 23.2  23.2  12.2 25.7  25.7
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.74 1.78  1.69  1.75 1.75  1.65  1.64 1.58  1.58  1.67 1.57  1.57
HCM2k90thQ:   5.4  2.2  11.2   4.3  4.7  15.7  16.9 24.8  24.8  13.3 27.4  27.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.00 2.06  1.91  2.02 2.02  1.85  1.84 1.75  1.75  1.88 1.73  1.73
HCM2k95thQ:   6.3  2.5  12.8   4.9  5.4  17.6  18.9 27.5  27.5  15.1 30.3  30.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.49 2.61  2.30  2.53 2.51  2.18  2.15 2.00  2.00  2.24 1.96  1.96
HCM2k98thQ:   7.8  3.2  15.3   6.2  6.7  20.8  22.2 31.4  31.4  17.9 34.3  34.3
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #16 Cosumnes River Boulevard/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  14.8 17.6  51.0  16.4 19.3  57.2  66.5  214  12.5  52.1  237   6.6
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    125.671 pounds
                      20.359 gallons
Carbon Dioxide:      392.094 pounds
Carbon Monoxide:      31.584 pounds
Hydrocarbons:          6.010 pounds
Nitrogen Oxides:       1.067 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    119.164 pounds
                      19.304 gallons
Carbon Dioxide:      371.790 pounds
Carbon Monoxide:      31.070 pounds
Hydrocarbons:          5.907 pounds
Nitrogen Oxides:       0.961 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj AM

Intersection #17: Cosumnes River Boulevard/Stone-Boswell Access West



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	7	0	5	7	0	0	7	0
Volume Module:												
Base Vol:	0	0	0	100	0	210	110	900	0	0	1060	110
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	100	0	210	110	900	0	0	1060	110
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	100	0	210	110	900	0	0	1060	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	100	0	210	110	900	0	0	1060	110
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	100	0	210	110	900	0	0	1060	110
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.88	1.00	0.88	0.93	0.93	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	0.32	0.00	0.68	1.00	2.00	0.00	0.00	1.81	0.19
Final Sat.:	0	0	0	537	0	1128	1769	3538	0	0	3160	328
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.19	0.00	0.19	0.06	0.25	0.00	0.00	0.34	0.34
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.28	0.00	0.28	0.09	0.60	0.00	0.00	0.51	0.51
Volume/Cap:	0.00	0.00	0.00	0.66	0.00	0.66	0.66	0.42	0.00	0.00	0.66	0.66
Delay/Veh:	0.0	0.0	0.0	35.4	0.0	35.4	53.5	10.9	0.0	0.0	19.3	19.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	35.4	0.0	35.4	53.5	10.9	0.0	0.0	19.3	19.3
LOS by Move:	A	A	A	D	A	D	D	B	A	A	B	B
HCM2kAvgQ:	0	0	0	9	0	9	5	8	0	0	15	15
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	2	0	0	0	0	1	1	0
Lane Group:	xxxx	xxxx	xxxx	LTR	LTR	LTR	L	T	xxxx	xxxx	RT	RT
#LnsInGrps:	0	0	0	1	1	1	1	2	0	0	2	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	4	xxxx	4	1	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	0.98	0.98	xxxxx	xxxx	0.98	0.98
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Parking Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
RT Adj:	xxxx	xxxx	xxxxx	0.91	xxxx	0.91	xxxx	xxxx	xxxxx	xxxx	0.99	0.99
LT Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.88	1.00	0.88	0.93	0.98	1.00	1.00	0.97	0.97
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Fnl Sat Adj:	1.00	1.00	1.00	0.88	1.00	0.88	0.93	0.93	1.00	1.00	0.92	0.92
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West


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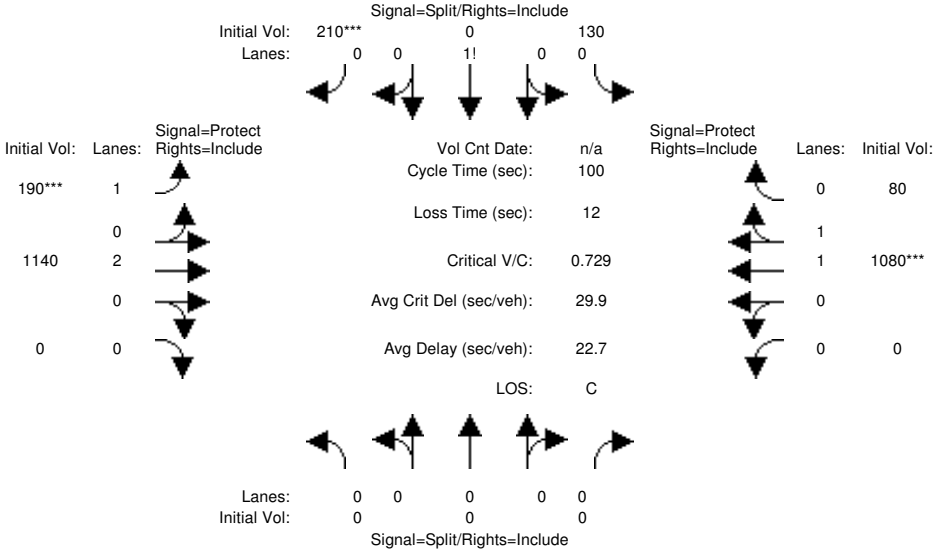
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.28 0.00  0.28  0.09 0.60  0.00  0.00 0.51  0.51
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   7.6  0.0   7.6   3.0  7.1   0.0   0.0 12.7  12.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   1.8  0.0   1.8   1.6  0.7   0.0   0.0  1.9   1.9
HCM2KQueue:   0.0  0.0   0.0   9.4  0.0   9.4   4.6  7.8   0.0   0.0 14.6  14.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.18  1.19 1.18  1.20  1.20 1.17  1.17
HCM2k70thQ:   0.0  0.0   0.0  11.1  0.0  11.1   5.4  9.2   0.0   0.0 17.1  17.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.52 1.60  1.52  1.56 1.53  1.60  1.60 1.48  1.48
HCM2k85thQ:   0.0  0.0   0.0  14.3  0.0  14.3   7.1 11.9   0.0   0.0 21.7  21.7
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.65 1.80  1.65  1.72 1.67  1.80  1.80 1.59  1.59
HCM2k90thQ:   0.0  0.0   0.0  15.5  0.0  15.5   7.8 13.0   0.0   0.0 23.3  23.3
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.86 2.10  1.86  1.97 1.89  2.10  2.10 1.77  1.77
HCM2k95thQ:   0.0  0.0   0.0  17.5  0.0  17.5   9.0 14.7   0.0   0.0 25.8  25.8
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.18 2.70  2.18  2.40 2.25  2.70  2.70 2.03  2.03
HCM2k98thQ:   0.0  0.0   0.0  20.6  0.0  20.6  11.0 17.5   0.0   0.0 29.6  29.6
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
*******************************************************************************
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  22.1  0.0  46.4  26.6  121   0.0   0.0  197  20.5
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     64.567 pounds
                      10.460 gallons
Carbon Dioxide:      201.448 pounds
Carbon Monoxide:      15.462 pounds
Hydrocarbons:          2.713 pounds
Nitrogen Oxides:       0.597 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     60.135 pounds
                       9.742 gallons
Carbon Dioxide:      187.620 pounds
Carbon Monoxide:      15.117 pounds
Hydrocarbons:          2.643 pounds
Nitrogen Oxides:       0.530 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #17: Cosumnes River Boulevard/Stone-Boswell Access West



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	7	0	5	7	0	0	7	0
Volume Module:												
Base Vol:	0	0	0	130	0	210	190	1140	0	0	1080	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:	0	0	0	130	0	210	190	1140	0	0	1080	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:	0	0	0	130	0	210	190	1140	0	0	1080	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	130	0	210	190	1140	0	0	1080	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:	0	0	0	130	0	210	190	1140	0	0	1080	80
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.88	1.00	0.88	0.93	0.93	1.00	1.00	0.92	0.92
Lanes:	0.00	0.00	0.00	0.38	0.00	0.62	1.00	2.00	0.00	0.00	1.86	0.14
Final Sat.:	0	0	0	640	0	1035	1769	3538	0	0	3261	242
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.20	0.11	0.32	0.00	0.00	0.33	0.33
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.28	0.00	0.28	0.15	0.60	0.00	0.00	0.45	0.45
Volume/Cap:	0.00	0.00	0.00	0.73	0.00	0.73	0.73	0.54	0.00	0.00	0.73	0.73
Delay/Veh:	0.0	0.0	0.0	38.4	0.0	38.4	50.7	12.0	0.0	0.0	24.0	24.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	38.4	0.0	38.4	50.7	12.0	0.0	0.0	24.0	24.0
LOS by Move:	A	A	A	D	A	D	D	B	A	A	C	C
HCM2kAvgQ:	0	0	0	11	0	11	7	11	0	0	16	16
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	0	1!	0	0	1	0	2	0	0	0	0	1	1	0
Lane Group:	xxxx	xxxx	xxxx	LTR	LTR	LTR	L	T	xxxx	xxxx	RT	RT
#LnsInGrps:	0	0	0	1	1	1	1	2	0	0	2	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	4	xxxx	4	1	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	0.98	0.98	xxxxx	xxxx	0.98	0.98
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Parking Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
RT Adj:	xxxx	xxxx	xxxxx	0.92	xxxx	0.92	xxxx	xxxx	xxxxx	xxxx	0.99	0.99
LT Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.88	1.00	0.88	0.93	0.98	1.00	1.00	0.97	0.97
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Fnl Sat Adj:	1.00	1.00	1.00	0.88	1.00	0.88	0.93	0.93	1.00	1.00	0.92	0.92
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West


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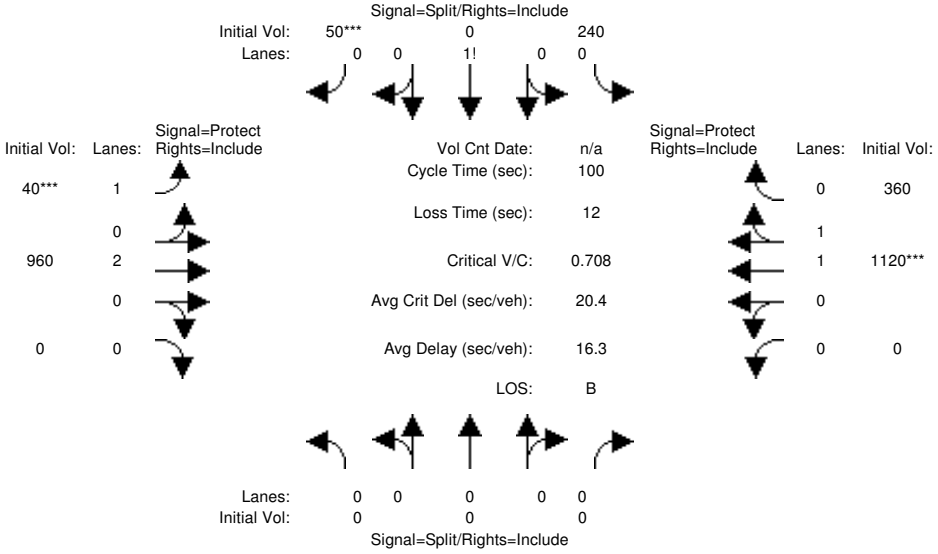
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.28 0.00  0.28  0.15 0.60  0.00  0.00 0.45  0.45
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   8.6  0.0   8.6   5.0  9.8   0.0   0.0 13.8  13.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   2.3  0.0   2.3   2.2  1.1   0.0   0.0  2.5   2.5
HCM2KQueue:   0.0  0.0   0.0  10.9  0.0  10.9   7.2 10.9   0.0   0.0 16.3  16.3
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.18  1.18 1.18  1.20  1.20 1.17  1.17
HCM2k70thQ:   0.0  0.0   0.0  12.8  0.0  12.8   8.5 12.9   0.0   0.0 19.0  19.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.51 1.60  1.51  1.54 1.51  1.60  1.60 1.47  1.47
HCM2k85thQ:   0.0  0.0   0.0  16.4  0.0  16.4  11.1 16.5   0.0   0.0 24.0  24.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.63 1.80  1.63  1.68 1.63  1.80  1.80 1.58  1.58
HCM2k90thQ:   0.0  0.0   0.0  17.8  0.0  17.8  12.1 17.8   0.0   0.0 25.7  25.7
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.83 2.10  1.83  1.90 1.83  2.10  2.10 1.74  1.74
HCM2k95thQ:   0.0  0.0   0.0  19.9  0.0  19.9  13.7 20.0   0.0   0.0 28.4  28.4
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.13 2.70  2.13  2.27 2.13  2.70  2.70 1.99  1.99
HCM2k98thQ:   0.0  0.0   0.0  23.2  0.0  23.2  16.4 23.3   0.0   0.0 32.4  32.4
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #17 Cosumnes River Boulevard/Stone-Boswell Access West
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  29.4  0.0  47.5  45.4  168   0.0   0.0  220  16.3
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     79.447 pounds
                      12.870 gallons
Carbon Dioxide:      247.876 pounds
Carbon Monoxide:      19.278 pounds
Hydrocarbons:          3.460 pounds
Nitrogen Oxides:       0.720 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     74.347 pounds
                      12.044 gallons
Carbon Dioxide:      231.962 pounds
Carbon Monoxide:      18.879 pounds
Hydrocarbons:          3.379 pounds
Nitrogen Oxides:       0.642 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #18: Cosumnes River Boulevard/Stone-Boswell Access East



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	7	0	5	7	0	0	7	0
Volume Module:												
Base Vol:	0	0	0	240	0	50	40	960	0	0	1120	360
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	240	0	50	40	960	0	0	1120	360
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	240	0	50	40	960	0	0	1120	360
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	240	0	50	40	960	0	0	1120	360
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	240	0	50	40	960	0	0	1120	360
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.92	0.93	0.93	1.00	1.00	0.90	0.90
Lanes:	0.00	0.00	0.00	0.83	0.00	0.17	1.00	2.00	0.00	0.00	1.51	0.49
Final Sat.:	0	0	0	1445	0	301	1769	3538	0	0	2581	830
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.17	0.00	0.17	0.02	0.27	0.00	0.00	0.43	0.43
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.23	0.00	0.23	0.05	0.65	0.00	0.00	0.60	0.60
Volume/Cap:	0.00	0.00	0.00	0.72	0.00	0.72	0.45	0.42	0.00	0.00	0.72	0.72
Delay/Veh:	0.0	0.0	0.0	41.9	0.0	41.9	49.8	8.5	0.0	0.0	15.4	15.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	41.9	0.0	41.9	49.8	8.5	0.0	0.0	15.4	15.4
LOS by Move:	A	A	A	D	A	D	D	A	A	A	B	B
HCM2kAvgQ:	0	0	0	10	0	10	2	7	0	0	18	18
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	0	1!	0	0	1	0	2	0	0	0	0	1	1	0
Lane Group:	xxxx	xxxx	xxxx	LTR	LTR	LTR	L	T	xxxx	xxxx	RT	RT
#LnsInGrps:	0	0	0	1	1	1	1	2	0	0	2	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	4	xxxx	4	1	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	0.98	0.98	xxxxx	xxxx	0.98	0.98
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Parking Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
RT Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.96	0.96
LT Adj:	xxxx	xxxx	xxxxx	0.96	xxxx	0.96	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.92	1.00	0.92	0.93	0.98	1.00	1.00	0.94	0.94
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Fnl Sat Adj:	1.00	1.00	1.00	0.92	1.00	0.92	0.93	0.93	1.00	1.00	0.90	0.90
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East


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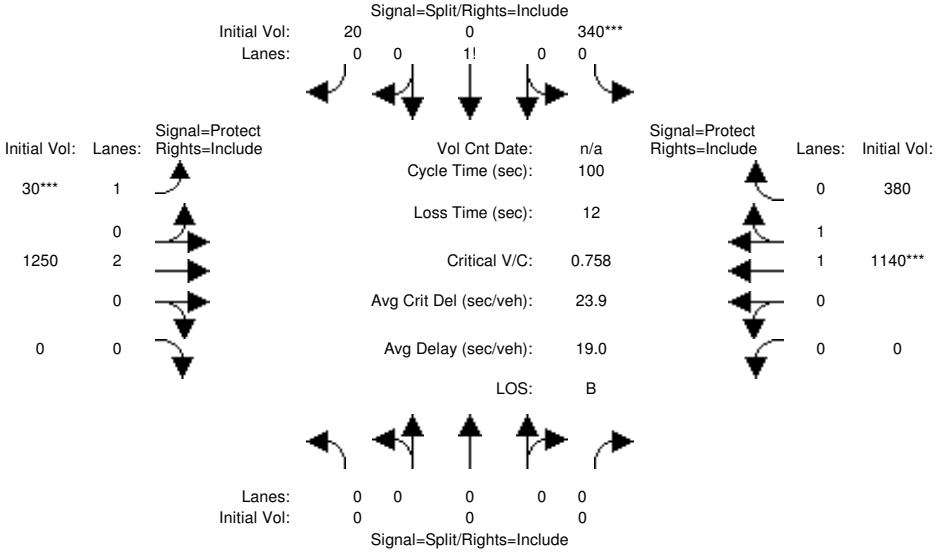
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.23 0.00  0.23  0.05 0.65  0.00  0.00 0.60  0.60
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   7.4  0.0   7.4   1.1  6.7   0.0   0.0 15.3  15.3
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   2.2  0.0   2.2   0.7  0.7   0.0   0.0  2.4   2.4
HCM2KQueue:   0.0  0.0   0.0   9.7  0.0   9.7   1.8  7.4   0.0   0.0 17.7  17.7
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.18  1.20 1.18  1.20  1.20 1.16  1.16
HCM2k70thQ:   0.0  0.0   0.0  11.4  0.0  11.4   2.2  8.8   0.0   0.0 20.6  20.6
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.52 1.60  1.52  1.58 1.53  1.60  1.60 1.47  1.47
HCM2k85thQ:   0.0  0.0   0.0  14.7  0.0  14.7   2.9 11.4   0.0   0.0 26.0  26.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.65 1.80  1.65  1.77 1.68  1.80  1.80 1.56  1.56
HCM2k90thQ:   0.0  0.0   0.0  15.9  0.0  15.9   3.2 12.5   0.0   0.0 27.7  27.7
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.85 2.10  1.85  2.04 1.90  2.10  2.10 1.72  1.72
HCM2k95thQ:   0.0  0.0   0.0  17.9  0.0  17.9   3.7 14.1   0.0   0.0 30.6  30.6
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.17 2.70  2.17  2.57 2.26  2.70  2.70 1.96  1.96
HCM2k98thQ:   0.0  0.0   0.0  21.1  0.0  21.1   4.7 16.9   0.0   0.0 34.7  34.7
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  55.4  0.0  11.5   9.7  115   0.0   0.0  198  63.6
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     64.785 pounds
                      10.495 gallons
Carbon Dioxide:      202.129 pounds
Carbon Monoxide:      15.215 pounds
Hydrocarbons:          2.575 pounds
Nitrogen Oxides:       0.619 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     59.909 pounds
                       9.705 gallons
Carbon Dioxide:      186.917 pounds
Carbon Monoxide:      14.836 pounds
Hydrocarbons:          2.497 pounds
Nitrogen Oxides:       0.546 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj PM

Intersection #18: Cosumnes River Boulevard/Stone-Boswell Access East



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	7	0	5	7	0	0	7	0
Volume Module:												
Base Vol:	0	0	0	340	0	20	30	1250	0	0	1140	380
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	340	0	20	30	1250	0	0	1140	380
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	340	0	20	30	1250	0	0	1140	380
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	340	0	20	30	1250	0	0	1140	380
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	340	0	20	30	1250	0	0	1140	380
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.93	1.00	0.93	0.93	0.93	1.00	1.00	0.90	0.90
Lanes:	0.00	0.00	0.00	0.94	0.00	0.06	1.00	2.00	0.00	0.00	1.50	0.50
Final Sat.:	0	0	0	1666	0	98	1769	3538	0	0	2555	852
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.20	0.02	0.35	0.00	0.00	0.45	0.45
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.26	0.00	0.26	0.05	0.62	0.00	0.00	0.57	0.57
Volume/Cap:	0.00	0.00	0.00	0.78	0.00	0.78	0.34	0.57	0.00	0.00	0.78	0.78
Delay/Veh:	0.0	0.0	0.0	42.9	0.0	42.9	48.2	11.6	0.0	0.0	18.9	18.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	42.9	0.0	42.9	48.2	11.6	0.0	0.0	18.9	18.9
LOS by Move:	A	A	A	D	A	D	D	B	A	A	B	B
HCM2kAvgQ:	0	0	0	12	0	12	1	12	0	0	21	21
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	0	1!	0	0	1	0	2	0	0	0	0	1	1	0
Lane Group:	xxxx	xxxx	xxxx	LTR	LTR	LTR	L	T	xxxx	xxxx	RT	RT
#LnsInGrps:	0	0	0	1	1	1	1	2	0	0	2	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	4	xxxx	4	1	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	0.98	0.98	xxxxx	xxxx	0.98	0.98
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
Parking Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	1.00
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	1.00	1.00	xxxxx	xxxx	1.00	1.00
RT Adj:	xxxx	xxxx	xxxxx	0.99	xxxx	0.99	xxxx	xxxx	xxxxx	xxxx	0.96	0.96
LT Adj:	xxxx	xxxx	xxxxx	0.96	xxxx	0.96	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.93	1.00	0.93	0.93	0.98	1.00	1.00	0.94	0.94
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Fnl Sat Adj:	1.00	1.00	1.00	0.93	1.00	0.93	0.93	0.93	1.00	1.00	0.90	0.90
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East


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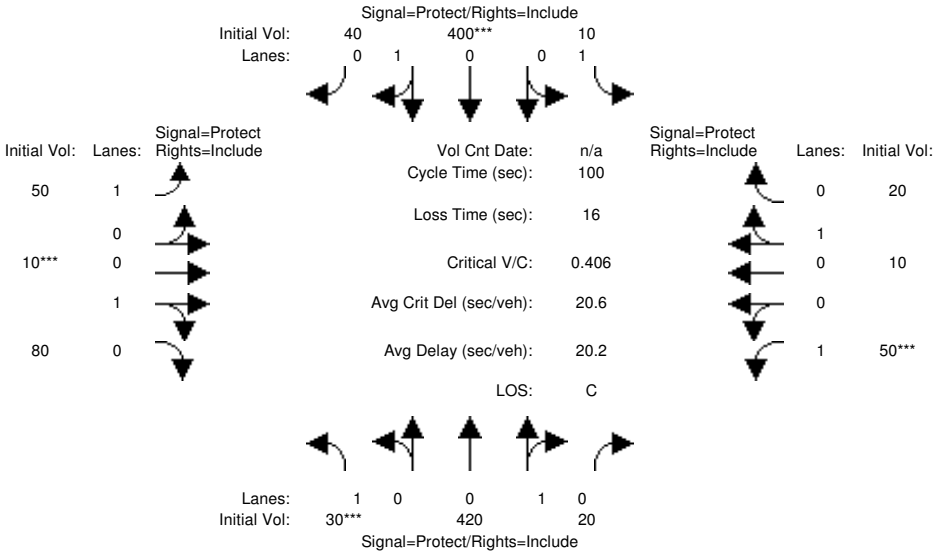
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.26 0.00  0.26  0.05 0.62  0.00  0.00 0.57  0.57
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   9.3  0.0   9.3   0.8 10.8   0.0   0.0 17.3  17.3
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  1.00 1.00  0.00  0.00 1.00  1.00
Q2:           0.0  0.0   0.0   2.9  0.0   2.9   0.5  1.3   0.0   0.0  3.2   3.2
HCM2KQueue:   0.0  0.0   0.0  12.2  0.0  12.2   1.3 12.1   0.0   0.0 20.5  20.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.17 1.20  1.17  1.20 1.17  1.20  1.20 1.16  1.16
HCM2k70thQ:   0.0  0.0   0.0  14.3  0.0  14.3   1.5 14.2   0.0   0.0 23.8  23.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.50 1.60  1.50  1.59 1.50  1.60  1.60 1.45  1.45
HCM2k85thQ:   0.0  0.0   0.0  18.3  0.0  18.3   2.0 18.1   0.0   0.0 29.8  29.8
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.62 1.80  1.62  1.78 1.62  1.80  1.80 1.54  1.54
HCM2k90thQ:   0.0  0.0   0.0  19.8  0.0  19.8   2.3 19.5   0.0   0.0 31.7  31.7
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.80 2.10  1.80  2.06 1.81  2.10  2.10 1.69  1.69
HCM2k95thQ:   0.0  0.0   0.0  22.0  0.0  22.0   2.6 21.8   0.0   0.0 34.7  34.7
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.09 2.70  2.09  2.61 2.10  2.70  2.70 1.91  1.91
HCM2k98thQ:   0.0  0.0   0.0  25.5  0.0  25.5   3.4 25.3   0.0   0.0 39.1  39.1
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #18 Cosumnes River Boulevard/Stone-Boswell Access East
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0  79.0  0.0   4.6   7.2  184   0.0   0.0  222  73.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     80.473 pounds
                      13.037 gallons
Carbon Dioxide:      251.076 pounds
Carbon Monoxide:      19.192 pounds
Hydrocarbons:          3.334 pounds
Nitrogen Oxides:       0.758 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     74.811 pounds
                      12.119 gallons
Carbon Dioxide:      233.411 pounds
Carbon Monoxide:      18.750 pounds
Hydrocarbons:          3.244 pounds
Nitrogen Oxides:       0.671 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #20: Delta Shores Circle/Street C



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	30	420	20	10	400	40	50	10	80	50	10	20
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	420	20	10	400	40	50	10	80	50	10	20
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	420	20	10	400	40	50	10	80	50	10	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	420	20	10	400	40	50	10	80	50	10	20
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	420	20	10	400	40	50	10	80	50	10	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.97	0.97	0.93	0.97	0.97	0.93	0.85	0.85	0.93	0.88	0.88
Lanes:	1.00	0.95	0.05	1.00	0.91	0.09	1.00	0.11	0.89	1.00	0.33	0.67
Final Sat.:	1769	1765	84	1769	1669	167	1769	179	1435	1769	559	1117
Capacity Analysis Module:												
Vol/Sat:	0.02	0.24	0.24	0.01	0.24	0.24	0.03	0.06	0.06	0.03	0.02	0.02
Crit Moves:	****				****			****			****	
Green/Cycle:	0.05	0.52	0.52	0.11	0.58	0.58	0.09	0.14	0.14	0.07	0.12	0.12
Volume/Cap:	0.34	0.45	0.45	0.05	0.41	0.41	0.33	0.41	0.41	0.41	0.15	0.15
Delay/Veh:	48.2	15.2	15.2	39.9	11.6	11.6	44.3	40.8	40.8	46.8	39.8	39.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.2	15.2	15.2	39.9	11.6	11.6	44.3	40.8	40.8	46.8	39.8	39.8
LOS by Move:	D	B	B	D	B	B	D	D	D	D	D	D
HCM2kAvgQ:	1	8	8	0	7	7	2	3	3	2	1	1
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0
Lane Group:	L	RT	RT	L	RT	RT	L	RT	RT	L	RT	RT
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.99	0.99	xxxx	0.99	0.99	xxxx	0.87	0.87	xxxx	0.90	0.90
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.97	0.97	0.93	0.97	0.97	0.93	0.85	0.85	0.93	0.88	0.88
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.97	0.97	0.93	0.97	0.97	0.93	0.85	0.85	0.93	0.88	0.88
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

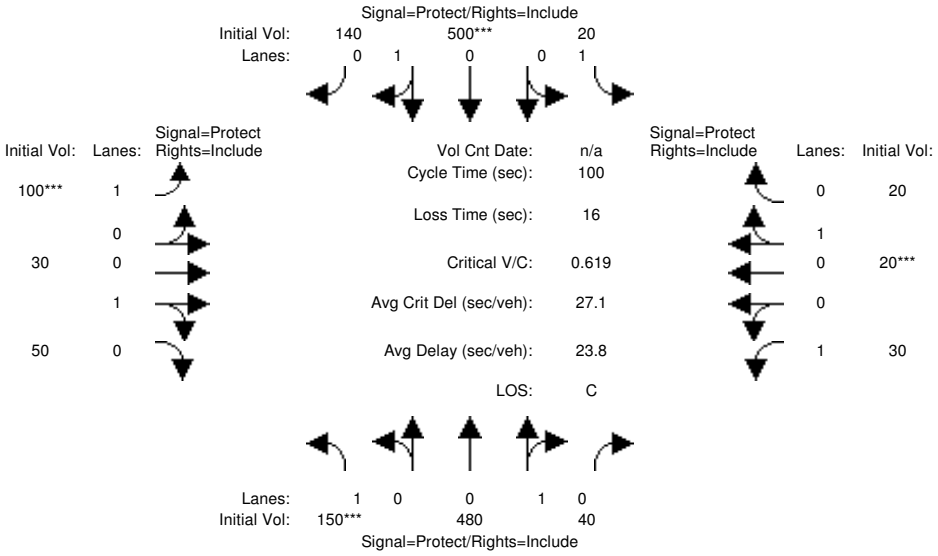
Intersection #20 Delta Shores Circle/Street C


```
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.05 0.52  0.52  0.11 0.58  0.58  0.09 0.14  0.14  0.07 0.12  0.12
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.8  7.6   7.6   0.2  6.7   6.7   1.3  2.3   2.3   1.3  0.7   0.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.5  0.8   0.8   0.1  0.7   0.7   0.5  0.7   0.7   0.6  0.2   0.2
HCM2KQueue:   1.3  8.4   8.4   0.3  7.4   7.4   1.8  3.0   3.0   2.0  0.9   0.9
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.18  1.18  1.20 1.18  1.18  1.20 1.19  1.19  1.20 1.20  1.20
HCM2k70thQ:   1.5 10.0  10.0   0.4  8.7   8.7   2.1  3.5   3.5   2.4  1.1   1.1
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.59 1.53  1.53  1.60 1.53  1.53  1.58 1.57  1.57  1.58 1.59  1.59
HCM2k85thQ:   2.0 12.9  12.9   0.5 11.3  11.3   2.8  4.6   4.6   3.1  1.5   1.5
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.78 1.66  1.66  1.79 1.68  1.68  1.77 1.75  1.75  1.76 1.78  1.78
HCM2k90thQ:   2.3 14.0  14.0   0.5 12.3  12.3   3.1  5.2   5.2   3.5  1.6   1.6
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.06 1.88  1.88  2.09 1.90  1.90  2.04 2.01  2.01  2.04 2.07  2.07
HCM2k95thQ:   2.6 15.8  15.8   0.6 14.0  14.0   3.6  5.9   5.9   4.0  1.9   1.9
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.61 2.22  2.22  2.68 2.27  2.27  2.57 2.50  2.50  2.56 2.63  2.63
HCM2k98thQ:   3.4 18.8  18.8   0.8 16.7  16.7   4.6  7.4   7.4   5.1  2.4   2.4
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #20 Delta Shores Circle/Street C
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   7.2 65.5   3.1   2.2 54.6   5.5  11.8  2.3  18.3  12.0  2.2   4.5
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     29.763 pounds
                       4.822 gallons
Carbon Dioxide:       92.860 pounds
Carbon Monoxide:       7.142 pounds
Hydrocarbons:          1.262 pounds
Nitrogen Oxides:       0.271 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     27.751 pounds
                       4.496 gallons
Carbon Dioxide:       86.583 pounds
Carbon Monoxide:       6.986 pounds
Hydrocarbons:          1.230 pounds
Nitrogen Oxides:       0.241 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #20: Delta Shores Circle/Street C



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	150	480	40	20	500	140	100	30	50	30	20	20
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:	150	480	40	20	500	140	100	30	50	30	20	20
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:	150	480	40	20	500	140	100	30	50	30	20	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	150	480	40	20	500	140	100	30	50	30	20	20
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:	150	480	40	20	500	140	100	30	50	30	20	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.97	0.97	0.93	0.95	0.95	0.93	0.89	0.89	0.93	0.91	0.91
Lanes:	1.00	0.92	0.08	1.00	0.78	0.22	1.00	0.38	0.62	1.00	0.50	0.50
Final Sat.:	1769	1698	142	1769	1407	394	1769	633	1054	1769	861	861
Capacity Analysis Module:												
Vol/Sat:	0.08	0.28	0.28	0.01	0.36	0.36	0.06	0.05	0.05	0.02	0.02	0.02
Crit Moves:	****				****		****				****	
Green/Cycle:	0.13	0.58	0.58	0.10	0.55	0.55	0.09	0.09	0.09	0.07	0.07	0.07
Volume/Cap:	0.65	0.49	0.49	0.11	0.65	0.65	0.65	0.52	0.52	0.26	0.33	0.33
Delay/Veh:	47.3	12.7	12.7	41.0	17.1	17.1	53.2	46.3	46.3	45.6	45.9	45.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.3	12.7	12.7	41.0	17.1	17.1	53.2	46.3	46.3	45.6	45.9	45.9
LOS by Move:	D	B	B	D	B	B	D	D	D	D	D	D
HCM2kAvgQ:	6	9	9	1	14	14	4	3	3	1	2	2
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0
Lane Group:	L	RT	RT	L	RT	RT	L	RT	RT	L	RT	RT
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.99	0.99	xxxx	0.97	0.97	xxxx	0.91	0.91	xxxx	0.93	0.93
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.97	0.97	0.93	0.95	0.95	0.93	0.89	0.89	0.93	0.91	0.91
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.97	0.97	0.93	0.95	0.95	0.93	0.89	0.89	0.93	0.91	0.91
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

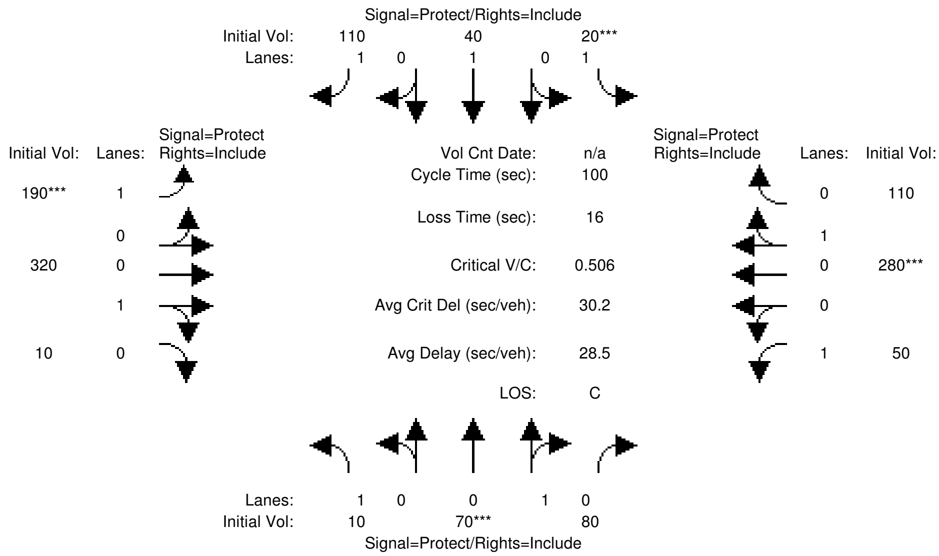
Intersection #20 Delta Shores Circle/Street C


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.13 0.58  0.58  0.10 0.55  0.55  0.09 0.09  0.09  0.07 0.07  0.07
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.0  8.5   8.5   0.5 12.4  12.4   2.7  2.1   2.1   0.8  1.1   1.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.6  0.9   0.9   0.1  1.7   1.7   1.5  1.0   1.0   0.3  0.5   0.5
HCM2KQueue:   5.5  9.4   9.4   0.6 14.1  14.1   4.2  3.1   3.1   1.1  1.5   1.5
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.18  1.18  1.20 1.17  1.17  1.19 1.19  1.19  1.20 1.20  1.20
HCM2k70thQ:   6.6 11.1  11.1   0.8 16.5  16.5   5.0  3.7   3.7   1.4  1.8   1.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.55 1.52  1.52  1.59 1.49  1.49  1.56 1.57  1.57  1.59 1.59  1.59
HCM2k85thQ:   8.6 14.3  14.3   1.0 21.0  21.0   6.5  4.8   4.8   1.8  2.4   2.4
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.70 1.65  1.65  1.79 1.60  1.60  1.72 1.74  1.74  1.78 1.77  1.77
HCM2k90thQ:   9.4 15.5  15.5   1.1 22.6  22.6   7.2  5.4   5.4   2.0  2.7   2.7
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.94 1.86  1.86  2.08 1.77  1.77  1.98 2.01  2.01  2.06 2.05  2.05
HCM2k95thQ:  10.7 17.4  17.4   1.3 25.1  25.1   8.3  6.2   6.2   2.3  3.1   3.1
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.35 2.19  2.19  2.65 2.04  2.04  2.43 2.49  2.49  2.62 2.59  2.59
HCM2k98thQ:  13.0 20.5  20.5   1.7 28.8  28.8  10.1  7.7   7.7   3.0  4.0   4.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #20 Delta Shores Circle/Street C
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  35.6 70.3   5.9   4.5 87.1  24.4  24.2  7.1  11.9   7.1  4.8   4.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     45.538 pounds
                       7.377 gallons
Carbon Dioxide:      142.078 pounds
Carbon Monoxide:      11.103 pounds
Hydrocarbons:          2.013 pounds
Nitrogen Oxides:       0.405 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     42.702 pounds
                       6.918 gallons
Carbon Dioxide:      133.230 pounds
Carbon Monoxide:      10.882 pounds
Hydrocarbons:          1.968 pounds
Nitrogen Oxides:       0.362 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj AM

Intersection #21: Delta Shores Circle/Street A




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R   L  -  T  -  R   L  -  T  -  R   L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5    7     0     5    7     0     5    7     0     5    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      10   70    80    20   40   110   190  320    10    50  280   110
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:   10   70    80    20   40   110   190  320    10    50  280   110
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:    10   70    80    20   40   110   190  320    10    50  280   110
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   10   70    80    20   40   110   190  320    10    50  280   110
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:   10   70    80    20   40   110   190  320    10    50  280   110
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.90  0.90  0.93 0.98  0.83  0.93 0.98  0.98  0.93 0.94  0.94
Lanes:       1.00 0.47  0.53  1.00 1.00  1.00  1.00 0.97  0.03  1.00 0.72  0.28
Final Sat.:  1769  799   914  1769 1862  1583  1769 1798    56  1769 1281   503
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.01 0.09  0.09  0.01 0.02  0.07  0.11 0.18  0.18  0.03 0.22  0.22
Crit Moves:       ****        ****             ****                   ****
Green/Cycle: 0.09 0.17  0.17  0.05 0.13  0.13  0.21 0.49  0.49  0.14 0.42  0.42
Volume/Cap:  0.06 0.52  0.52  0.23 0.17  0.55  0.52 0.37  0.37  0.21 0.52  0.52
Delay/Veh:   41.8 39.8  39.8  46.9 39.3  44.2  36.8 16.3  16.3  38.8 22.4  22.4
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  41.8 39.8  39.8  46.9 39.3  44.2  36.8 16.3  16.3  38.8 22.4  22.4
LOS by Move:   D    D     D     D    D     D     D    B     B     D    C     C
HCM2kAvgQ:      0    5     5     1    1     4     6    6     6     1    9     9
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:         1  0  0  1  0    1  0  1  0  1    1  0  0  1  0    1  0  0  1  0
Lane Group:    L   RT     RT     L    T     R     L   RT     RT     L   RT     RT
#LnsInGrps:     1    1     1     1    1     1     1    1     1     1    1     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8               8               8               8
% Hev Veh:           2               2               2               2
Grade:              0%              0%              0%              0%
Parking/Hr:         No              No              No              No
Bus Stp/Hr:          0               0               0               0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0               0               0               0
ExclusiveRT:     Include         Include         Include         Include
% RT Prtct:          0               0               0               0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx xxxx  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx 0.92  0.92  xxxx xxxx  0.85  xxxx 1.00  1.00  xxxx 0.96  0.96
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.90  0.90  0.93 0.98  0.83  0.93 0.98  0.98  0.93 0.94  0.94
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 0.93 0.90  0.90  0.93 0.98  0.83  0.93 0.98  0.98  0.93 0.94  0.94
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                       2000 HCM Operations Method
                         Base Volume Alternative
*******************************************************************************
Intersection #21 Delta Shores Circle/Street A
```

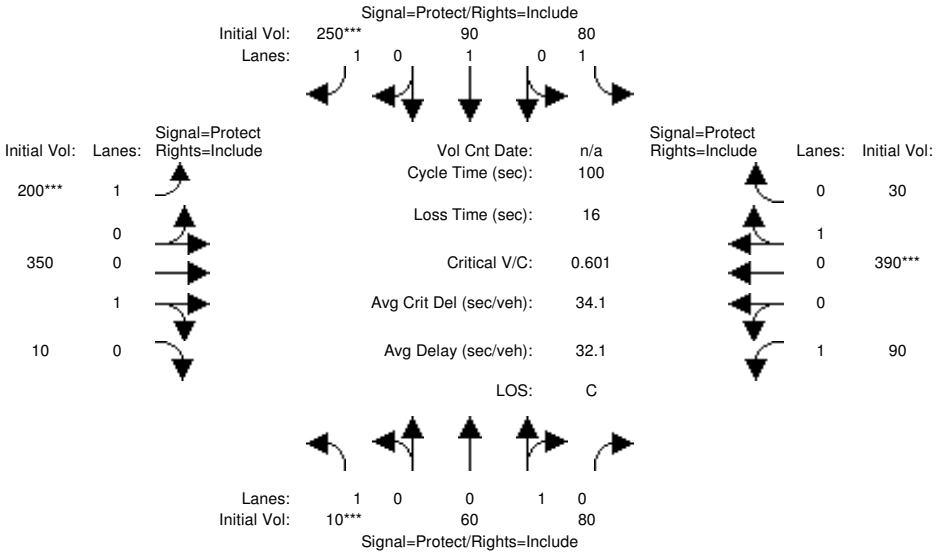


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.09 0.17  0.17  0.05 0.13  0.13  0.21 0.49  0.49  0.14 0.42  0.42
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.3  3.8   3.8   0.5  1.0   2.9   4.7  5.7   5.7   1.2  8.1   8.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.1  1.0   1.0   0.3  0.2   1.1   1.0  0.6   0.6   0.3  1.1   1.1
HCM2KQueue:   0.3  4.8   4.8   0.8  1.2   4.0   5.7  6.3   6.3   1.5  9.1   9.1
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.19  1.20 1.20  1.19  1.19 1.19  1.19  1.20 1.18  1.18
HCM2k70thQ:   0.4  5.8   5.8   1.0  1.4   4.7   6.8  7.5   7.5   1.8 10.8  10.8
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.56  1.56  1.59 1.59  1.56  1.55 1.54  1.54  1.59 1.52  1.52
HCM2k85thQ:   0.5  7.5   7.5   1.3  1.9   6.2   8.9  9.7   9.7   2.4 13.9  13.9
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.79 1.71  1.71  1.78 1.78  1.73  1.70 1.69  1.69  1.77 1.65  1.65
HCM2k90thQ:   0.6  8.3   8.3   1.5  2.1   6.9   9.8 10.7  10.7   2.6 15.1  15.1
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.09 1.96  1.96  2.07 2.06  1.98  1.94 1.92  1.92  2.05 1.86  1.86
HCM2k95thQ:   0.7  9.5   9.5   1.7  2.5   7.9  11.1 12.1  12.1   3.1 17.0  17.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.68 2.39  2.39  2.64 2.61  2.44  2.34 2.32  2.32  2.59 2.19  2.19
HCM2k98thQ:   0.9 11.6  11.6   2.2  3.1   9.7  13.5 14.6  14.6   3.9 20.1  20.1
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #21 Delta Shores Circle/Street A
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   2.3 16.0  18.3   4.8  8.9  25.8  42.3 50.0   1.6  11.1 52.2  20.5
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     41.569 pounds
                       6.734 gallons
Carbon Dioxide:      129.696 pounds
Carbon Monoxide:      10.303 pounds
Hydrocarbons:          1.920 pounds
Nitrogen Oxides:       0.359 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     39.219 pounds
                       6.353 gallons
Carbon Dioxide:      122.362 pounds
Carbon Monoxide:      10.119 pounds
Hydrocarbons:          1.883 pounds
Nitrogen Oxides:       0.323 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #21: Delta Shores Circle/Street A



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	10	60	80	80	90	250	200	350	10	90	390	30
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:	10	60	80	80	90	250	200	350	10	90	390	30
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:	10	60	80	80	90	250	200	350	10	90	390	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	60	80	80	90	250	200	350	10	90	390	30
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:	10	60	80	80	90	250	200	350	10	90	390	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.90	0.90	0.93	0.98	0.83	0.93	0.98	0.98	0.93	0.97	0.97
Lanes:	1.00	0.43	0.57	1.00	1.00	1.00	1.00	0.97	0.03	1.00	0.93	0.07
Final Sat.:	1769	729	972	1769	1862	1583	1769	1803	52	1769	1710	132
Capacity Analysis Module:												
Vol/Sat:	0.01	0.08	0.08	0.05	0.05	0.16	0.11	0.19	0.19	0.05	0.23	0.23
Crit Moves:	****					****	****				****	
Green/Cycle:	0.05	0.19	0.19	0.11	0.25	0.25	0.18	0.43	0.43	0.11	0.36	0.36
Volume/Cap:	0.11	0.44	0.44	0.40	0.19	0.63	0.63	0.45	0.45	0.45	0.63	0.63
Delay/Veh:	46.0	37.0	37.0	42.5	29.8	36.7	42.1	20.7	20.7	43.2	28.4	28.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.0	37.0	37.0	42.5	29.8	36.7	42.1	20.7	20.7	43.2	28.4	28.4
LOS by Move:	D	D	D	D	C	D	D	C	C	D	C	C
HCM2kAvgQ:	0	4	4	3	2	8	7	8	8	3	11	11
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	0 1	0	1	0 1	0	1	1	0	0 1	0	1	0	0 1	0
Lane Group:	L	RT	RT	L	T	R	L	RT	RT	L	RT	RT
#LnsInGrps:	1	1	1	1	1	1	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.91	0.91	xxxx	xxxx	0.85	xxxx	1.00	1.00	xxxx	0.99	0.99
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.90	0.90	0.93	0.98	0.83	0.93	0.98	0.98	0.93	0.97	0.97
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.90	0.90	0.93	0.98	0.83	0.93	0.98	0.98	0.93	0.97	0.97
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

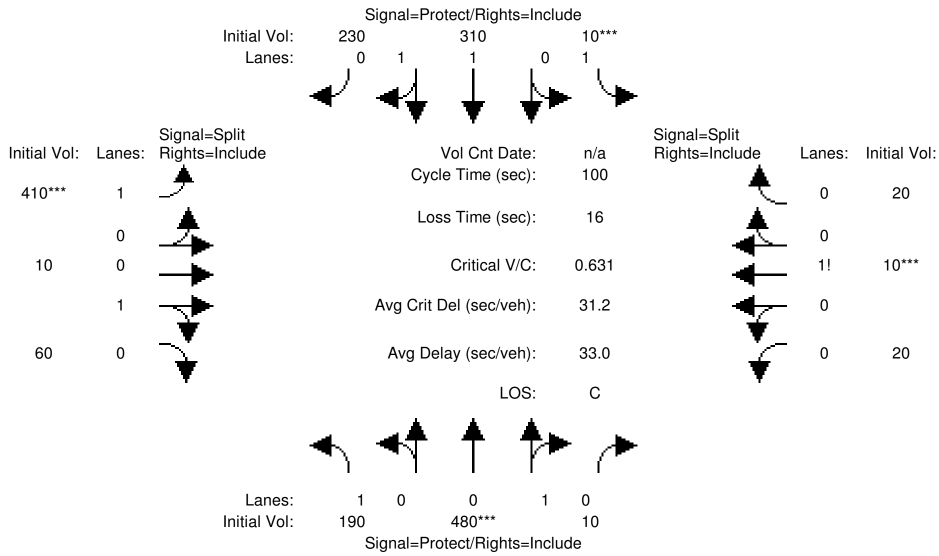
Intersection #21 Delta Shores Circle/Street A


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.05 0.19  0.19  0.11 0.25  0.25  0.18 0.43  0.43  0.11 0.36  0.36
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.3  3.4   3.4   2.1  2.0   6.2   5.1  7.1   7.1   2.3  9.7   9.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.1  0.8   0.8   0.6  0.2   1.6   1.6  0.8   0.8   0.8  1.6   1.6
HCM2KQueue:   0.4  4.2   4.2   2.7  2.2   7.8   6.7  7.9   7.9   3.1 11.3  11.3
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.19  1.19 1.19  1.18  1.18 1.18  1.18  1.19 1.18  1.18
HCM2k70thQ:   0.5  5.0   5.0   3.2  2.6   9.2   7.9  9.4   9.4   3.7 13.3  13.3
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.56  1.56  1.57 1.58  1.53  1.54 1.53  1.53  1.57 1.51  1.51
HCM2k85thQ:   0.6  6.6   6.6   4.3  3.5  11.9  10.3 12.1  12.1   4.9 17.0  17.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.79 1.72  1.72  1.75 1.76  1.67  1.69 1.67  1.67  1.74 1.63  1.63
HCM2k90thQ:   0.7  7.3   7.3   4.7  3.9  13.0  11.3 13.2  13.2   5.4 18.4  18.4
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.09 1.97  1.97  2.02 2.03  1.89  1.91 1.89  1.89  2.00 1.82  1.82
HCM2k95thQ:   0.8  8.3   8.3   5.4  4.5  14.7  12.8 14.9  14.9   6.3 20.5  20.5
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.67 2.42  2.42  2.51 2.54  2.25  2.30 2.24  2.24  2.49 2.12  2.12
HCM2k98thQ:   1.0 10.2  10.2   6.8  5.6  17.5  15.4 17.8  17.8   7.8 23.9  23.9
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #21 Delta Shores Circle/Street A
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   2.4 13.3  17.7  18.6 17.7  55.7  46.3 62.1   1.8  21.0 80.7   6.2
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     57.121 pounds
                       9.254 gallons
Carbon Dioxide:      178.217 pounds
Carbon Monoxide:      14.301 pounds
Hydrocarbons:          2.708 pounds
Nitrogen Oxides:       0.486 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     54.093 pounds
                       8.763 gallons
Carbon Dioxide:      168.770 pounds
Carbon Monoxide:      14.063 pounds
Hydrocarbons:          2.660 pounds
Nitrogen Oxides:       0.437 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #22: Delta Shores Circle North/24th Street




```
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     5    7     0     5    7     0     5    7     0     5    7     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     190  480    10    10  310   230   410   10    60    20   10    20
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:  190  480    10    10  310   230   410   10    60    20   10    20
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:   190  480    10    10  310   230   410   10    60    20   10    20
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  190  480    10    10  310   230   410   10    60    20   10    20
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:  190  480    10    10  310   230   410   10    60    20   10    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.93 0.98  0.98  0.93 0.87  0.87  0.93 0.85  0.85  0.91 0.91  0.91
Lanes:       1.00 0.98  0.02  1.00 1.15  0.85  1.00 0.14  0.86  0.40 0.20  0.40
Final Sat.:  1769 1819    38  1769 1901  1410  1769  232  1390   690  345   690
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.11 0.26  0.26  0.01 0.16  0.16  0.23 0.04  0.04  0.03 0.03  0.03
Crit Moves:       ****        ****             ****                  ****
Green/Cycle: 0.17 0.38  0.38  0.05 0.26  0.26  0.34 0.34  0.34  0.07 0.07  0.07
Volume/Cap:  0.62 0.69  0.69  0.11 0.62  0.62  0.69 0.13  0.13  0.41 0.41  0.41
Delay/Veh:   42.4 28.7  28.7  46.0 34.0  34.0  32.0 23.1  23.1  46.8 46.8  46.8
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  42.4 28.7  28.7  46.0 34.0  34.0  32.0 23.1  23.1  46.8 46.8  46.8
LOS by Move:   D    C     C     D    C     C     C    C     C     D    D     D
HCM2kAvgQ:      6   13    13     0    9     9    12    1     1     2    2     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        1  0  0  1  0    1  0  1  1  0    1  0  0  1  0    0  0  1! 0  0
Lane Group:    L   RT     RT     L   RT    RT     L   RT    RT   LTR  LTR   LTR
#LnsInGrps:     1    1     1     1    2     2     1    1     1     1    1     1
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12   12    12    12   12    12    12   12    12    12   12    12
CrsswalkWid:         8                8                8                8
% Hev Veh:           2                2                2                2
Grade:              0%               0%               0%               0%
Parking/Hr:         No               No               No               No
Bus Stp/Hr:          0                0                0                0
Area Type:    < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > >
Cnft Ped/Hr:         0                0                0                0
ExclusiveRT:     Include          Include          Include          Include
% RT Prtct:          0                0                0                0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:     1 xxxx  xxxx     1 xxxx  xxxx     1 xxxx  xxxx     4    4     4
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Hev Veh Adj: 0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98  0.98 0.98  0.98
Grade Adj:   1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Parking Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  1.00 1.00  1.00
Bus Stp Adj: xxxx 1.00  1.00  xxxx 1.00  1.00  xxxx 1.00  1.00  1.00 1.00  1.00
Area Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
RT Adj:      xxxx 1.00  1.00  xxxx 0.94  0.94  xxxx 0.87  0.87  0.95 0.95  0.95
LT Adj:      0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.95 xxxx xxxxx  0.98 0.98  0.98
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 0.98  0.98  0.93 0.92  0.92  0.93 0.85  0.85  0.91 0.91  0.91
Usr Sat Adj: 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 Sat Adj: 1.00 1.00  1.00  1.00 0.95  0.95  1.00 1.00  1.00  1.00 1.00  1.00
Fnl Sat Adj: 0.93 0.98  0.98  0.93 0.87  0.87  0.93 0.85  0.85  0.91 0.91  0.91
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > > >
DelAdjFctr:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
```

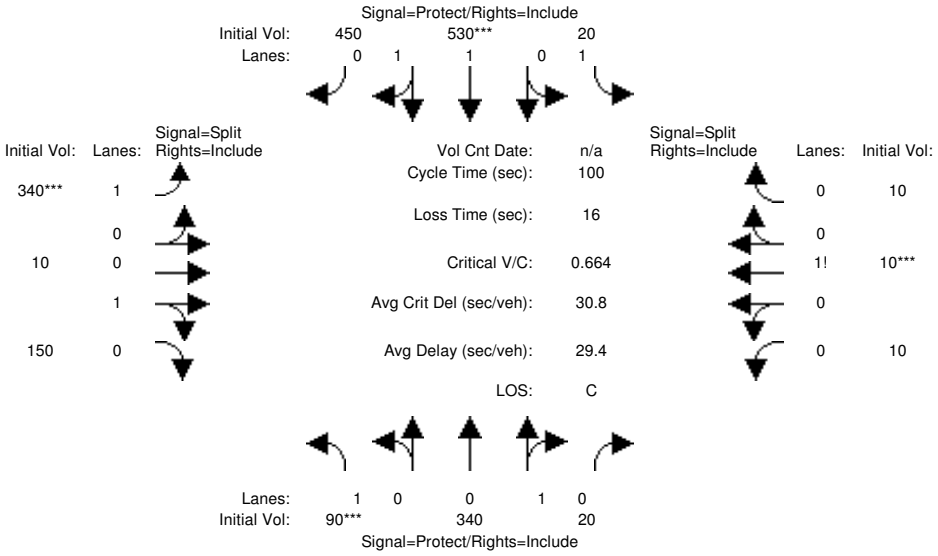


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.17 0.38  0.38  0.05 0.26  0.26  0.34 0.34  0.34  0.07 0.07  0.07
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           4.9 11.4  11.4   0.3  7.0   7.0   9.8  1.3   1.3   1.3  1.3   1.3
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.5  2.1   2.1   0.1  1.5   1.5   2.0  0.1   0.1   0.7  0.7   0.7
HCM2KQueue:   6.4 13.5  13.5   0.4  8.5   8.5  11.9  1.5   1.5   2.0  2.0   2.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.17  1.17  1.20 1.18  1.18  1.17 1.20  1.20  1.20 1.20  1.20
HCM2k70thQ:   7.6 15.8  15.8   0.5 10.1  10.1  13.9  1.8   1.8   2.4  2.4   2.4
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.54 1.49  1.49  1.60 1.53  1.53  1.50 1.59  1.59  1.58 1.58  1.58
HCM2k85thQ:   9.9 20.1  20.1   0.6 13.0  13.0  17.8  2.4   2.4   3.1  3.1   3.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.69 1.60  1.60  1.79 1.66  1.66  1.62 1.77  1.77  1.76 1.76  1.76
HCM2k90thQ:  10.8 21.6  21.6   0.7 14.1  14.1  19.2  2.6   2.6   3.5  3.5   3.5
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.92 1.78  1.78  2.09 1.87  1.87  1.81 2.05  2.05  2.04 2.04  2.04
HCM2k95thQ:  12.3 24.0  24.0   0.8 16.0  16.0  21.5  3.1   3.1   4.0  4.0   4.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.31 2.06  2.06  2.67 2.22  2.22  2.10 2.59  2.59  2.56 2.56  2.56
HCM2k98thQ:  14.8 27.7  27.7   1.0 18.9  18.9  24.9  3.9   3.9   5.1  5.1   5.1
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  44.1  101   2.1   2.4 68.4  50.8  88.5  1.7  10.4   4.8  2.4   4.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     62.561 pounds
                      10.135 gallons
Carbon Dioxide:      195.190 pounds
Carbon Monoxide:      15.699 pounds
Hydrocarbons:          2.981 pounds
Nitrogen Oxides:       0.532 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     59.289 pounds
                       9.605 gallons
Carbon Dioxide:      184.981 pounds
Carbon Monoxide:      15.441 pounds
Hydrocarbons:          2.929 pounds
Nitrogen Oxides:       0.479 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj PM

Intersection #22: Delta Shores Circle North/24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	90	340	20	20	530	450	340	10	150	10	10	10
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	340	20	20	530	450	340	10	150	10	10	10
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	340	20	20	530	450	340	10	150	10	10	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	340	20	20	530	450	340	10	150	10	10	10
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	340	20	20	530	450	340	10	150	10	10	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.97	0.97	0.93	0.87	0.87	0.93	0.84	0.84	0.92	0.92	0.92
Lanes:	1.00	0.94	0.06	1.00	1.08	0.92	1.00	0.06	0.94	0.34	0.33	0.33
Final Sat.:	1769	1744	103	1769	1781	1512	1769	100	1499	583	583	583
Capacity Analysis Module:												
Vol/Sat:	0.05	0.19	0.19	0.01	0.30	0.30	0.19	0.10	0.10	0.02	0.02	0.02
Crit Moves:	****				****		****				****	
Green/Cycle:	0.07	0.39	0.39	0.10	0.42	0.42	0.27	0.27	0.27	0.07	0.07	0.07
Volume/Cap:	0.70	0.49	0.49	0.11	0.70	0.70	0.70	0.37	0.37	0.24	0.24	0.24
Delay/Veh:	61.4	23.3	23.3	41.1	25.3	25.3	37.2	29.8	29.8	45.0	45.0	45.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.4	23.3	23.3	41.1	25.3	25.3	37.2	29.8	29.8	45.0	45.0	45.0
LOS by Move:	E	C	C	D	C	C	D	C	C	D	D	D
HCM2kAvgQ:	4	8	8	1	14	14	11	4	4	1	1	1
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	0 1	0	1	0 1	1	0	1	0	0 1	0	0	0	1!	0	0
Lane Group:	L	RT	RT	L	RT	RT	L	RT	RT	LTR	LTR	LTR
#LnsInGrps:	1	1	1	1	2	2	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	4	4	4
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	1.00	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.99	0.99	xxxx	0.93	0.93	xxxx	0.86	0.86	0.96	0.96	0.96
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.98	0.98	0.98
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.97	0.97	0.93	0.91	0.91	0.93	0.84	0.84	0.92	0.92	0.92
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.97	0.97	0.93	0.87	0.87	0.93	0.84	0.84	0.92	0.92	0.92
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #22 Delta Shores Circle North/24th Street


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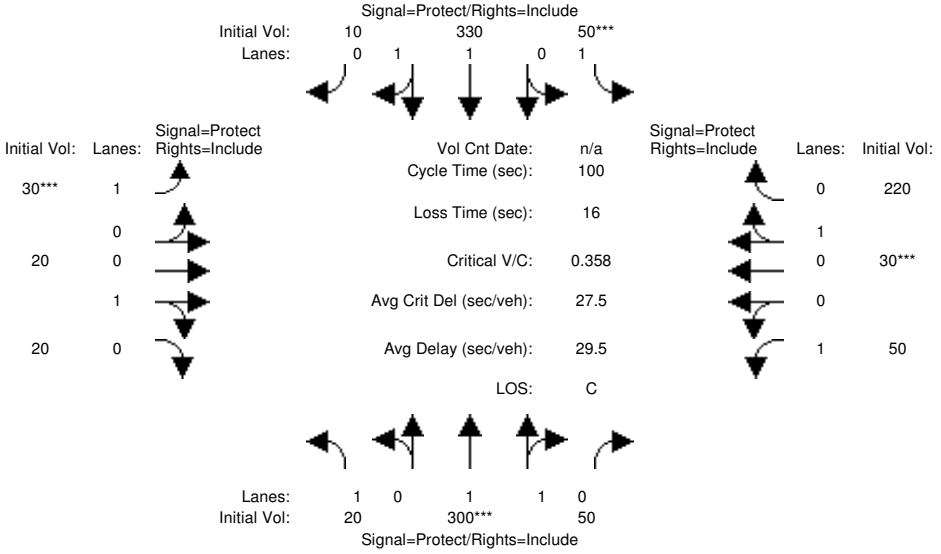
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.07 0.39  0.39  0.10 0.42  0.42  0.27 0.27  0.27  0.07 0.07  0.07
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           2.4  7.5   7.5   0.5 11.8  11.8   8.5  3.6   3.6   0.8  0.8   0.8
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           1.7  1.0   1.0   0.1  2.2   2.2   2.1  0.6   0.6   0.3  0.3   0.3
HCM2KQueue:   4.2  8.5   8.5   0.6 13.9  13.9  10.6  4.2   4.2   1.1  1.1   1.1
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.18  1.18  1.20 1.17  1.17  1.18 1.19  1.19  1.20 1.20  1.20
HCM2k70thQ:   5.0 10.0  10.0   0.8 16.3  16.3  12.5  4.9   4.9   1.3  1.3   1.3
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.56 1.53  1.53  1.59 1.49  1.49  1.51 1.56  1.56  1.59 1.59  1.59
HCM2k85thQ:   6.5 12.9  12.9   1.0 20.7  20.7  16.0  6.5   6.5   1.8  1.8   1.8
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.72 1.66  1.66  1.79 1.60  1.60  1.64 1.72  1.72  1.78 1.78  1.78
HCM2k90thQ:   7.2 14.1  14.1   1.1 22.3  22.3  17.3  7.2   7.2   2.0  2.0   2.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.98 1.87  1.87  2.08 1.78  1.78  1.83 1.98  1.98  2.06 2.06  2.06
HCM2k95thQ:   8.2 15.9  15.9   1.3 24.8  24.8  19.4  8.2   8.2   2.3  2.3   2.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.43 2.22  2.22  2.65 2.04  2.04  2.14 2.43  2.43  2.62 2.62  2.62
HCM2k98thQ:  10.1 18.8  18.8   1.7 28.5  28.5  22.7 10.1  10.1   2.9  2.9   2.9
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #22 Delta Shores Circle North/24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  22.0 63.9   3.8   4.5  109  92.3  76.4  2.0  30.3   2.4  2.4   2.4
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     65.312 pounds
                      10.581 gallons
Carbon Dioxide:      203.775 pounds
Carbon Monoxide:      16.230 pounds
Hydrocarbons:          3.032 pounds
Nitrogen Oxides:       0.567 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     61.664 pounds
                       9.990 gallons
Carbon Dioxide:      192.392 pounds
Carbon Monoxide:      15.943 pounds
Hydrocarbons:          2.974 pounds
Nitrogen Oxides:       0.509 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj AM

Intersection #23: Street C/ 24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	20	300	50	50	330	10	30	20	20	50	30	220
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:	20	300	50	50	330	10	30	20	20	50	30	220
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:	20	300	50	50	330	10	30	20	20	50	30	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	300	50	50	330	10	30	20	20	50	30	220
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:	20	300	50	50	330	10	30	20	20	50	30	220
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.93	0.93	0.93	0.93	0.91	0.91	0.93	0.85	0.85
Lanes:	1.00	1.71	0.29	1.00	1.94	0.06	1.00	0.50	0.50	1.00	0.12	0.88
Final Sat.:	1769	2969	495	1769	3420	104	1769	861	861	1769	194	1422
Capacity Analysis Module:												
Vol/Sat:	0.01	0.10	0.10	0.03	0.10	0.10	0.02	0.02	0.02	0.03	0.15	0.15
Crit Moves:		****		****			****				****	
Green/Cycle:	0.12	0.28	0.28	0.08	0.24	0.24	0.05	0.28	0.28	0.20	0.43	0.43
Volume/Cap:	0.09	0.36	0.36	0.36	0.41	0.41	0.34	0.08	0.08	0.14	0.36	0.36
Delay/Veh:	39.1	29.0	29.0	45.3	32.5	32.5	48.2	26.6	26.6	33.1	19.5	19.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.1	29.0	29.0	45.3	32.5	32.5	48.2	26.6	26.6	33.1	19.5	19.5
LOS by Move:	D	C	C	D	C	C	D	C	C	C	B	B
HCM2kAvgQ:	1	5	5	2	5	5	1	1	1	1	5	5
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	1	0	0	1	0
Lane Group:	L	RT		RT	L	RT		RT	L	RT		RT	L	RT		RT	L	RT		RT
#LnsInGrps:	1	2		2	1	2		2	1	1		1	1	1		1	1	1		1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12		12	12	12		12	12	12		12	12	12		12	12	12		12
CrsswalkWid:		8			8				8				8				8			
% Hev Veh:		2			2				2				2				2			
Grade:		0%			0%				0%				0%				0%			
Parking/Hr:		No			No				No				No				No			
Bus Stp/Hr:		0			0				0				0				0			
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >																			
Cnft Ped/Hr:		0			0				0				0				0			
ExclusiveRT:		Include			Include				Include				Include				Include			
% RT Prtct:		0			0				0				0				0			
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.98	0.98	xxxx	1.00	1.00	xxxx	0.93	0.93	xxxx	0.87	0.87
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.96	0.96	0.93	0.98	0.98	0.93	0.91	0.91	0.93	0.85	0.85
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.91	0.91	0.93	0.93	0.93	0.93	0.91	0.91	0.93	0.85	0.85
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >																			
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >																			
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #23 Street C/ 24th Street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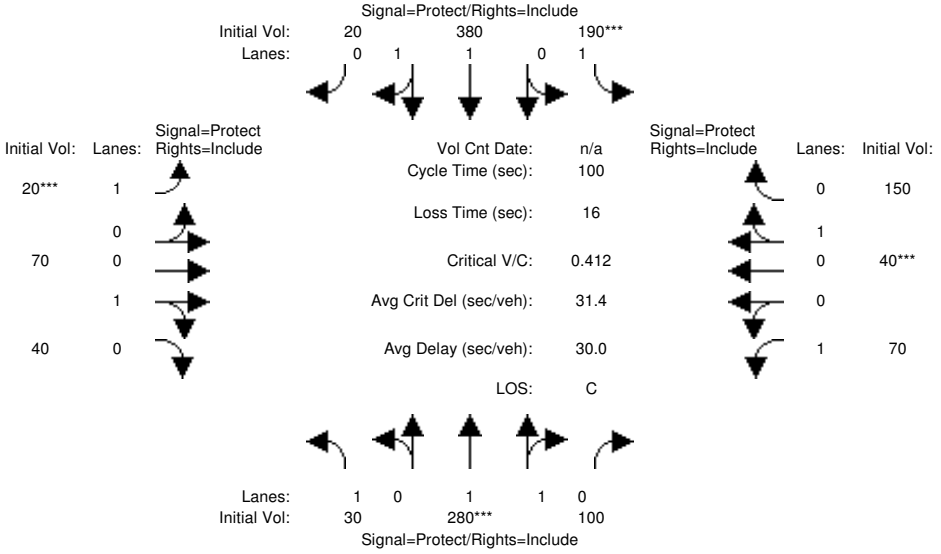
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.12 0.28  0.28  0.08 0.24  0.24  0.05 0.28  0.28  0.20 0.43  0.43
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.5  4.1   4.1   1.3  4.2   4.2   0.8  0.8   0.8   1.1  4.7   4.7
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.1  0.6   0.6   0.5  0.7   0.7   0.5  0.1   0.1   0.2  0.6   0.6
HCM2KQueue:   0.6  4.6   4.6   1.9  4.9   4.9   1.3  0.9   0.9   1.3  5.2   5.2
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.19  1.20 1.19  1.19  1.20 1.20  1.20  1.20 1.19  1.19
HCM2k70thQ:   0.7  5.5   5.5   2.2  5.8   5.8   1.5  1.1   1.1   1.6  6.2   6.2
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.59 1.56  1.56  1.58 1.56  1.56  1.59 1.59  1.59  1.59 1.55  1.55
HCM2k85thQ:   0.9  7.2   7.2   2.9  7.6   7.6   2.0  1.4   1.4   2.1  8.1   8.1
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.79 1.72  1.72  1.76 1.71  1.71  1.78 1.78  1.78  1.77 1.71  1.71
HCM2k90thQ:   1.1  8.0   8.0   3.3  8.3   8.3   2.3  1.6   1.6   2.3  8.9   8.9
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.08 1.96  1.96  2.04 1.96  1.96  2.06 2.07  2.07  2.06 1.95  1.95
HCM2k95thQ:   1.2  9.1   9.1   3.8  9.5   9.5   2.6  1.9   1.9   2.7 10.2  10.2
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.66 2.40  2.40  2.57 2.39  2.39  2.61 2.63  2.63  2.60 2.37  2.37
HCM2k98thQ:   1.6 11.1  11.1   4.8 11.6  11.6   3.4  2.4   2.4   3.4 12.4  12.4
                     Fuel Consumption and Emissions
                       2000 HCM Operations Method
                         Base Volume Alternative
*******************************************************************************
Intersection #23 Street C/ 24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   4.4 60.0  10.0  11.9 69.7   2.1   7.2  3.7   3.7  10.3  5.1  37.1
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     37.183 pounds
                       6.024 gallons
Carbon Dioxide:      116.010 pounds
Carbon Monoxide:       9.242 pounds
Hydrocarbons:          1.730 pounds
Nitrogen Oxides:       0.320 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     35.118 pounds
                       5.689 gallons
Carbon Dioxide:      109.569 pounds
Carbon Monoxide:       9.080 pounds
Hydrocarbons:          1.698 pounds
Nitrogen Oxides:       0.287 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #23: Street C/ 24th Street



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	30	280	100	190	380	20	20	70	40	70	40	150
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	280	100	190	380	20	20	70	40	70	40	150
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	280	100	190	380	20	20	70	40	70	40	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	280	100	190	380	20	20	70	40	70	40	150
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	280	100	190	380	20	20	70	40	70	40	150
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.86	0.86
Lanes:	1.00	1.47	0.53	1.00	1.90	0.10	1.00	0.64	0.36	1.00	0.21	0.79
Final Sat.:	1769	2505	895	1769	3337	176	1769	1120	640	1769	346	1297
Capacity Analysis Module:												
Vol/Sat:	0.02	0.11	0.11	0.11	0.11	0.11	0.01	0.06	0.06	0.04	0.12	0.12
Crit Moves:		****		****			****				****	
Green/Cycle:	0.16	0.26	0.26	0.25	0.36	0.36	0.05	0.19	0.19	0.13	0.27	0.27
Volume/Cap:	0.11	0.42	0.42	0.42	0.32	0.32	0.23	0.33	0.33	0.29	0.42	0.42
Delay/Veh:	36.2	30.8	30.8	31.9	23.3	23.3	46.9	35.7	35.7	39.7	30.5	30.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.2	30.8	30.8	31.9	23.3	23.3	46.9	35.7	35.7	39.7	30.5	30.5
LOS by Move:	D	C	C	C	C	C	D	D	D	D	C	C
HCM2kAvgQ:	1	5	5	5	5	5	1	3	3	2	5	5
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	1	0	0	1	0
Lane Group:	L	RT	RT	L	RT	RT	L	RT	RT	L	RT	RT
#LnsInGrps:	1	2	2	1	2	2	1	1	1	1	1	1
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.96	0.96	xxxx	0.99	0.99	xxxx	0.95	0.95	xxxx	0.88	0.88
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.94	0.94	0.93	0.97	0.97	0.93	0.93	0.93	0.93	0.86	0.86
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.89	0.89	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.86	0.86
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

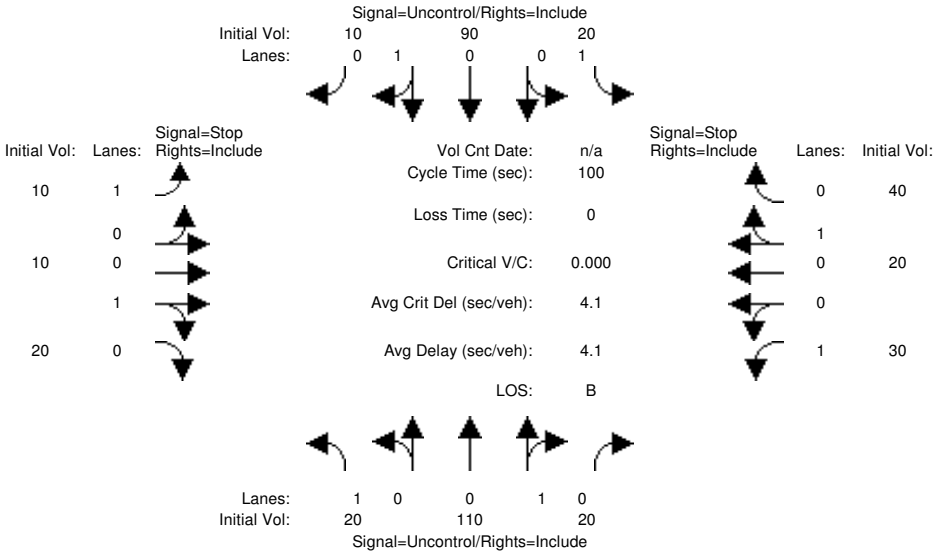
Intersection #23 Street C/ 24th Street


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.16 0.26  0.26  0.25 0.36  0.36  0.05 0.19  0.19  0.13 0.27  0.27
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.7  4.6   4.6   4.4  4.2   4.2   0.5  2.6   2.6   1.8  4.3   4.3
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.1  0.7   0.7   0.7  0.5   0.5   0.3  0.5   0.5   0.4  0.7   0.7
HCM2KQueue:   0.8  5.3   5.3   5.1  4.7   4.7   0.8  3.1   3.1   2.2  5.1   5.1
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.19  1.19  1.19 1.19  1.19  1.20 1.19  1.19  1.19 1.19  1.19
HCM2k70thQ:   1.0  6.3   6.3   6.1  5.6   5.6   1.0  3.7   3.7   2.6  6.0   6.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.59 1.55  1.55  1.55 1.56  1.56  1.59 1.57  1.57  1.58 1.55  1.55
HCM2k85thQ:   1.3  8.3   8.3   8.0  7.3   7.3   1.3  4.9   4.9   3.4  7.9   7.9
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.78 1.71  1.71  1.71 1.72  1.72  1.78 1.74  1.74  1.76 1.71  1.71
HCM2k90thQ:   1.5  9.1   9.1   8.8  8.0   8.0   1.5  5.5   5.5   3.8  8.7   8.7
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.07 1.95  1.95  1.95 1.96  1.96  2.07 2.00  2.00  2.03 1.95  1.95
HCM2k95thQ:   1.7 10.4  10.4  10.0  9.2   9.2   1.7  6.3   6.3   4.4  9.9   9.9
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.64 2.36  2.36  2.37 2.40  2.40  2.64 2.49  2.49  2.55 2.38  2.38
HCM2k98thQ:   2.2 12.6  12.6  12.2 11.2  11.2   2.2  7.8   7.8   5.5 12.0  12.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #23 Street C/ 24th Street
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   6.4 58.0  20.7  39.7 68.7   3.6   4.8 15.2   8.7  15.8  8.2  30.8
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     46.253 pounds
                       7.493 gallons
Carbon Dioxide:      144.310 pounds
Carbon Monoxide:      11.513 pounds
Hydrocarbons:          2.160 pounds
Nitrogen Oxides:       0.397 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     43.707 pounds
                       7.081 gallons
Carbon Dioxide:      136.365 pounds
Carbon Monoxide:      11.313 pounds
Hydrocarbons:          2.120 pounds
Nitrogen Oxides:       0.357 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Cum w/proj AM

Intersection #24: Street A/Street C



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	20	110	20	20	90	10	10	10	20	30	20	40
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:	20	110	20	20	90	10	10	10	20	30	20	40
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:	20	110	20	20	90	10	10	10	20	30	20	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	20	110	20	20	90	10	10	10	20	30	20	40
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	100	xxxx	xxxxx	130	xxxx	xxxxx	325	305	95	310	300	120
Potent Cap.:	1493	xxxx	xxxxx	1455	xxxx	xxxxx	628	608	962	642	612	931
Move Cap.:	1493	xxxx	xxxxx	1455	xxxx	xxxxx	574	592	962	608	596	931
Volume/Cap:	0.01	xxxx	xxxx	0.01	xxxx	xxxx	0.02	0.02	0.02	0.05	0.03	0.04
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	7.5	xxxx	xxxxx	11.4	xxxx	xxxxx	11.2	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	B	*	*	B	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	796	xxxx	xxxx	784
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.1	xxxxx	xxxx	0.2
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.7	xxxxx	xxxx	10.0
Shared LOS:	*	*	*	*	*	*	*	*	A	*	*	A
ApproachDel:	xxxxxx			xxxxxx			10.1			10.4		
ApproachLOS:	*			*			B			B		
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Peak Hour Delay Signal Warrant Report

****

Intersection #24 Street A/Street C

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0	0 1	0	1	0 0 1	0	1	0 0 1	0	1	0 0 1
Initial Vol:	20	110	20	20	90	10	10	10	20	30	20	40
ApproachDel:	xxxxxx			xxxxxx			10.1			10.4		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=40]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=400]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=90]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=400]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

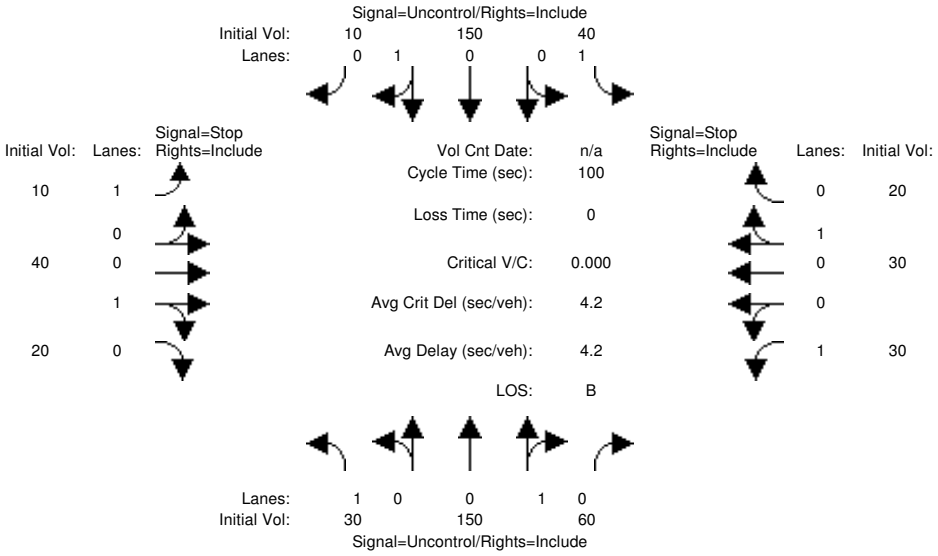

```
The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #24 Street A/Street C
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
-----------|--------------||--------------||--------------||--------------|
Approach:      North Bound       South Bound       East Bound       West Bound
Movement:     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R
-----------|--------------||--------------||--------------||--------------|
Control:       Uncontrolled      Uncontrolled      Stop Sign        Stop Sign
Lanes:        1  0  0  1  0     1  0  0  1  0     1  0  0  1  0     1  0  0  1  0
Initial Vol:   20  110    20     20   90    10     10   10    20     30   20    40
-----------|--------------||--------------||--------------||--------------|
Major Street Volume:              270
Minor Approach Volume:            90
Minor Approach Volume Threshold: 937
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum w/proj PM

Intersection #24: Street A/Street C



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	30	150	60	40	150	10	10	40	20	30	30	20
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	150	60	40	150	10	10	40	20	30	30	20
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	150	60	40	150	10	10	40	20	30	30	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	30	150	60	40	150	10	10	40	20	30	30	20
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	160	xxxx	xxxxx	210	xxxx	xxxxx	500	505	155	505	480	180
Potent Cap.:	1419	xxxx	xxxxx	1361	xxxx	xxxxx	481	470	891	478	485	863
Move Cap.:	1419	xxxx	xxxxx	1361	xxxx	xxxxx	430	446	891	418	461	863
Volume/Cap:	0.02	xxxx	xxxx	0.03	xxxx	xxxx	0.02	0.09	0.02	0.07	0.07	0.02
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.1	xxxx	xxxxx	0.1	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	7.6	xxxx	xxxxx	7.7	xxxx	xxxxx	13.6	xxxx	xxxxx	14.3	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	B	*	*	B	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	535	xxxx	xxxx	566
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	0.4	xxxxx	xxxx	0.3
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	12.6	xxxxx	xxxx	12.0
Shared LOS:	*	*	*	*	*	*	*	*	B	*	*	B
ApproachDel:	xxxxxx			xxxxxx			12.7			12.8		
ApproachLOS:	*			*			B			B		
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Peak Hour Delay Signal Warrant Report

****

Intersection #24 Street A/Street C

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0
Initial Vol:	30	150	60	40	150	10	10	40	20	30	30	20
ApproachDel:	xxxxxx			xxxxxx			12.7			12.8		

Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=70]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=590]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=80]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=590]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #24 Street A/Street C

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Lanes:	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0	1	0	0	1	0
Initial Vol:	30	150		60		40	150		10		10	40		20		30	30		20	

Major Street Volume: 440
Minor Approach Volume: 80
Minor Approach Volume Threshold: 727

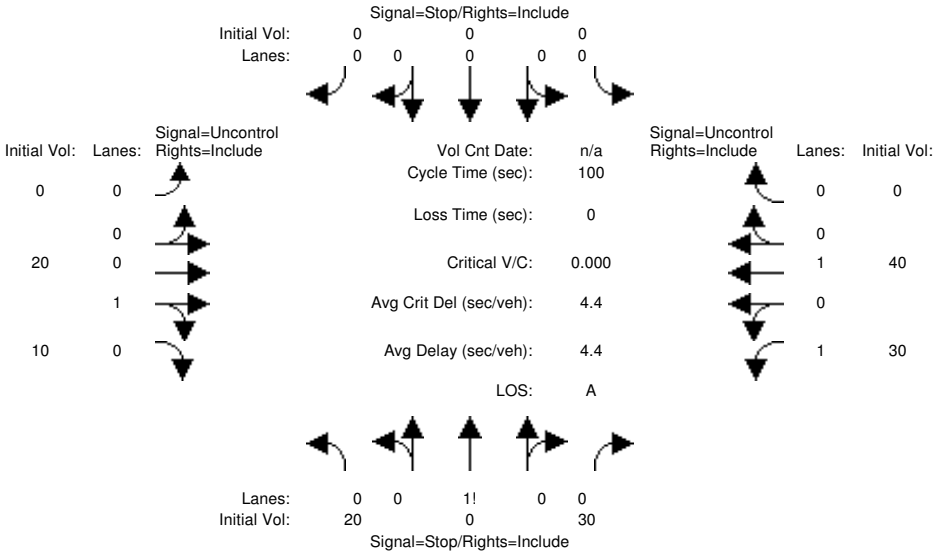
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future. Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction. Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.

Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum w/proj AM

Intersection #25: Street C/Street B




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      20    0    30     0    0     0     0   20    10    30   40     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:   20    0    30     0    0     0     0   20    10    30   40     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:    20    0    30     0    0     0     0   20    10    30   40     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   20    0    30     0    0     0     0   20    10    30   40     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4  6.5   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  125  125    25  xxxx xxxx xxxxx  xxxx xxxx xxxxx    30 xxxx xxxxx
Potent Cap.:  870  765  1051  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1583 xxxx xxxxx
Move Cap.:    857  751  1051  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1583 xxxx xxxxx
Volume/Cap:  0.02 0.00  0.03  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.02 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.1 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.3 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  964 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.2 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx  8.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    A     *     *    *     *     *    *     *     *    *     *
ApproachDel:       8.9           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         A               *                *                *
------------|---------------||---------------||---------------||---------------|
HevVeh:             2%              2%               2%               2%
Grade:              0%              0%               0%               0%
Peds/Hour:          0               0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #25 Street C/Street B
*******************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:       0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:   20    0    30     0    0     0     0   20    10    30   40     0
ApproachDel:       8.9           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=50]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=150]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
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"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #25 Street C/Street B
*******************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Initial Vol:	20		0		30	0		0		0	0		20		10	30		40		0

Major Street Volume: 100
Minor Approach Volume: 50
Minor Approach Volume Threshold: 1078

SIGNAL WARRANT DISCLAIMER
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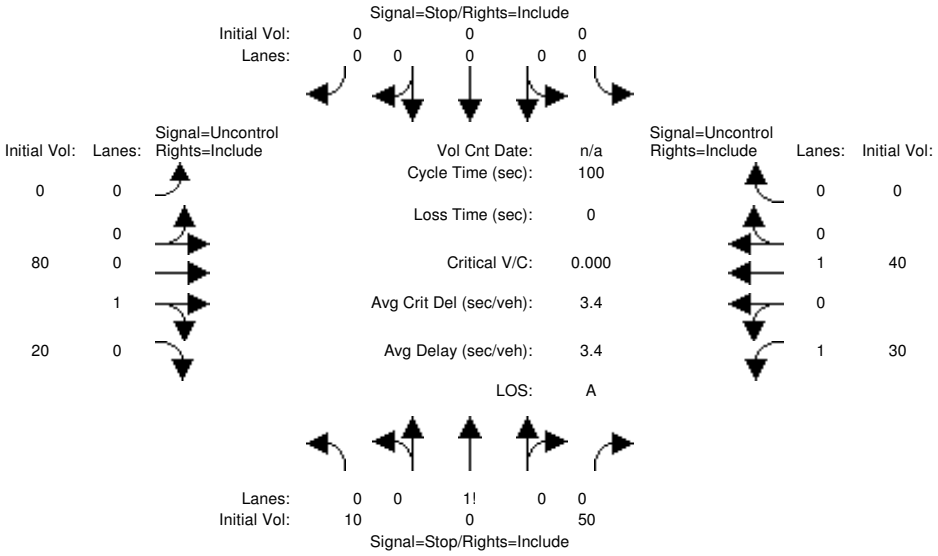
Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum w/proj PM

Intersection #25: Street C/Street B



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	10	0	50	0	0	0	0	80	20	30	40	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:	10	0	50	0	0	0	0	80	20	30	40	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:	10	0	50	0	0	0	0	80	20	30	40	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	10	0	50	0	0	0	0	80	20	30	40	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	190	190	90	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	100	xxxx	xxxxx
Potent Cap.:	799	705	968	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1493	xxxx	xxxxx
Move Cap.:	787	691	968	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1493	xxxx	xxxxx
Volume/Cap:	0.01	0.00	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	932	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	9.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	*	*	*
ApproachDel:		9.1			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		A			*			*			*	
HevVeh:		2%			2%			2%			2%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Peak Hour Delay Signal Warrant Report

****

Intersection #25 Street C/Street B

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	1	0	1 0
Initial Vol:	10	0	50	0	0	0	0	80	20	30	40	0
ApproachDel:		9.1			xxxxxx			xxxxxx			xxxxxx	

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=60]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=230]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #25 Street C/Street B

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Initial Vol:	10		0		50	0		0		0	0		80		20	30		40		0

Major Street Volume: 170
Minor Approach Volume: 60
Minor Approach Volume Threshold: 895

SIGNAL WARRANT DISCLAIMER
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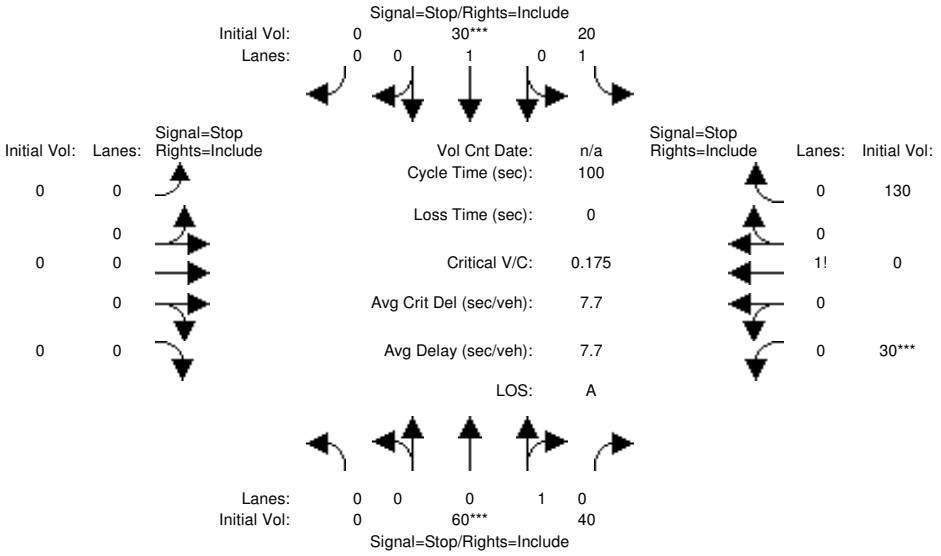
Delta Shore

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Cum w/proj AM

Intersection #26: Street D/Street E



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	60	40	20	30	0	0	0	0	30	0	130
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	60	40	20	30	0	0	0	0	30	0	130
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	60	40	20	30	0	0	0	0	30	0	130
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	60	40	20	30	0	0	0	0	30	0	130
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	60	40	20	30	0	0	0	0	30	0	130
Saturation Flow Module:												
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	0.60	0.40	1.00	1.00	0.00	0.00	0.00	0.00	0.19	0.00	0.81
Final Sat.:	0	501	334	646	710	0	0	0	0	172	0	745
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.12	0.12	0.03	0.04	xxxx	xxxx	xxxx	xxxx	0.17	xxxx	0.17
Crit Moves:		****			****					****		
Delay/Veh:	0.0	7.7	7.7	8.3	7.8	0.0	0.0	0.0	0.0	7.6	0.0	7.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	7.7	7.7	8.3	7.8	0.0	0.0	0.0	0.0	7.6	0.0	7.6
LOS by Move:	*	A	A	A	A	*	*	*	*	A	*	A
ApproachDel:		7.7			8.0			xxxxxx			7.6	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		7.7			8.0			xxxxxx			7.6	
LOS by Appr:		A			A			*			A	
AllWayAvgQ:	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
Time Period: 0.25 hour												
HevVeh:		2%			2%			2%			2%	
Alpha Value: 0.01												
GroupType:		3A			5			X			2	
P[C1]:		0.7728			0.7348			x.xxxx			0.8228	
P[C2]:		0.0579			0.0960			x.xxxx			0.0000	
P[C3]:		0.1575			0.1497			x.xxxx			0.1691	
P[C4]:		0.0118			0.0196			x.xxxx			0.0081	
P[C5]:		0.0000			0.0000			x.xxxx			0.0000	
Padj[C1]:		0.00408			0.00454			xx.xxxxx			0.00362	
Padj[C2]:		0.00123			0.00093			xx.xxxxx			0.00185	
Padj[C3]:		-0.00461			-0.00430			xx.xxxxx			-0.00499	
Padj[C4]:		-0.00071			-0.00117			xx.xxxxx			-0.00048	
Padj[C5]:		0.00000			0.00000			xx.xxxxx			0.00000	
Lanes:	L1		L2	L1		L2	L1		L2	L1		L2
LaneType:	LTR		NOLANE	LEFT	THRU	NOLANE	NOLANE		NOLANE	LTR		NOLANE
HeadwayAdj:	-0.206	xx.xxx		0.534	0.034		xx.xxx	xx.xxx		-0.416	xx.xxx	
Volume:	100	xxxxxx		20	30		xxxxxx	xxxxxx		160	xxxxxx	
Capacity:	836	xxxxx		646	710		xxxxx	xxxxx		917	xxxxx	
DegOfUtil:	0.12	x.xx		0.03	0.04		x.xx	x.xx		0.17	x.xx	
DepHeadway:	4.17	xx.xx		5.42	4.92		xx.xx	xx.xx		3.81	xx.xx	
ServiceTime:	2.2	xx.x		3.1	2.6		xx.x	xx.x		1.8	xx.x	
Delay:	7.7	xxx.x		8.3	7.8		xxx.x	xxx.x		7.6	xxx.x	
Queue:	0.1	xxx.x		0.0	0.0		xxx.x	xxx.x		0.2	xxx.x	

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	7.7	8.0	xxx.x	7.6
Delay Adj:	1.00	1.00	x.xx	1.00
ApprAdjDel:	7.7	8.0	xxx.x	7.6
LOS by Appr:	A	A	*	A
OverallDel:		7.7		
OverallLOS:		A		

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #26 Street D/Street E

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound

Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	0 0 0 1 0	1 0 1 0 0	0 0 0 0 0	0 0 1! 0 0
Initial Vol:	0 60 40	20 30 0	0 0 0	30 0 130

Major Street Volume: 160
Minor Approach Volume: 100
Minor Approach Volume Threshold: 708

SIGNAL WARRANT DISCLAIMER
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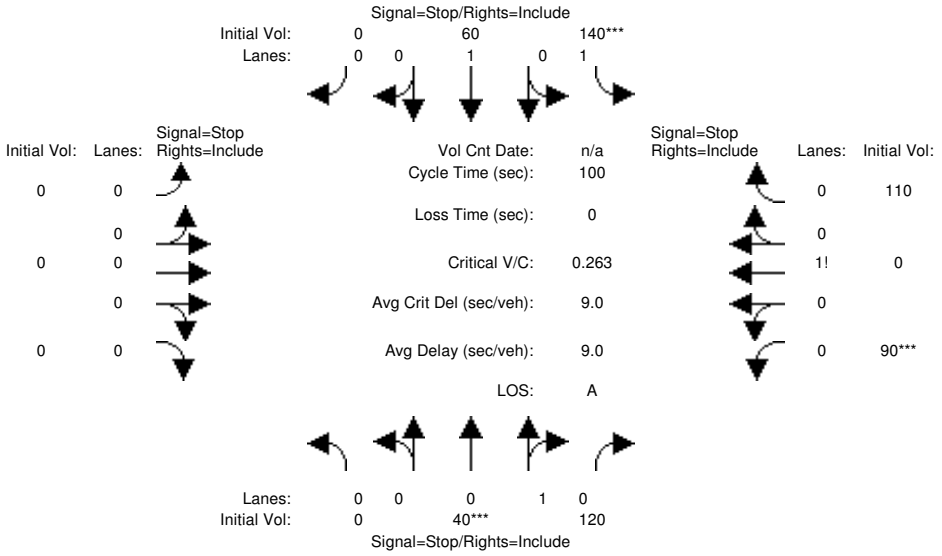
Delta Shore

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Cum w/proj PM

Intersection #26: Street D/Street E



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	40	120	140	60	0	0	0	0	90	0	110
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	40	120	140	60	0	0	0	0	90	0	110
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	40	120	140	60	0	0	0	0	90	0	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	40	120	140	60	0	0	0	0	90	0	110
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	40	120	140	60	0	0	0	0	90	0	110
Saturation Flow Module:												
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	0.25	0.75	1.00	1.00	0.00	0.00	0.00	0.00	0.45	0.00	0.55
Final Sat.:	0	202	605	623	682	0	0	0	0	342	0	418
Capacity Analysis Module:												
Vol/Sat:	xxxx	0.20	0.20	0.22	0.09	xxxx	xxxx	xxxx	xxxx	0.26	xxxx	0.26
Crit Moves:		****		****						****		
Delay/Veh:	0.0	8.3	8.3	9.9	8.3	0.0	0.0	0.0	0.0	9.0	0.0	9.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.3	8.3	9.9	8.3	0.0	0.0	0.0	0.0	9.0	0.0	9.0
LOS by Move:	*	A	A	A	A	*	*	*	*	A	*	A
ApproachDel:		8.3			9.4			xxxxxx			9.0	
Delay Adj:		1.00			1.00			xxxxx			1.00	
ApprAdjDel:		8.3			9.4			xxxxxx			9.0	
LOS by Appr:		A			A			*			A	
AllWayAvgQ:	0.2	0.2	0.2	0.3	0.1	0.0	0.0	0.0	0.0	0.3	0.3	0.3
Time Period: 0.25 hour												
HevVeh:		2%			2%			2%			2%	
Alpha Value: 0.01												
GroupType:		3A			5			X			2	
P[C1]:		0.5359			0.6066			x.xxxx			0.5786	
P[C2]:		0.2137			0.1430			x.xxxx			0.0000	
P[C3]:		0.1790			0.2027			x.xxxx			0.3670	
P[C4]:		0.0714			0.0478			x.xxxx			0.0544	
P[C5]:		0.0000			0.0000			x.xxxx			0.0000	
Padj[C1]:		0.00786			0.00692			xx.xxxxx			0.00897	
Padj[C2]:		0.00108			0.00155			xx.xxxxx			0.00476	
Padj[C3]:		-0.00466			-0.00560			xx.xxxxx			-0.01047	
Padj[C4]:		-0.00428			-0.00287			xx.xxxxx			-0.00326	
Padj[C5]:		0.00000			0.00000			xx.xxxxx			0.00000	
Lanes:	L1		L2	L1		L2	L1		L2	L1		L2
LaneType:	LTR		NOLANE	LEFT	THRU	NOLANE	NOLANE		NOLANE	LTR		NOLANE
HeadwayAdj:	-0.416	xx.xxx		0.534	0.034		xx.xxx	xx.xxx		-0.206	xx.xxx	
Volume:	160	xxxxxx		140	60		xxxxxx	xxxxxx		200	xxxxxx	
Capacity:	806	xxxxx		623	682		xxxxx	xxxxx		759	xxxxx	
DegOfUtil:	0.19	x.xx		0.22	0.09		x.xx	x.xx		0.25	x.xx	
DepHeadway:	4.30	xx.xx		5.62	5.12		xx.xx	xx.xx		4.51	xx.xx	
ServiceTime:	2.3	xx.x		3.3	2.8		xx.x	xx.x		2.5	xx.x	
Delay:	8.3	xxx.x		9.9	8.3		xxx.x	xxx.x		9.0	xxx.x	
Queue:	0.2	xxx.x		0.3	0.1		xxx.x	xxx.x		0.3	xxx.x	

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	8.3	9.4	xxx.x	9.0
Delay Adj:	1.00	1.00	x.xx	1.00
ApprAdjDel:	8.3	9.4	xxx.x	9.0
LOS by Appr:	A	A	*	A

OverallDel: 9.0
OverallLOS: A

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #26 Street D/Street E

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound


```
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:         Stop Sign        Stop Sign        Stop Sign        Stop Sign
Lanes:        0  0  0  1  0    1  0  1  0  0    0  0  0  0  0    0  0  1! 0  0
Initial Vol:     0   40   120   140   60     0     0    0     0    90    0   110
------------|---------------||---------------||---------------||---------------|
Major Street Volume:              360
Minor Approach Volume:            200
Minor Approach Volume Threshold: 637
------------------------------------------------------------------------------
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a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

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a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
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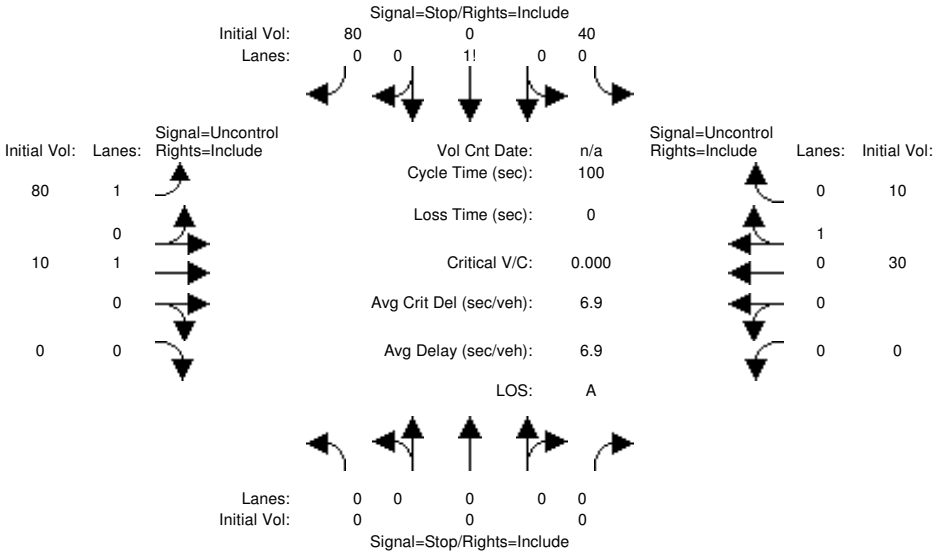
Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum w/proj AM

Intersection #27: Street E/Street G




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0     0     0    40     0    80    80   10     0     0   30    10
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    40     0    80    80   10     0     0   30    10
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    40     0    80    80   10     0     0   30    10
Reduct Vol:     0     0     0     0     0     0     0    0     0     0    0     0
FinalVolume:    0     0     0    40     0    80    80   10     0     0   30    10
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   6.4  6.5   6.2   4.1 xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx   3.5  4.0   3.3   2.2 xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   205  205    35    40 xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx   783  691  1038  1570 xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:   xxxx xxxx xxxxx   753  656  1038  1570 xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  xxxx xxxx  xxxx  0.05 0.00  0.08  0.05 xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.4 xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     A    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx  922 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx  0.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx  9.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    *     *     *    A     *     *    *     *     *    *     *
ApproachDel:    xxxxxx               9.5            xxxxxx            xxxxxx
ApproachLOS:         *                 A                 *                 *
------------|---------------||---------------||---------------||---------------|
HevVeh:             2%               2%               2%               2%
Grade:              0%               0%               0%               0%
Peds/Hour:          0                0                0                0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #27 Street E/Street G
********************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:       0  0  0  0  0    0  0  1! 0  0    1  0  1  0  0    0  0  0  1  0
Initial Vol:    0     0     0    40     0    80    80   10     0     0   30    10
ApproachDel:    xxxxxx               9.5            xxxxxx            xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=120]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=250]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
********************************************************************************
Intersection #27 Street E/Street G
********************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	0	0	0	0	0	1!	0	0	1	0	1	0	0	0	0	0	1	0
Initial Vol:	0		0		0	40		0		80	80		10		0	0		30		10

Major Street Volume: 130
Minor Approach Volume: 120
Minor Approach Volume Threshold: 988

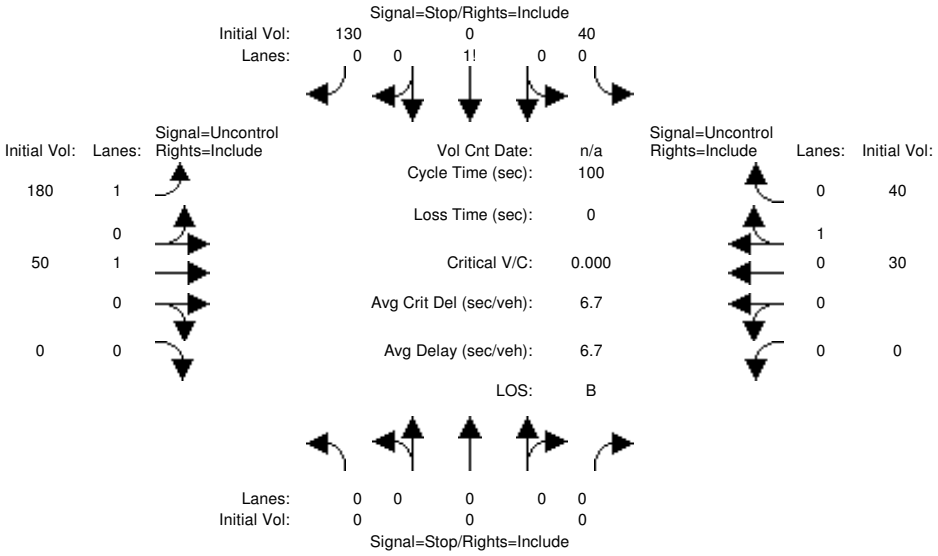
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum w/proj PM

Intersection #27: Street E/Street G



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	40	0	130	180	50	0	0	30	40
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	40	0	130	180	50	0	0	30	40
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	40	0	130	180	50	0	0	30	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	40	0	130	180	50	0	0	30	40
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	460	460	50	70	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	559	498	1018	1531	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	509	439	1018	1531	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.08	0.00	0.13	0.12	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	824	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			10.5			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Peak Hour Delay Signal Warrant Report

****

Intersection #27 Street E/Street G

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	0	0	0	1!	0	0	1	0	0	0	1	0
Initial Vol:	0	0	0	40	0	130	180	50	0	0	30	40		
ApproachDel:	xxxxxx			10.5			xxxxxx			xxxxxx		

Approach[southbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=170]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=470]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #27 Street E/Street G

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Lanes:	0	0	0	0	0		0	0	1!	0	0		1	0	1	0	0		0	0	0	1	0	
Initial Vol:	0		0		0		40		0		130		180		50		0		0		30		40	

Major Street Volume: 300
Minor Approach Volume: 170
Minor Approach Volume Threshold: 700

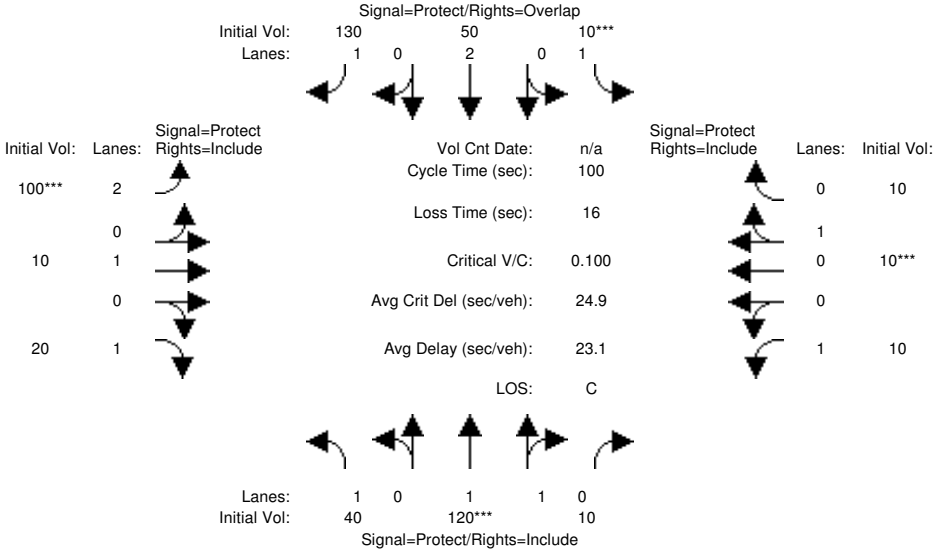
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #28: Delta Shores Circle South/Street D South



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	40	120	10	10	50	130	100	10	20	10	10	10
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:	40	120	10	10	50	130	100	10	20	10	10	10
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:	40	120	10	10	50	130	100	10	20	10	10	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	120	10	10	50	130	100	10	20	10	10	10
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:	40	120	10	10	50	130	100	10	20	10	10	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.92	0.93	0.93	0.83	0.90	0.98	0.83	0.93	0.91	0.91
Lanes:	1.00	1.85	0.15	1.00	2.00	1.00	2.00	1.00	1.00	1.00	0.50	0.50
Final Sat.:	1769	3226	269	1769	3538	1583	3432	1862	1583	1769	861	861
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.04	0.01	0.01	0.08	0.03	0.01	0.01	0.01	0.01	0.01
Crit Moves:		****		****			****				****	
Green/Cycle:	0.18	0.37	0.37	0.06	0.25	0.54	0.29	0.24	0.24	0.17	0.12	0.12
Volume/Cap:	0.13	0.10	0.10	0.10	0.06	0.15	0.10	0.02	0.05	0.03	0.10	0.10
Delay/Veh:	34.6	20.4	20.4	45.2	28.5	11.4	25.8	29.1	29.4	34.6	39.7	39.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.6	20.4	20.4	45.2	28.5	11.4	25.8	29.1	29.4	34.6	39.7	39.7
LOS by Move:	C	C	C	D	C	B	C	C	C	C	D	D
HCM2kAvgQ:	1	1	1	0	1	2	1	0	0	0	1	1
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	1	1	0	1	0	2	0	1	2	0	1	0	1	1	0	0	1	0
Lane Group:	L	RT		RT	L	T		R	L	T		R	L	RT		RT				
#LnsInGrps:	1	2		2	1	2		1	2	1		1	1	1		1				
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.99	0.99	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	0.93	0.93
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.97	0.97	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.91	0.91
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	0.95	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.92	0.92	0.93	0.93	0.83	0.90	0.98	0.83	0.93	0.91	0.91
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

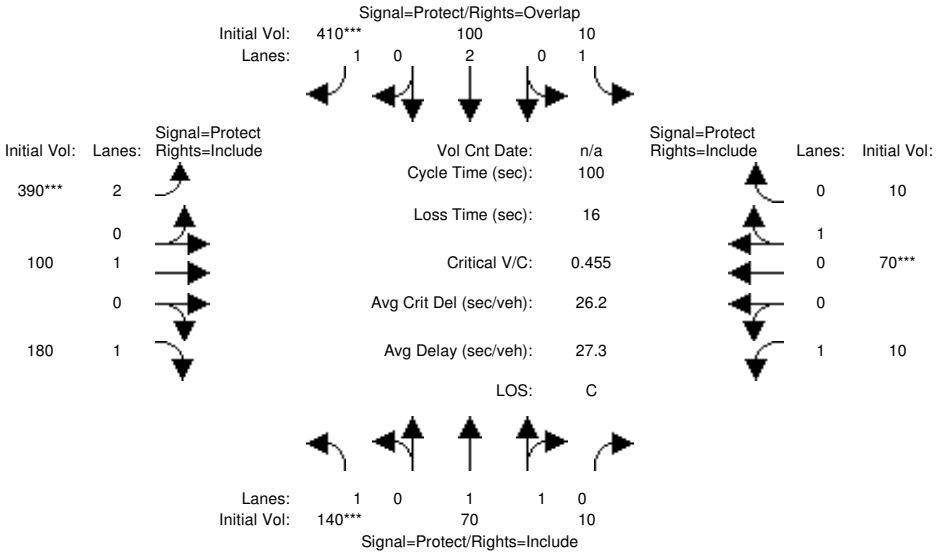
Intersection #28 Delta Shores Circle South/Street D South


```
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.18 0.37  0.37  0.06 0.25  0.54  0.29 0.24  0.24  0.17 0.12  0.12
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.9  1.2   1.2   0.3  0.6   1.8   1.0  0.2   0.4   0.2  0.5   0.5
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.1  0.1   0.1   0.1  0.1   0.2   0.1  0.0   0.1   0.0  0.1   0.1
HCM2KQueue:   1.1  1.3   1.3   0.4  0.6   2.0   1.2  0.2   0.5   0.3  0.6   0.6
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.20  1.20 1.20  1.20  1.20 1.20  1.20
HCM2k70thQ:   1.3  1.6   1.6   0.4  0.7   2.4   1.4  0.3   0.6   0.3  0.7   0.7
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.59 1.59  1.59  1.60 1.59  1.58  1.59 1.60  1.60  1.60 1.59  1.59
HCM2k85thQ:   1.7  2.1   2.1   0.6  1.0   3.1   1.8  0.4   0.8   0.4  1.0   1.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.78 1.77  1.77  1.79 1.79  1.76  1.78 1.80  1.79  1.79 1.79  1.79
HCM2k90thQ:   1.9  2.4   2.4   0.7  1.1   3.5   2.1  0.4   0.9   0.5  1.1   1.1
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.07 2.06  2.06  2.09 2.08  2.04  2.06 2.09  2.08  2.09 2.08  2.08
HCM2k95thQ:   2.2  2.8   2.8   0.8  1.3   4.0   2.4  0.5   1.0   0.6  1.3   1.3
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.62 2.60  2.60  2.67 2.65  2.56  2.62 2.68  2.66  2.68 2.65  2.65
HCM2k98thQ:   2.8  3.5   3.5   1.0  1.6   5.0   3.0  0.6   1.3   0.7  1.6   1.6
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
********************************************************************************
Intersection #28 Delta Shores Circle South/Street D South
********************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   8.4 19.5   1.6   2.4  9.5  16.1  18.2  1.9   3.9   2.1  2.2   2.2
--------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     14.623 pounds
                       2.369 gallons
Carbon Dioxide:       45.624 pounds
Carbon Monoxide:       3.555 pounds
Hydrocarbons:          0.643 pounds
Nitrogen Oxides:       0.129 pounds
--------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     13.702 pounds
                       2.220 gallons
Carbon Dioxide:       42.751 pounds
Carbon Monoxide:       3.483 pounds
Hydrocarbons:          0.628 pounds
Nitrogen Oxides:       0.115 pounds
--------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj PM

Intersection #28: Delta Shores Circle South/Street D South



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	5	7	0	5	7	0	5	7	0	5	7	0
Volume Module:												
Base Vol:	140	70	10	10	100	410	390	100	180	10	70	10
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:	140	70	10	10	100	410	390	100	180	10	70	10
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:	140	70	10	10	100	410	390	100	180	10	70	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	140	70	10	10	100	410	390	100	180	10	70	10
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:	140	70	10	10	100	410	390	100	180	10	70	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.93	0.93	0.83	0.90	0.98	0.83	0.93	0.96	0.96
Lanes:	1.00	1.75	0.25	1.00	2.00	1.00	2.00	1.00	1.00	1.00	0.87	0.13
Final Sat.:	1769	3037	434	1769	3538	1583	3432	1862	1583	1769	1598	228
Capacity Analysis Module:												
Vol/Sat:	0.08	0.02	0.02	0.01	0.03	0.26	0.11	0.05	0.11	0.01	0.04	0.04
Crit Moves:	****					****	****				****	
Green/Cycle:	0.17	0.29	0.29	0.21	0.32	0.57	0.25	0.24	0.24	0.11	0.10	0.10
Volume/Cap:	0.45	0.08	0.08	0.03	0.09	0.45	0.45	0.22	0.47	0.05	0.45	0.45
Delay/Veh:	38.1	26.0	26.0	31.8	23.8	12.9	32.1	30.7	33.5	40.3	44.6	44.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.1	26.0	26.0	31.8	23.8	12.9	32.1	30.7	33.5	40.3	44.6	44.6
LOS by Move:	D	C	C	C	C	B	C	C	C	D	D	D
HCM2kAvgQ:	4	1	1	0	1	7	6	3	5	0	3	3
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1	0	1	1	0	1	0	2	0	1	2	0	1	0	1	1	0	0	1	0
Lane Group:	L	RT		RT		L	T		R		L	T		R		L	RT		RT	
#LnsInGrps:	1	2		2		1	2		1		2	1		1		1	1		1	
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8			8			8			8		
% Hev Veh:	2			2			2			2		
Grade:	0%			0%			0%			0%		
Parking/Hr:	No			No			No			No		
Bus Stp/Hr:	0			0			0			0		
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:	0			0			0			0		
ExclusiveRT:	Include			Include			Include			Include		
% RT Prtct:	0			0			0			0		
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.98	0.98	xxxx	xxxx	0.85	xxxx	xxxx	0.85	xxxx	0.98	0.98
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	0.96	0.96	0.93	0.98	0.83	0.93	0.98	0.83	0.93	0.96	0.96
Usr Sat Adj:	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 Sat Adj:	1.00	0.95	0.95	1.00	0.95	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Fnl Sat Adj:	0.93	0.91	0.91	0.93	0.93	0.83	0.90	0.98	0.83	0.93	0.96	0.96
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

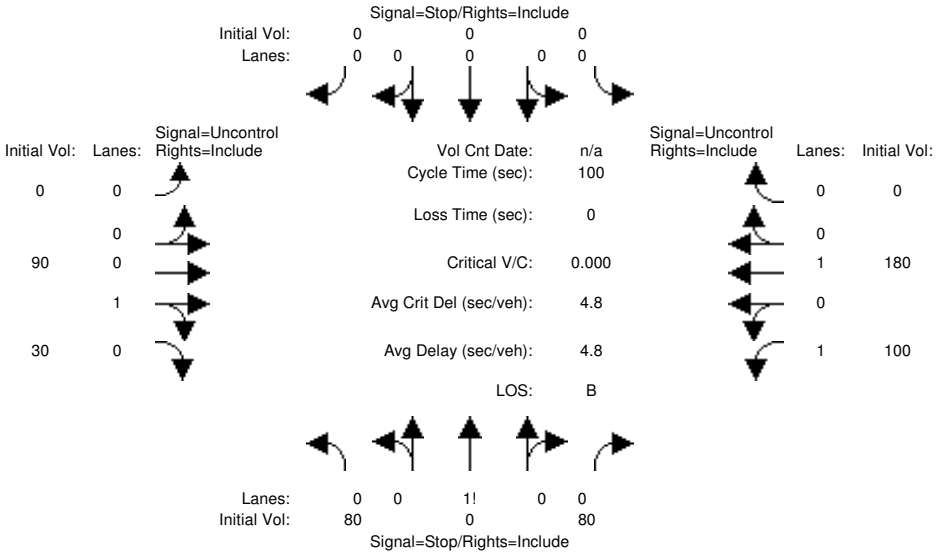
Intersection #28 Delta Shores Circle South/Street D South


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.17 0.29  0.29  0.21 0.32  0.57  0.25 0.24  0.24  0.11 0.10  0.10
ArrivalType:         3               3               3               3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           3.5  0.9   0.9   0.2  1.0   6.6   4.7  2.2   4.3   0.2  2.1   2.1
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q2:           0.8  0.1   0.1   0.0  0.1   0.8   0.8  0.3   0.9   0.1  0.8   0.8
HCM2KQueue:   4.3  0.9   0.9   0.3  1.1   7.4   5.5  2.5   5.2   0.3  2.9   2.9
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.19 1.20  1.20  1.20 1.20  1.18  1.19 1.19  1.19  1.20 1.19  1.19
HCM2k70thQ:   5.1  1.1   1.1   0.3  1.3   8.8   6.6  3.0   6.1   0.4  3.4   3.4
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.56 1.59  1.59  1.60 1.59  1.53  1.55 1.58  1.55  1.60 1.57  1.57
HCM2k85thQ:   6.7  1.5   1.5   0.4  1.8  11.4   8.6  4.0   8.0   0.5  4.5   4.5
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.72 1.78  1.78  1.80 1.78  1.68  1.70 1.75  1.71  1.79 1.75  1.75
HCM2k90thQ:   7.4  1.7   1.7   0.4  2.0  12.5   9.4  4.4   8.8   0.5  5.0   5.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.97 2.07  2.07  2.09 2.06  1.90  1.94 2.02  1.95  2.09 2.01  2.01
HCM2k95thQ:   8.5  1.9   1.9   0.5  2.3  14.1  10.7  5.1  10.0   0.6  5.8   5.8
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.42 2.63  2.63  2.68 2.62  2.26  2.35 2.52  2.37  2.68 2.50  2.50
HCM2k98thQ:  10.4  2.5   2.5   0.7  2.9  16.8  13.0  6.3  12.2   0.8  7.2   7.2
                        Fuel Consumption and Emissions
                          2000 HCM Operations Method
                            Base Volume Alternative
*******************************************************************************
Intersection #28 Delta Shores Circle South/Street D South
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:  31.4 12.8   1.8   2.0 17.5  59.5  82.5 20.1  38.6   2.2 16.5   2.4
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     46.999 pounds
                       7.614 gallons
Carbon Dioxide:      146.636 pounds
Carbon Monoxide:      11.604 pounds
Hydrocarbons:          2.150 pounds
Nitrogen Oxides:       0.409 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     44.280 pounds
                       7.173 gallons
Carbon Dioxide:      138.154 pounds
Carbon Monoxide:      11.391 pounds
Hydrocarbons:          2.106 pounds
Nitrogen Oxides:       0.366 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum w/proj AM

Intersection #29: Street C/Stone-Boswell Access West




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      80    0    80     0    0     0     0   90    30   100  180     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:   80    0    80     0    0     0     0   90    30   100  180     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:    80    0    80     0    0     0     0   90    30   100  180     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   80    0    80     0    0     0     0   90    30   100  180     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4  6.5   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  485  485   105  xxxx xxxx xxxxx  xxxx xxxx xxxxx   120 xxxx xxxxx
Potent Cap.:  541  482   949  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1468 xxxx xxxxx
Move Cap.:    513  449   949  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1468 xxxx xxxxx
Volume/Cap:  0.16 0.00  0.08  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.07 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.2 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.6 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  666 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.9 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 12.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    B     *     *    *     *     *    *     *     *    *     *
ApproachDel:      12.1           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         B              *                *                *
------------|---------------||---------------||---------------||---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #29 Street C/Stone-Boswell Access West
*******************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:       0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:   80    0    80     0    0     0     0   90    30   100  180     0
ApproachDel:      12.1           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=160]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=560]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #29 Street C/Stone-Boswell Access West
*******************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Initial Vol:	80		0		80		0		0			0	90		30	100		180		0

Major Street Volume: 400
Minor Approach Volume: 160
Minor Approach Volume Threshold: 601

SIGNAL WARRANT DISCLAIMER

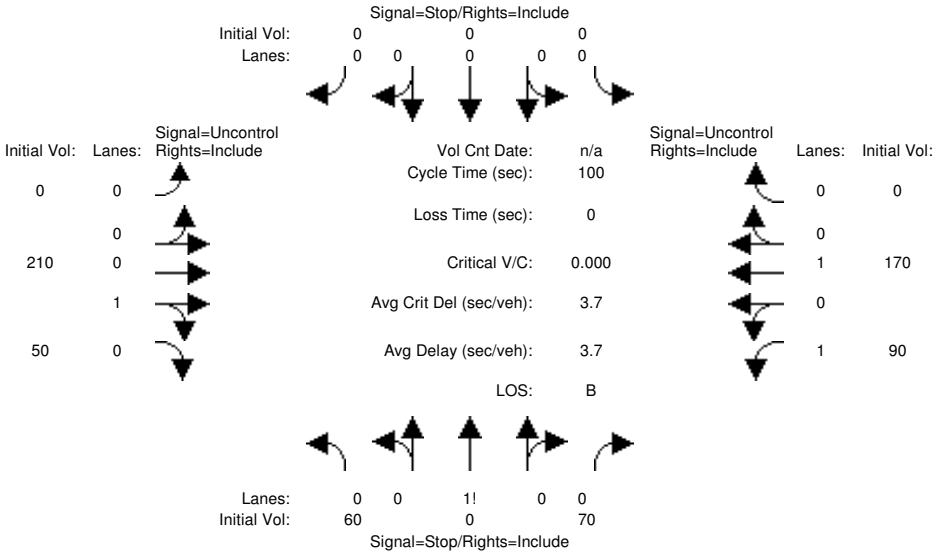
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Cum w/proj PM

Intersection #29: Street C/Stone-Boswell Access West



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	60	0	70	0	0	0	0	210	50	90	170	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:	60	0	70	0	0	0	0	210	50	90	170	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:	60	0	70	0	0	0	0	210	50	90	170	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	60	0	70	0	0	0	0	210	50	90	170	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	585	585	235	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	260	xxxx	xxxxx
Potent Cap.:	473	423	804	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1304	xxxx	xxxxx
Move Cap.:	448	394	804	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1304	xxxx	xxxxx
Volume/Cap:	0.13	0.00	0.09	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.07	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	589	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	12.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	12.8			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		
HevVeh:	2%			2%			2%			2%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		

Pedestrian Walk Speed: 4.00 feet/sec

LaneWidth:	12 feet	12 feet	12 feet	12 feet

Time Period: 0.25 hour

Peak Hour Delay Signal Warrant Report

****

Intersection #29 Street C/Stone-Boswell Access West

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	1	0	1 0
Initial Vol:	60	0	70	0	0	0	0	210	50	90	170	0
ApproachDel:	12.8			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=130]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=650]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #29 Street C/Stone-Boswell Access West

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Initial Vol:	60		0		70	0		0		0	0		210		50	90		170		0

Major Street Volume: 520
Minor Approach Volume: 130
Minor Approach Volume Threshold: 510

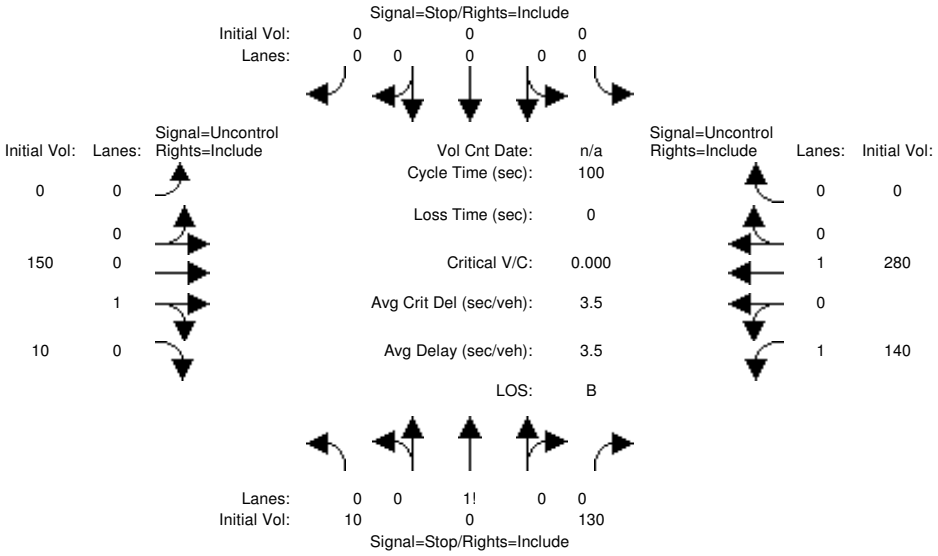
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (alternative)
Cum w/proj AM

Intersection #30: Street C/Stone-Boswell Access East




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      10    0   130     0    0     0     0  150    10   140  280     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:   10    0   130     0    0     0     0  150    10   140  280     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:    10    0   130     0    0     0     0  150    10   140  280     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:   10    0   130     0    0     0     0  150    10   140  280     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4  6.5   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  715  715   155  xxxx xxxx xxxxx  xxxx xxxx xxxxx   160 xxxx xxxxx
Potent Cap.:  397  356   891  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1419 xxxx xxxxx
Move Cap.:    367  321   891  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1419 xxxx xxxxx
Volume/Cap:  0.03 0.00  0.15  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.10 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx   0.3 xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   7.8 xxxx xxxxx
LOS by Move:   *    *     *     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  808 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.6 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 10.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:    *    B     *     *    *     *     *    *     *     *    *     *
ApproachDel:      10.4           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         B              *                *                *
------------|---------------||---------------||---------------||---------------|
HevVeh:             2%              2%              2%              2%
Grade:              0%              0%              0%              0%
Peds/Hour:          0               0               0               0
Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth:       12 feet          12 feet          12 feet          12 feet
Time Period: 0.25 hour
                    Peak Hour Delay Signal Warrant Report
*******************************************************************************
Intersection #30 Street C/Stone-Boswell Access East
*******************************************************************************
Base Volume Alternative: Peak Hour Warrant NOT Met
------------|---------------||---------------||---------------||---------------|
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Control:        Stop Sign        Stop Sign       Uncontrolled     Uncontrolled
Lanes:       0  0  1! 0  0    0  0  0  0  0    0  0  0  1  0    1  0  1  0  0
Initial Vol:   10    0   130     0    0     0     0  150    10   140  280     0
ApproachDel:      10.4           xxxxxx           xxxxxx           xxxxxx
------------|---------------||---------------||---------------||---------------|
Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=140]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=720]
   SUCCEED - Total volume greater than or equal to 650 for intersection
             with less than four approaches.
-------------------------------------------------------------------------------
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an
"indicator" of the likelihood of an unsignalized intersection warranting
a traffic signal in the future.  Intersections that exceed this warrant
are probably more likely to meet one or more of the other volume based
signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace
a rigorous and complete traffic signal warrant analysis by the responsible
jurisdiction.  Consideration of the other signal warrants, which is beyond
the scope of this software, may yield different results.
                Peak Hour Volume Signal Warrant Report [Urban]
*******************************************************************************
Intersection #30 Street C/Stone-Boswell Access East
*******************************************************************************
```


Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Initial Vol:	10		0		130		0		0			0	150		10	140		280		0

Major Street Volume: 580
Minor Approach Volume: 140
Minor Approach Volume Threshold: 473

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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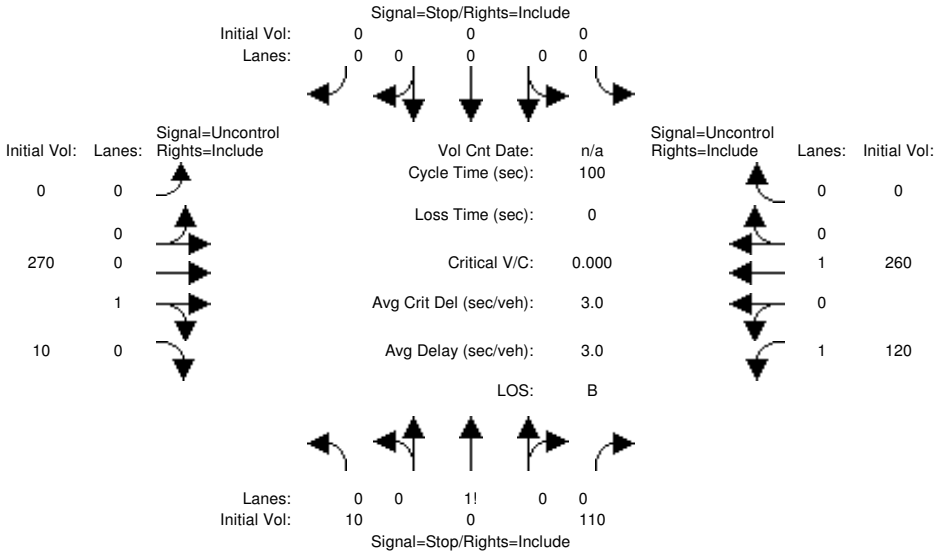
Delta Shore

Level Of Service Computation Report
2000 HCM Unsignalized (Base Volume Alternative)
Cum w/proj PM

Intersection #30: Street C/Stone-Boswell Access East



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	10	0	110	0	0	0	0	270	10	120	260	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:	10	0	110	0	0	0	0	270	10	120	260	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:	10	0	110	0	0	0	0	270	10	120	260	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	10	0	110	0	0	0	0	270	10	120	260	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	775	775	275	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	280	xxxx	xxxxx
Potent Cap.:	366	329	764	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1283	xxxx	xxxxx
Move Cap.:	340	298	764	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1283	xxxx	xxxxx
Volume/Cap:	0.03	0.00	0.14	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.09	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	692	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	11.3	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:		11.3			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		B			*			*			*	
HevVeh:		2%			2%			2%			2%	
Grade:		0%			0%			0%			0%	
Peds/Hour:		0			0			0			0	

Pedestrian Walk Speed: 4.00 feet/sec
LaneWidth: 12 feet 12 feet 12 feet 12 feet
Time Period: 0.25 hour

Peak Hour Delay Signal Warrant Report

****

Intersection #30 Street C/Stone-Boswell Access East

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0	0	1! 0	0	0	0	0	0	1 0	1	0	1 0
Initial Vol:	10	0	110	0	0	0	0	270	10	120	260	0
ApproachDel:		11.3			xxxxxx			xxxxxx			xxxxxx	

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=120]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=780]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #30 Street C/Stone-Boswell Access East

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Lanes:	0	0	1!	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0
Initial Vol:	10		0		110	0		0		0	0		270		10	120		260		0

Major Street Volume: 660
Minor Approach Volume: 120
Minor Approach Volume Threshold: 428

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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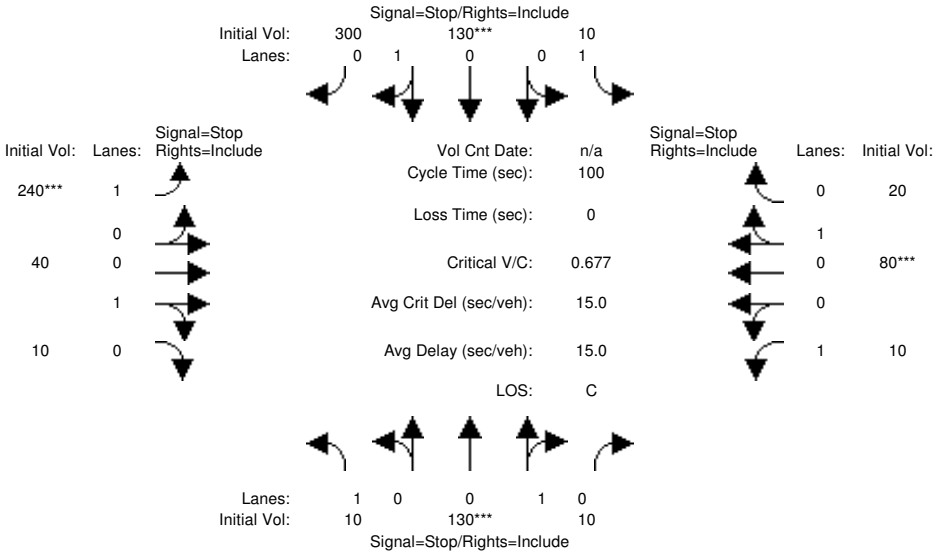
Delta Shore

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Cum w/proj AM

Intersection #31: Street C/Detroit Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	130	10	10	130	300	240	40	10	10	80	20
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:	10	130	10	10	130	300	240	40	10	10	80	20
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:	10	130	10	10	130	300	240	40	10	10	80	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	130	10	10	130	300	240	40	10	10	80	20
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:	10	130	10	10	130	300	240	40	10	10	80	20
Saturation Flow Module:												
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	0.93	0.07	1.00	0.30	0.70	1.00	0.80	0.20	1.00	0.80	0.20
Final Sat.:	493	497	38	534	192	443	503	437	109	461	403	101
Capacity Analysis Module:												
Vol/Sat:	0.02	0.26	0.26	0.02	0.68	0.68	0.48	0.09	0.09	0.02	0.20	0.20
Crit Moves:		****			****		****				****	
Delay/Veh:	9.7	11.1	11.1	9.3	18.3	18.3	15.1	9.5	9.5	10.0	10.7	10.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.7	11.1	11.1	9.3	18.3	18.3	15.1	9.5	9.5	10.0	10.7	10.7
LOS by Move:	A	B	B	A	C	C	C	A	A	B	B	B
ApproachDel:		11.0			18.1			14.2			10.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		11.0			18.1			14.2			10.6	
LOS by Appr:		B			C			B			B	
AllWayAvgQ:	0.0	0.3	0.3	0.0	1.8	1.8	0.8	0.1	0.1	0.0	0.2	0.2
Time Period: 0.25 hour												
HevVeh:		2%			2%			2%			2%	
Alpha Value: 0.01												
GroupType:		5			5			5			5	
P[C1]:		0.13			0.30			0.20			0.12	
P[C2]:		0.27			0.10			0.05			0.12	
P[C3]:		0.17			0.37			0.46			0.29	
P[C4]:		0.37			0.20			0.25			0.38	
P[C5]:		0.07			0.03			0.03			0.09	
Padj[C1]:		0.020			0.016			0.019			0.022	
Padj[C2]:		0.008			0.008			0.010			0.012	
Padj[C3]:		-0.000			-0.009			-0.011			-0.003	
Padj[C4]:		-0.021			-0.012			-0.015			-0.022	
Padj[C5]:		-0.007			-0.003			-0.003			-0.009	

Lanes:	L1	L2	L1	L2	L1	L2	L1	L2
LaneType:	LEFT	RTTHRU	LEFT	RTTHRU	LEFT	RTTHRU	LEFT	RTTHRU
HeadwayAdj:	0.534	-0.016	0.534	-0.454	0.534	-0.106	0.534	-0.106
Volume:	10	140	10	430	240	50	10	100
Capacity:	493	535	534	636	503	547	461	504
DegOfUtil:	0.02	0.25	0.02	0.66	0.46	0.09	0.02	0.18
DepHeadway:	6.89	6.34	6.52	5.53	6.84	6.20	7.18	6.54
ServiceTime:	4.6	4.0	4.2	3.2	4.5	3.9	4.9	4.2
Delay:	9.7	11.1	9.3	18.3	15.1	9.5	10.0	10.7
Queue:	0.0	0.3	0.0	1.8	0.8	0.1	0.0	0.2

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	11.0	18.1	14.2	10.6
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	11.0	18.1	14.2	10.6
LOS by Appr:	B	C	B	B

OverallDel: 15.0
OverallLOS: C

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #31 Street C/Detroit Boulevard

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound

Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0
Initial Vol:	10 130 10	10 130 300	240 40 10	10 80 20

Major Street Volume: 590
Minor Approach Volume: 290
Minor Approach Volume Threshold: 601

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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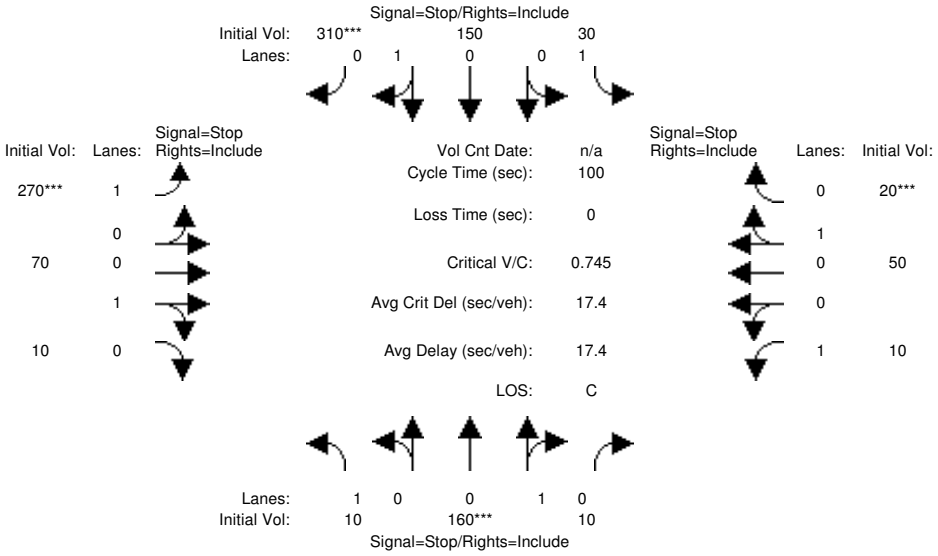
Delta Shore

Level Of Service Computation Report
2000 HCM 4-Way Stop (Base Volume Alternative)
Cum w/proj PM

Intersection #31: Street C/Detroit Boulevard



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	10	160	10	30	150	310	270	70	10	10	50	20
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:	10	160	10	30	150	310	270	70	10	10	50	20
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:	10	160	10	30	150	310	270	70	10	10	50	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	160	10	30	150	310	270	70	10	10	50	20
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:	10	160	10	30	150	310	270	70	10	10	50	20
Saturation Flow Module:												
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	0.94	0.06	1.00	0.33	0.67	1.00	0.87	0.13	1.00	0.71	0.29
Final Sat.:	480	490	31	522	201	416	492	465	66	434	339	136
Capacity Analysis Module:												
Vol/Sat:	0.02	0.33	0.33	0.06	0.75	0.75	0.55	0.15	0.15	0.02	0.15	0.15
Crit Moves:		****				****	****					****
Delay/Veh:	9.9	12.2	12.2	9.8	22.4	22.4	17.3	10.2	10.2	10.4	10.6	10.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.9	12.2	12.2	9.8	22.4	22.4	17.3	10.2	10.2	10.4	10.6	10.6
LOS by Move:	A	B	B	A	C	C	C	B	B	B	B	B
ApproachDel:		12.1			21.6			15.7			10.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.1			21.6			15.7			10.6	
LOS by Appr:		B			C			C			B	
AllWayAvgQ:	0.0	0.4	0.4	0.1	2.4	2.4	1.0	0.2	0.2	0.0	0.1	0.1

Time Period: 0.25 hour
HevVeh: 2% 2% 2% 2%
Alpha Value: 0.01

GroupType:	5	5	5	5
P[C1]:	0.09	0.23	0.15	0.07
P[C2]:	0.26	0.11	0.03	0.10
P[C3]:	0.14	0.38	0.50	0.24
P[C4]:	0.44	0.24	0.29	0.45
P[C5]:	0.07	0.03	0.04	0.14
Padj[C1]:	0.021	0.017	0.020	0.025
Padj[C2]:	0.010	0.008	0.012	0.015
Padj[C3]:	0.001	-0.008	-0.011	0.000
Padj[C4]:	-0.026	-0.014	-0.017	-0.025
Padj[C5]:	-0.007	-0.003	-0.004	-0.014

Lanes:	L1	L2	L1	L2	L1	L2	L1	L2
LaneType:	LEFT	RTTHRU	LEFT	RTTHRU	LEFT	RTTHRU	LEFT	RTTHRU
HeadwayAdj:	0.534	-0.007	0.534	-0.438	0.534	-0.053	0.534	-0.166
Volume:	10	170	30	460	270	80	10	70
Capacity:	480	521	522	617	492	531	434	475
DegOfUtil:	0.02	0.31	0.06	0.73	0.53	0.14	0.02	0.13
DepHeadway:	7.10	6.56	6.69	5.72	7.03	6.44	7.56	6.86
ServiceTime:	4.8	4.3	4.4	3.4	4.7	4.1	5.3	4.6
Delay:	9.9	12.2	9.8	22.4	17.3	10.2	10.4	10.6
Queue:	0.0	0.4	0.1	2.4	1.0	0.2	0.0	0.1

Approach:	North Bound	South Bound	East Bound	West Bound
ApproachDel:	12.1	21.6	15.7	10.6
Delay Adj:	1.00	1.00	1.00	1.00
ApprAdjDel:	12.1	21.6	15.7	10.6
LOS by Appr:	B	C	C	B

OverallDel: 17.4
OverallLOS: C

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #31 Street C/Detroit Boulevard

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound	South Bound	East Bound	West Bound

Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Stop Sign	Stop Sign
Lanes:	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0
Initial Vol:	10 160 10	30 150 310	270 70 10	10 50 20

Major Street Volume: 670
Minor Approach Volume: 350
Minor Approach Volume Threshold: 546

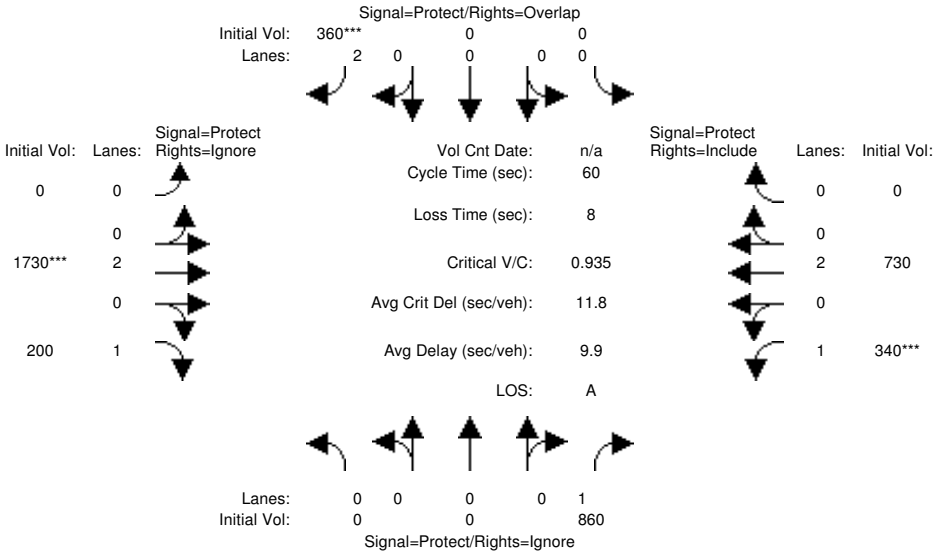
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj AM

Intersection #32:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	4	0	25	0	4	25	0
Volume Module:												
Base Vol:	0	0	860	0	0	360	0	1730	200	340	730	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	860	0	0	360	0	1730	200	340	730	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	360	0	1730	0	340	730	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	360	0	1730	0	340	730	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	360	0	1730	0	340	730	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.73	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	1.00	0.00	0.00	2.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	1900	0	0	2786	0	3538	1900	1769	3538	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.49	0.00	0.19	0.21	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.76	0.00	0.24	0.70	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.76	0.00	0.64	0.00	0.80	0.29	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	30.8	0.0	3.9	0.0	31.9	3.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	30.8	0.0	3.9	0.0	31.9	3.5	0.0
LOS by Move:	A	A	A	A	A	C	A	A	A	C	A	A
HCM2kAvgQ:	0	0	0	0	0	6	0	9	0	8	3	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	1	0	0	0	0	2	0	0	2	0	1	1	0	2	0	0
Lane Group:	xxxx	xxxx	R	xxxx	xxxx	R	xxxx	T	R	L	T	xxxx
#LnsInGrps:	0	0	1	0	0	2	0	2	1	1	2	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:	8	8	8	8
% Hev Veh:	2	2	2	2
Grade:	0%	0%	0%	0%
Parking/Hr:	No	No	No	No
Bus Stp/Hr:	0	0	0	0
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >
Cnft Ped/Hr:	0	0	0	0
ExclusiveRT:	Include	Include	Include	Include
% RT Prtct:	0	0	0	0
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.98	xxxx	0.98	xxxxx	0.98	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx
Area Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.83	1.00	0.98	1.00	0.93	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.88	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	1.00	1.00	1.00	1.00	1.00	0.73	1.00	0.93	1.00	0.93	0.93	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > >
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >
DelAdjFctr:	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #32


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*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.0  0.0   3.2   0.0  7.1   0.0   5.3  2.4   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   2.4   0.0  1.8   0.0   3.1  0.4   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0   5.7   0.0  8.9   0.0   8.4  2.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.19  1.20 1.18  1.20  1.18 1.19  1.20
HCM2k70thQ:   0.0  0.0   0.0   0.0  0.0   6.7   0.0 10.5   0.0  10.0  3.4   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.60 1.60  1.55  1.60 1.52  1.60  1.53 1.57  1.60
HCM2k85thQ:   0.0  0.0   0.0   0.0  0.0   8.8   0.0 13.5   0.0  12.9  4.5   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.80 1.80  1.70  1.80 1.66  1.80  1.66 1.75  1.80
HCM2k90thQ:   0.0  0.0   0.0   0.0  0.0   9.7   0.0 14.7   0.0  14.0  5.0   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.10 2.10  1.94  2.10 1.87  2.10  1.88 2.01  2.10
HCM2k95thQ:   0.0  0.0   0.0   0.0  0.0  11.0   0.0 16.6   0.0  15.8  5.7   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.70 2.70  2.35  2.70 2.20  2.70  2.22 2.50  2.70
HCM2k98thQ:   0.0  0.0   0.0   0.0  0.0  13.3   0.0 19.6   0.0  18.8  7.1   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #32
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0 85.8   0.0  203   0.0  80.0 69.0   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:     58.955 pounds
                       9.551 gallons
Carbon Dioxide:      183.940 pounds
Carbon Monoxide:      13.151 pounds
Hydrocarbons:          2.007 pounds
Nitrogen Oxides:       0.603 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:     53.541 pounds
                       8.674 gallons
Carbon Dioxide:      167.049 pounds
Carbon Monoxide:      12.734 pounds
Hydrocarbons:          1.921 pounds
Nitrogen Oxides:       0.526 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
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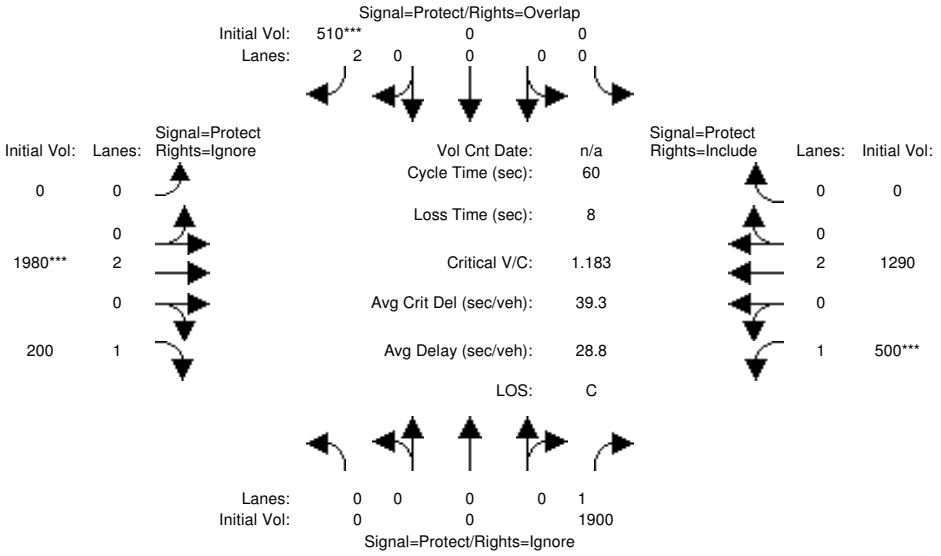
Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj PM

Intersection #32:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	4	0	25	0	4	25	0
Volume Module:												
Base Vol:	0	0	1900	0	0	510	0	1980	200	500	1290	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	1900	0	0	510	0	1980	200	500	1290	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	0	0	0	0	0	510	0	1980	0	500	1290	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	510	0	1980	0	500	1290	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	510	0	1980	0	500	1290	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	0.73	1.00	0.93	1.00	0.93	0.93	1.00
Lanes:	0.00	0.00	1.00	0.00	0.00	2.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	0	0	1900	0	0	2786	0	3538	1900	1769	3538	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.56	0.00	0.28	0.36	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.76	0.00	0.24	0.70	0.00
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	1.08	0.00	0.74	0.00	1.18	0.52	0.00
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	88.5	0.0	5.0	0.0	124.8	4.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	88.5	0.0	5.0	0.0	124.8	4.4	0.0
LOS by Move:	A	A	A	A	A	F	A	A	A	F	A	A
HCM2kAvgQ:	0	0	0	0	0	12	0	12	0	22	6	0

HCM Ops Adjusted Lane Utilization Module:																				
Lanes:	0	0	0	0	1	0	0	0	0	2	0	0	2	0	1	1	0	2	0	0
Lane Group:	xxxx	xxxx		R		xxxx	xxxx		R		xxxx		T		R		L		T	xxxx
#LnsInGrps:	0	0		1		0	0		2		0		2		1		1		2	0
HCM Ops Input Saturation Adj Module:																				
Lane Width:	12		12		12	12		12	12		12		12		12		12		12	12
CrsswalkWid:			8					8					8						8	
% Hev Veh:			2					2					2						2	
Grade:			0%					0%					0%						0%	
Parking/Hr:			No					No					No						No	
Bus Stp/Hr:			0					0					0						0	
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >																			
Cnft Ped/Hr:			0					0					0						0	
ExclusiveRT:			Include					Include					Include						Include	
% RT Prtct:			0					0					0						0	
HCM Ops f(lt) Adj Case Module:																				
f(lt) Case:	xxxx	xxxx		xxxx		xxxx	xxxx		xxxx		xxxx	xxxx		xxxx			1	xxxx		xxxx
HCM Ops Saturation Adj Module:																				
Ln Wid Adj:	xxxx	xxxx		xxxxx		xxxx	xxxx		1.00		xxxx	1.00		xxxxx			1.00	1.00		xxxxx
Hev Veh Adj:	xxxx	xxxx		xxxxx		xxxx	xxxx		0.98		xxxx	0.98		xxxxx			0.98	0.98		xxxxx
Grade Adj:	xxxx	xxxx		xxxxx		xxxx	xxxx		1.00		xxxx	1.00		xxxxx			1.00	1.00		xxxxx
Parking Adj:	xxxx	xxxx		xxxxx		xxxx	xxxx		1.00		xxxx	xxxx		xxxxx			xxxx	1.00		xxxxx
Bus Stp Adj:	xxxx	xxxx		xxxxx		xxxx	xxxx		1.00		xxxx	xxxx		xxxxx			xxxx	1.00		xxxxx
Area Adj:	xxxx	xxxx		xxxxx		xxxx	xxxx		1.00		xxxx	1.00		xxxxx			1.00	1.00		xxxxx
RT Adj:	xxxx	xxxx		xxxxx		xxxx	xxxx		0.85		xxxx	xxxx		xxxxx			xxxx	xxxx		xxxxx
LT Adj:	xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx		xxxx	xxxx		xxxxx			0.95	xxxx		xxxxx
PedBike Adj:	1.00	1.00		1.00		1.00	1.00		1.00		1.00	1.00		1.00			1.00	1.00		1.00
HCM Sat Adj:	1.00	1.00		1.00		1.00	1.00		0.83		1.00	0.98		1.00			0.93	0.98		1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00		1.00		1.00	1.00		0.88		1.00	0.95		1.00			1.00	0.95		1.00
Fnl Sat Adj:	1.00	1.00		1.00		1.00	1.00		0.73		1.00	0.93		1.00			0.93	0.93		1.00
Delay Adjustment Factor Module:																				
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >																			
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >																			
DelAdjFctr:	0.00	0.00		0.00		0.00	0.00		1.00		0.00	1.00		0.00			1.00	1.00		0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #32


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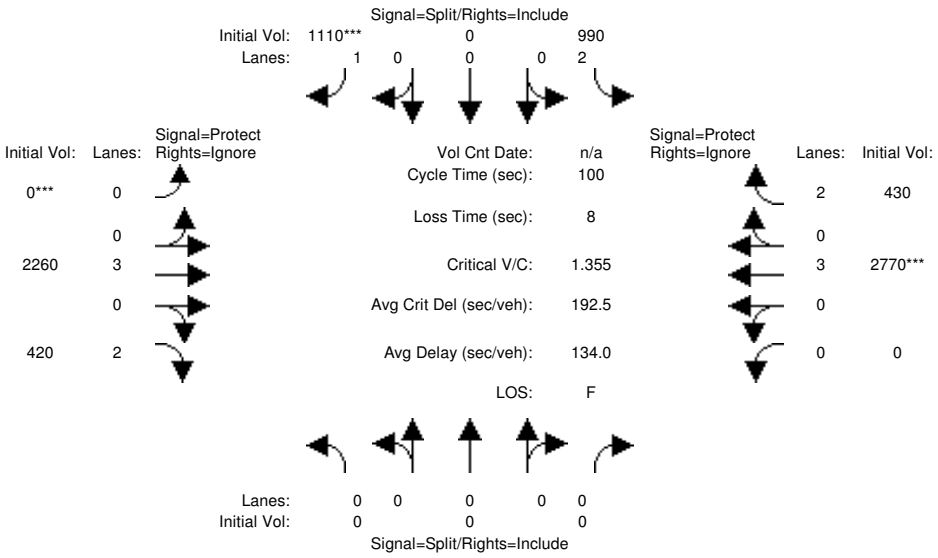
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.00 0.00  0.17  0.00 0.76  0.00  0.24 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   0.0  0.0   4.8   0.0  9.5   0.0   8.3  5.3   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  0.00 0.00  1.00  0.00 1.00  0.00  1.00 1.00  0.00
Q2:           0.0  0.0   0.0   0.0  0.0   7.5   0.0  2.6   0.0  13.9  1.1   0.0
HCM2KQueue:   0.0  0.0   0.0   0.0  0.0  12.3   0.0 12.1   0.0  22.3  6.4   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.20 1.20  1.17  1.20 1.17  1.20  1.16 1.19  1.20
HCM2k70thQ:   0.0  0.0   0.0   0.0  0.0  14.4   0.0 14.2   0.0  25.8  7.6   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.60 1.60  1.50  1.60 1.50  1.60  1.44 1.54  1.60
HCM2k85thQ:   0.0  0.0   0.0   0.0  0.0  18.4   0.0 18.2   0.0  32.1  9.9   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.80 1.80  1.62  1.80 1.62  1.80  1.53 1.69  1.80
HCM2k90thQ:   0.0  0.0   0.0   0.0  0.0  19.9   0.0 19.6   0.0  34.1 10.8   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  2.10 2.10  1.80  2.10 1.81  2.10  1.67 1.92  2.10
HCM2k95thQ:   0.0  0.0   0.0   0.0  0.0  22.1   0.0 21.9   0.0  37.3 12.3   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.70 2.70  2.09  2.70 2.09  2.70  1.88 2.31  2.70
HCM2k98thQ:   0.0  0.0   0.0   0.0  0.0  25.7   0.0 25.4   0.0  41.9 14.8   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #32
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0   0.0  0.0 129.5   0.0  270   0.0 132.4  152   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    136.678 pounds
                      22.142 gallons
Carbon Dioxide:      426.437 pounds
Carbon Monoxide:      33.929 pounds
Hydrocarbons:          6.392 pounds
Nitrogen Oxides:       1.125 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    129.175 pounds
                      20.926 gallons
Carbon Dioxide:      403.026 pounds
Carbon Monoxide:      33.347 pounds
Hydrocarbons:          6.273 pounds
Nitrogen Oxides:       1.015 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj AM

Intersection #33:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	990	0	1110	0	2260	420	0	2770	430
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	990	0	1110	0	2260	420	0	2770	430
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	990	0	1110	0	2260	0	0	2770	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	990	0	1110	0	2260	0	0	2770	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	990	0	1110	0	2260	0	0	2770	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.89	0.88	1.00	0.89	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	2.00	0.00	3.00	2.00
Final Sat.:	0	0	0	3432	0	1583	0	5083	3344	0	5083	3344
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.29	0.00	0.70	0.00	0.44	0.00	0.00	0.54	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.52	0.00	0.52	0.00	0.40	0.00	0.00	0.40	0.00
Volume/Cap:	0.00	0.00	0.00	0.56	0.00	1.35	0.00	1.11	0.00	0.00	1.35	0.00
Delay/Veh:	0.0	0.0	0.0	16.7	0.0	191.7	0.0	85.2	0.0	0.0	193	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	16.7	0.0	191.7	0.0	85.2	0.0	0.0	193	0.0
LOS by Move:	A	A	A	B	A	F	A	F	A	A	F	A
HCM2kAvgQ:	0	0	0	11	0	71	0	39	0	0	65	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	2	0	0	0	1	0	0	3	0	2	0	0	3	0	2
Lane Group:	xxxx	xxxx	xxxx	L	xxxx	R	xxxx	T	R	xxxx	T	R
#LnsInGrps:	0	0	0	2	0	1	0	3	2	0	3	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	xxxx	0.98	xxxxx	xxxx	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.93	1.00	0.83	1.00	0.98	1.00	1.00	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.88	1.00	0.91	0.88
Fnl Sat Adj:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.89	0.88	1.00	0.89	0.88
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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Intersection #33


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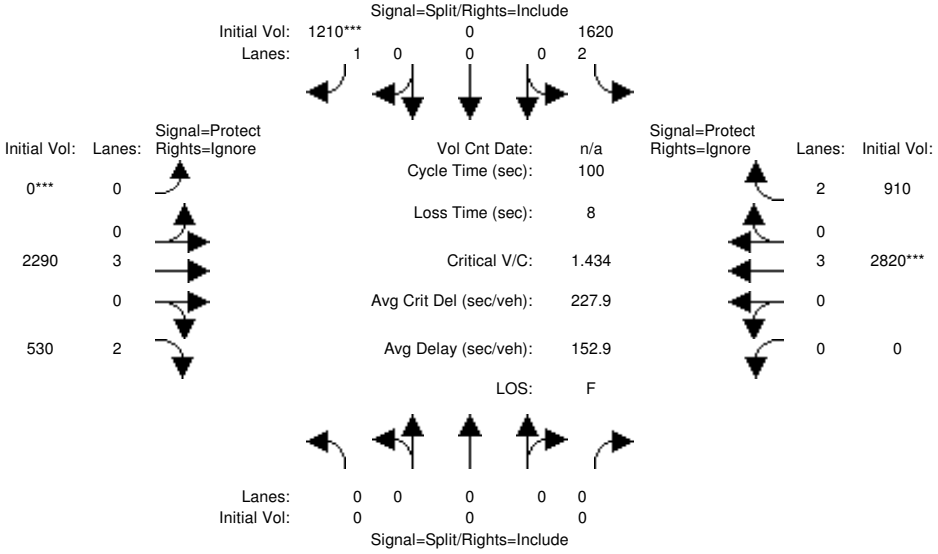
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.52 0.00  0.52  0.00 0.40  0.00  0.00 0.40  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0   9.6  0.0  30.8   0.0 23.0   0.0   0.0 28.2   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   1.2  0.0  39.8   0.0 16.2   0.0   0.0 36.7   0.0
HCM2KQueue:   0.0  0.0   0.0  10.8  0.0  70.6   0.0 39.2   0.0   0.0 64.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.18 1.20  1.12  1.20 1.14  1.20  1.20 1.12  1.20
HCM2k70thQ:   0.0  0.0   0.0  12.7  0.0  78.9   0.0 44.6   0.0   0.0 72.6   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.51 1.60  1.33  1.60 1.38  1.60  1.60 1.33  1.60
HCM2k85thQ:   0.0  0.0   0.0  16.4  0.0  93.8   0.0 54.2   0.0   0.0 86.5   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.63 1.80  1.41  1.80 1.46  1.80  1.80 1.42  1.80
HCM2k90thQ:   0.0  0.0   0.0  17.7  0.0  99.7   0.0 57.1   0.0   0.0 91.8   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.83 2.10  1.51  2.10 1.57  2.10  2.10 1.52  2.10
HCM2k95thQ:   0.0  0.0   0.0  19.8  0.0 106.8   0.0 61.5   0.0   0.0 98.3   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  2.13 2.70  1.70  2.70 1.75  2.70  2.70 1.71  2.70
HCM2k98thQ:   0.0  0.0   0.0  23.1  0.0 120.4   0.0 68.6   0.0   0.0  111   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #33
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 167.8  0.0 448.1   0.0  608   0.0   0.0  910   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    756.692 pounds
                     122.584 gallons
Carbon Dioxide:     2360.878 pounds
Carbon Monoxide:     206.461 pounds
Hydrocarbons:         44.753 pounds
Nitrogen Oxides:       4.804 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    742.328 pounds
                     120.257 gallons
Carbon Dioxide:     2316.062 pounds
Carbon Monoxide:     205.306 pounds
Hydrocarbons:         44.526 pounds
Nitrogen Oxides:       4.548 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cum w/proj PM

Intersection #33:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	0	0	0	1620	0	1210	0	2290	530	0	2820	910
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	1620	0	1210	0	2290	530	0	2820	910
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	1620	0	1210	0	2290	0	0	2820	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1620	0	1210	0	2290	0	0	2820	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	1620	0	1210	0	2290	0	0	2820	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.89	0.88	1.00	0.89	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	2.00	0.00	3.00	2.00
Final Sat.:	0	0	0	3432	0	1583	0	5083	3344	0	5083	3344
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.47	0.00	0.76	0.00	0.45	0.00	0.00	0.55	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.53	0.00	0.53	0.00	0.39	0.00	0.00	0.39	0.00
Volume/Cap:	0.00	0.00	0.00	0.89	0.00	1.43	0.00	1.16	0.00	0.00	1.43	0.00
Delay/Veh:	0.0	0.0	0.0	26.2	0.0	225.5	0.0	111	0.0	0.0	229	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	26.2	0.0	225.5	0.0	111	0.0	0.0	229	0.0
LOS by Move:	A	A	A	C	A	F	A	F	A	A	F	A
HCM2kAvgQ:	0	0	0	26	0	82	0	43	0	0	71	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	0	0	0	0	0	2	0	0	1	0	0	3	0	2	0	0	3	0	2
Lane Group:	xxxx	xxxx	xxxx	L	xxxx	R	xxxx	T	R	xxxx	T	R
#LnsInGrps:	0	0	0	2	0	1	0	3	2	0	3	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	xxxx	xxxx	xxxx	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Hev Veh Adj:	xxxx	xxxx	xxxxx	0.98	xxxx	0.98	xxxx	0.98	xxxxx	xxxx	0.98	xxxxx
Grade Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Parking Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Area Adj:	xxxx	xxxx	xxxxx	1.00	xxxx	1.00	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
RT Adj:	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	1.00	1.00	1.00	0.93	1.00	0.83	1.00	0.98	1.00	1.00	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	0.88	1.00	0.91	0.88
Fnl Sat Adj:	1.00	1.00	1.00	0.90	1.00	0.83	1.00	0.89	0.88	1.00	0.89	0.88
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

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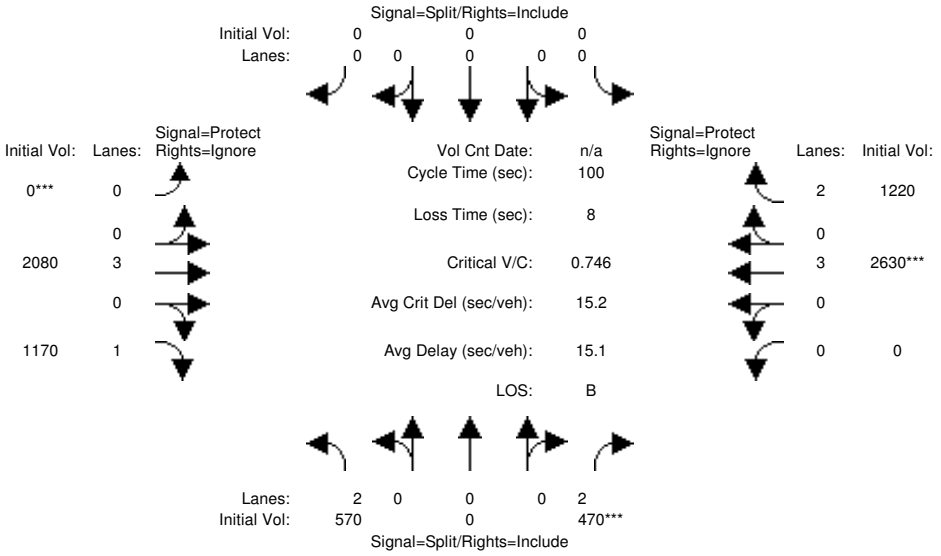
Intersection #33


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.00 0.00  0.00  0.53 0.00  0.53  0.00 0.39  0.00  0.00 0.39  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           0.0  0.0   0.0  20.5  0.0  33.6   0.0 23.3   0.0   0.0 28.7   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 0.00 0.00  0.00  1.00 0.00  1.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           0.0  0.0   0.0   5.5  0.0  48.9   0.0 20.0   0.0   0.0 42.1   0.0
HCM2KQueue:   0.0  0.0   0.0  26.0  0.0  82.5   0.0 43.3   0.0   0.0 70.8   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.20 1.20  1.20  1.15 1.20  1.11  1.20 1.13  1.20  1.20 1.12  1.20
HCM2k70thQ:   0.0  0.0   0.0  30.0  0.0  91.8   0.0 49.1   0.0   0.0 79.1   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.60 1.60  1.60  1.43 1.60  1.32  1.60 1.37  1.60  1.60 1.33  1.60
HCM2k85thQ:   0.0  0.0   0.0  37.1  0.0 108.8   0.0 59.4   0.0   0.0 94.1   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.80 1.80  1.80  1.51 1.80  1.41  1.80 1.45  1.80  1.80 1.41  1.80
HCM2k90thQ:   0.0  0.0   0.0  39.2  0.0 116.0   0.0 62.7   0.0   0.0 xxxx   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 2.10 2.10  2.10  1.64 2.10  1.51  2.10 1.55  2.10  2.10 1.51  2.10
HCM2k95thQ:   0.0  0.0   0.0  42.7  0.0 124.2   0.0 67.4   0.0   0.0  107   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.70 2.70  2.70  1.84 2.70  1.70  2.70 1.74  2.70  2.70 1.70  2.70
HCM2k98thQ:   0.0  0.0   0.0  47.7  0.0 140.4   0.0 75.2   0.0   0.0  121   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #33
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:         30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops:   0.0  0.0   0.0 358.2  0.0 599.7   0.0  639   0.0   0.0  971   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    948.307 pounds
                     153.626 gallons
Carbon Dioxide:     2958.719 pounds
Carbon Monoxide:     259.866 pounds
Hydrocarbons:         56.653 pounds
Nitrogen Oxides:       5.932 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    931.952 pounds
                     150.976 gallons
Carbon Dioxide:     2907.690 pounds
Carbon Monoxide:     258.544 pounds
Hydrocarbons:         56.395 pounds
Nitrogen Oxides:       5.633 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design Base Volume Alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj AM

Intersection #34:



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Volume Module:												
Base Vol:	570	0	470	0	0	0	0	2080	1170	0	2630	1220
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:	570	0	470	0	0	0	0	2080	1170	0	2630	1220
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	570	0	470	0	0	0	0	2080	0	0	2630	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	570	0	470	0	0	0	0	2080	0	0	2630	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	570	0	470	0	0	0	0	2080	0	0	2630	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.73	1.00	1.00	1.00	1.00	0.89	1.00	1.00	0.89	0.88
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	0.00	3.00	2.00
Final Sat.:	3432	0	2786	0	0	0	0	5083	1900	0	5083	3344
Capacity Analysis Module:												
Vol/Sat:	0.17	0.00	0.17	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.52	0.00
Crit Moves:			****					****				****
Green/Cycle:	0.23	0.00	0.23	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.69	0.00
Volume/Cap:	0.73	0.00	0.75	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.75	0.00
Delay/Veh:	39.5	0.0	40.9	0.0	0.0	0.0	0.0	8.2	0.0	0.0	10.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.5	0.0	40.9	0.0	0.0	0.0	0.0	8.2	0.0	0.0	10.6	0.0
LOS by Move:	D	A	D	A	A	A	A	A	A	A	B	A
HCM2kAvgQ:	10	0	9	0	0	0	0	12	0	0	20	0
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	2	0	0	2	0	0	0	0	0	3	0	1	0	0	3	0	2
Lane Group:	L	xxxx	R	xxxx	xxxx	xxxx	xxxx	T	R	xxxx	T	R
#LnsInGrps:	2	0	2	0	0	0	0	3	1	0	3	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		2			2			2			2	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Hev Veh Adj:	0.98	xxxx	0.98	xxxx	xxxx	xxxxx	xxxx	0.98	xxxxx	xxxx	0.98	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	xxxxx	xxxx	1.00	xxxxx
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.93	1.00	0.83	1.00	1.00	1.00	1.00	0.98	1.00	1.00	0.98	1.00
Usr Sat Adj:	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 Sat Adj:	0.97	1.00	0.88	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.88
Fnl Sat Adj:	0.90	1.00	0.73	1.00	1.00	1.00	1.00	0.89	1.00	1.00	0.89	0.88
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

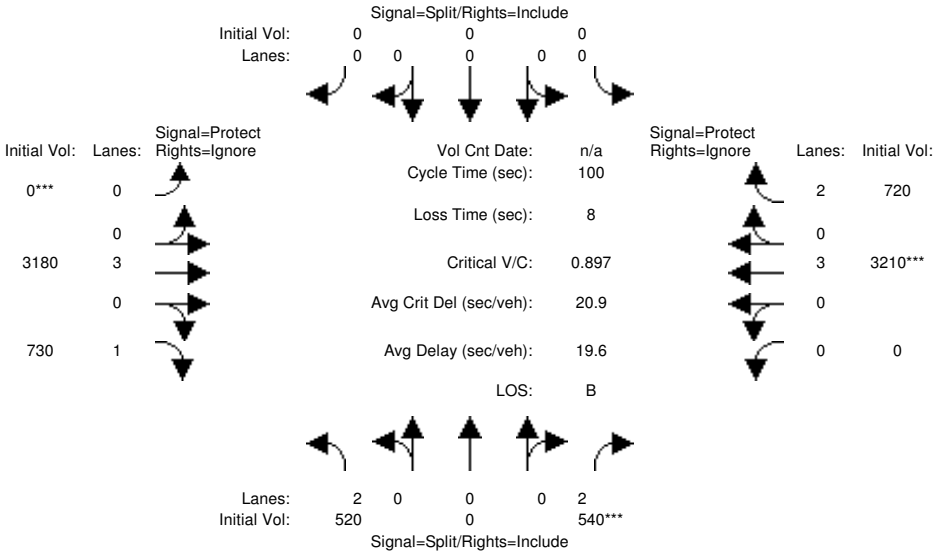
Intersection #34


```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.23 0.00  0.23  0.00 0.00  0.00  0.00 0.69  0.00  0.00 0.69  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           7.6  0.0   6.9   0.0  0.0   0.0   0.0 11.0   0.0   0.0 17.0   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           2.3  0.0   2.4   0.0  0.0   0.0   0.0  1.4   0.0   0.0  2.7   0.0
HCM2KQueue:   9.9  0.0   9.3   0.0  0.0   0.0   0.0 12.4   0.0   0.0 19.7   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.18  1.20 1.20  1.20  1.20 1.17  1.20  1.20 1.16  1.20
HCM2k70thQ:  11.7  0.0  11.0   0.0  0.0   0.0   0.0 14.5   0.0   0.0 22.9   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.60  1.52  1.60 1.60  1.60  1.60 1.50  1.60  1.60 1.46  1.60
HCM2k85thQ:  15.0  0.0  14.2   0.0  0.0   0.0   0.0 18.5   0.0   0.0 28.7   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.64 1.80  1.65  1.80 1.80  1.80  1.80 1.62  1.80  1.80 1.55  1.80
HCM2k90thQ:  16.3  0.0  15.4   0.0  0.0   0.0   0.0 20.0   0.0   0.0 30.6   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.85 2.10  1.86  2.10 2.10  2.10  2.10 1.80  2.10  2.10 1.70  2.10
HCM2k95thQ:  18.3  0.0  17.3   0.0  0.0   0.0   0.0 22.3   0.0   0.0 33.6   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.17 2.70  2.19  2.70 2.70  2.70  2.70 2.09  2.70  2.70 1.92  2.70
HCM2k98thQ:  21.5  0.0  20.4   0.0  0.0   0.0   0.0 25.8   0.0   0.0 37.9   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #34
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 132.2  0.0 109.4   0.0  0.0   0.0   0.0  270   0.0   0.0  417   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    129.526 pounds
                      20.983 gallons
Carbon Dioxide:      404.123 pounds
Carbon Monoxide:      30.180 pounds
Hydrocarbons:          5.027 pounds
Nitrogen Oxides:       1.255 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    119.429 pounds
                      19.347 gallons
Carbon Dioxide:      372.617 pounds
Carbon Monoxide:      29.396 pounds
Hydrocarbons:          4.866 pounds
Nitrogen Oxides:       1.106 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


Delta Shore

Level Of Service Computation Report
2000 HCM Operations (alternative)
Cum w/proj PM

Intersection #34:




```
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:     520     0   540     0     0     0     0  3180   730     0  3210   720
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:  520     0   540     0     0     0     0  3180   730     0  3210   720
User Adj:    1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
PHF Volume:   520     0   540     0     0     0     0  3180     0     0  3210     0
Reduct Vol:     0     0     0     0     0     0     0     0     0     0     0     0
Reduced Vol:  520     0   540     0     0     0     0  3180     0     0  3210     0
PCE Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
MLF Adj:     1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  0.00  1.00  1.00  0.00
FinalVolume:  520     0   540     0     0     0     0  3180     0     0  3210     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900  1900
Adjustment:  0.90  1.00  0.73  1.00  1.00  1.00  1.00  0.89  1.00  1.00  0.89  0.88
Lanes:       2.00  0.00  2.00  0.00  0.00  0.00  0.00  3.00  1.00  0.00  3.00  2.00
Final Sat.:  3432     0  2786     0     0     0     0  5083  1900     0  5083  3344
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.15  0.00  0.19  0.00  0.00  0.00  0.00  0.63  0.00  0.00  0.63  0.00
Crit Moves:             ****                    ****                    ****
Green/Cycle: 0.22  0.00  0.22  0.00  0.00  0.00  0.00  0.70  0.00  0.00  0.70  0.00
Volume/Cap:  0.70  0.00  0.90  0.00  0.00  0.00  0.00  0.89  0.00  0.00  0.90  0.00
Delay/Veh:   39.2   0.0  54.3   0.0   0.0   0.0   0.0  14.8   0.0   0.0  15.3   0.0
User DelAdj: 1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
AdjDel/Veh:  39.2   0.0  54.3   0.0   0.0   0.0   0.0  14.8   0.0   0.0  15.3   0.0
LOS by Move:    D     A     D     A     A     A     A     B     A     A     B     A
HCM2kAvgQ:      9     0    13     0     0     0     0    32     0     0    33     0
------------|---------------||---------------||---------------||---------------|
HCM Ops Adjusted Lane Utilization Module:
Lanes:        2  0  0  0  2     0  0  0  0  0     0  0  3  0  1     0  0  3  0  2
Lane Group:    L  xxxx    R    xxxx xxxx  xxxx  xxxx    T     R    xxxx    T     R
#LnsInGrps:    2     0     2     0     0     0     0     3     1     0     3     2
------------|---------------||---------------||---------------||---------------|
HCM Ops Input Saturation Adj Module:
Lane Width:    12    12    12    12    12    12    12    12    12    12    12    12
CrsswalkWid:          8                 8                 8                 8
% Hev Veh:            2                 2                 2                 2
Grade:               0%                0%                0%                0%
Parking/Hr:          No                No                No                No
Bus Stp/Hr:           0                 0                 0                 0
Area Type:    < < < < < < < < < < < < < < < < < < Other  > > > > > > > > > > > > > > > > > >
Cnft Ped/Hr:          0                 0                 0                 0
ExclusiveRT:      Include           Include           Include           Include
% RT Prtct:           0                 0                 0                 0
------------|---------------||---------------||---------------||---------------|
HCM Ops f(lt) Adj Case Module:
f(lt) Case:      1 xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
HCM Ops Saturation Adj Module:
Ln Wid Adj:  1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Hev Veh Adj: 0.98 xxxx  0.98  xxxx xxxx xxxxx  xxxx 0.98 xxxxx  xxxx 0.98 xxxxx
Grade Adj:   1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
Parking Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Bus Stp Adj: xxxx xxxx  1.00  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Area Adj:    1.00 xxxx  1.00  xxxx xxxx xxxxx  xxxx 1.00 xxxxx  xxxx 1.00 xxxxx
RT Adj:      xxxx xxxx  0.85  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
LT Adj:      0.95 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
PedBike Adj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
HCM Sat Adj: 0.93 1.00  0.83  1.00 1.00  1.00  1.00 0.98  1.00  1.00 0.98  1.00
Usr Sat Adj: 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 Sat Adj: 0.97 1.00  0.88  1.00 1.00  1.00  1.00 0.91  1.00  1.00 0.91  0.88
Fnl Sat Adj: 0.90 1.00  0.73  1.00 1.00  1.00  1.00 0.89  1.00  1.00 0.89  0.88
------------|---------------||---------------||---------------||---------------|
Delay Adjustment Factor Module:
Coordinated:  < < < < < < < < < < < < < < <  No  > > > > > > > > > > > > > > > >
Signal Type:  < < < < < < < < < < < <     Actuated     > > > > > > > > > > > > >
DelAdjFctr:  1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
      Level Of Service Detailed Computation Report (HCM2000 Queue Method)
                          2000 HCM Operations Method
                            Base Volume Alternative
********************************************************************************
Intersection #34
```



```
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Green/Cycle: 0.22 0.00  0.22  0.00 0.00  0.00  0.00 0.70  0.00  0.00 0.70  0.00
ArrivalType:         3                3                3                3
ProgFactor:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Q1:           6.9  0.0   8.3   0.0  0.0   0.0   0.0 25.6   0.0   0.0 26.2   0.0
UpstreamVC:  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
UpstreamAdj: 0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00  0.00 0.00  0.00
EarlyArrAdj: 1.00 0.00  1.00  0.00 0.00  0.00  0.00 1.00  0.00  0.00 1.00  0.00
Q2:           2.1  0.0   4.4   0.0  0.0   0.0   0.0  6.0   0.0   0.0  6.3   0.0
HCM2KQueue:   8.9  0.0  12.7   0.0  0.0   0.0   0.0 31.6   0.0   0.0 32.6   0.0
------------|---------------||---------------||---------------||---------------|
70th%Factor: 1.18 1.20  1.17  1.20 1.20  1.20  1.20 1.15  1.20  1.20 1.14  1.20
HCM2k70thQ:  10.5  0.0  14.8   0.0  0.0   0.0   0.0 36.2   0.0   0.0 37.3   0.0
------------|---------------||---------------||---------------||---------------|
85th%Factor: 1.52 1.60  1.50  1.60 1.60  1.60  1.60 1.40  1.60  1.60 1.40  1.60
HCM2k85thQ:  13.6  0.0  18.9   0.0  0.0   0.0   0.0 44.4   0.0   0.0 45.7   0.0
------------|---------------||---------------||---------------||---------------|
90th%Factor: 1.66 1.80  1.61  1.80 1.80  1.80  1.80 1.48  1.80  1.80 1.48  1.80
HCM2k90thQ:  14.8  0.0  20.4   0.0  0.0   0.0   0.0 46.8   0.0   0.0 48.2   0.0
------------|---------------||---------------||---------------||---------------|
95th%Factor: 1.87 2.10  1.80  2.10 2.10  2.10  2.10 1.60  2.10  2.10 1.60  2.10
HCM2k95thQ:  16.7  0.0  22.7   0.0  0.0   0.0   0.0 50.7   0.0   0.0 52.1   0.0
------------|---------------||---------------||---------------||---------------|
98th%Factor: 2.20 2.70  2.08  2.70 2.70  2.70  2.70 1.79  2.70  2.70 1.78  2.70
HCM2k98thQ:  19.7  0.0  26.3   0.0  0.0   0.0   0.0 56.5   0.0   0.0 58.0   0.0
                      Fuel Consumption and Emissions
                        2000 HCM Operations Method
                          Base Volume Alternative
*******************************************************************************
Intersection #34
*******************************************************************************
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Run Speed:          30 MPH           30 MPH           30 MPH           30 MPH
NumOfStops: 120.1  0.0 131.3   0.0  0.0   0.0   0.0  629   0.0   0.0  645   0.0
-------------------------------------------------------------------------------
Name: year 1995 composite fleet
Fuel Consumption:    195.068 pounds
                      31.601 gallons
Carbon Dioxide:      608.613 pounds
Carbon Monoxide:      46.656 pounds
Hydrocarbons:          8.092 pounds
Nitrogen Oxides:       1.883 pounds
-------------------------------------------------------------------------------
Name: year 2000 composite fleet
Fuel Consumption:    181.381 pounds
                      29.384 gallons
Carbon Dioxide:      565.908 pounds
Carbon Monoxide:      45.580 pounds
Hydrocarbons:          7.875 pounds
Nitrogen Oxides:       1.666 pounds
-------------------------------------------------------------------------------
DISCLAIMER
The fuel consumption and emissions measures should be used with
caution and only for comparisons of different signal timings, geometric
design alternatives or for general planning applications, as these
calculations are applied to the analysis of a single intersection within the
CCG and TRAFFIX.  Network models are more appropriate since they can
account for the influence of the adjacent control measures and other system
elements.
```


HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, NB AM
From/To:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	6200	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1685	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2392	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2392	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, NB PM
From/To:
Jurisdiction:
Analysis Year:
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2925	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	795	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1129	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1129	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	17.4	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, SB AM
From/To:
Jurisdiction:
Analysis Year:
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2610	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	709	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1007	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1007	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	15.5	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, SB PM
From/To:
Jurisdiction:
Analysis Year:
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	6290	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1709	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2427	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2427	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Laguna, NB AM
From/To:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores: SA07-0088A

Flow Inputs and Adjustments

Volume, V	5617	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1526	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2167	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2167	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	57.9	mi/h
Number of lanes, N	3	
Density, D	37.4	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Laguna, NB PM
From/To:
Jurisdiction:
Analysis Year:
Description:

Flow Inputs and Adjustments

Volume, V	2782	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	756	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1073	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1073	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	16.5	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Laguna, SB AM
From/To:
Jurisdiction:
Analysis Year:
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2341	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	636	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	903	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	903	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	13.9	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Laguna, SB PM
From/To:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	5654	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1536	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2182	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2182	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	57.5	mi/h
Number of lanes, N	3	
Density, D	37.9	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Pocket AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5617	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	502	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5617	502		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1526	136		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	6502	551		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.572 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD}$ = 3956 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	6502	7050	No
$v_{FO} = v - v_R$	5951	7050	No
v_R	551	2000	No

v_3 or v_{av34} = 2546 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3956	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 36.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.478

Space mean speed in ramp influence area, S_R = 54.0 mph

Space mean speed in outer lanes, S_0 = 65.3 mph

Space mean speed for all vehicles, S = 57.9 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Pocket PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2782	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	448	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2782	448		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	756	122		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3220	492		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.657 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD}$ = 2284 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3220	7050	No
$v_{FO} = v - v_R$	2728	7050	No
v_R	492	2000	No

v_3 or v_{av34} = 936 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12}	2284	4600	No

!

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 22.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.472

Space mean speed in ramp influence area, S_R = 54.1 mph

Space mean speed in outer lanes, S_0 = 71.3 mph

Space mean speed for all vehicles, S = 58.2 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Pocket AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5115	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	408	vph
Length of first accel/decel lane	450	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	677	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5115	408	677	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1390	111	184	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5921	448	743	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.590 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 3494 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6369	7050	No
v_{3} or v_{av34}	2427 pc/h	(Equation 25-4 or 25-5)	
Is v_{3} or v_{av34} > 2700 pc/h?			No
Is v_{3} or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3494	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L = 33.2$ pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, $M_S = 0.490$

Space mean speed in ramp influence area, $S_R = 53.7$ mph

Space mean speed in outer lanes, $S_0 = 57.7$ mph

Space mean speed for all vehicles, $S = 55.2$ mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Pocket PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2334	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	199	vph
Length of first accel/decel lane	450	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	392	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2334	199	392	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	634	54	107	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2702	218	430	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.590 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 1594 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2920	7050	No
v_3 or v_{av34}	1108 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1594	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 16.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.313

Space mean speed in ramp influence area, S_R = 57.8 mph

Space mean speed in outer lanes, S_0 = 62.8 mph

Space mean speed for all vehicles, S = 59.6 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Pocket AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5523	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	677	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	408	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5523	677	408	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1501	184	111	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6393	743	448	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.583 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 3728 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7136	7050	Yes

v_{3} or v_{av34} = 2665 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? No

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3728	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L = 38.8$ pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, $M_S = 0.648$

Space mean speed in ramp influence area, $S_R = 50.1$ mph

Space mean speed in outer lanes, $S_0 = 56.3$ mph

Space mean speed for all vehicles, $S = 52.2$ mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Pocket PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2533	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	392	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	199	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2533	392	199	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	688	107	54	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2932	430	218	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.583 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 1710 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3362	7050	No
v_3 or v_{av34}	1222 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1710	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 20.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.340

Space mean speed in ramp influence area, S_R = 57.2 mph

Space mean speed in outer lanes, S_0 = 62.4 mph

Space mean speed for all vehicles, S = 59.0 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Pocket AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2610	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	574	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2610	574		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	709	156		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3021	630		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.655 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD}$ = 2197 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3021	7050	No
$v_{FO} = v - v_R$	2391	7050	No
v_R	630	2000	No

v_3 or v_{av34} = 824 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12}	2197	4600	No

!

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 21.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.485

Space mean speed in ramp influence area, S_R = 53.9 mph

Space mean speed in outer lanes, S_0 = 71.3 mph

Space mean speed for all vehicles, S = 57.7 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Pocket PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6290	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1153	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6290	1153		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1709	313		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	7281	1266		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.520 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4392 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7281	7050	Yes
$v_{FO} = v_F - v_R$	6015	7050	No
v_R	1266	2000	No

v_3 or v_{av34} 2889 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4581 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4581	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 42.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.542

Space mean speed in ramp influence area, S_R = 52.5 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 56.5 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Pocket AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2036	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	97	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	208	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2036	97	208	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	553	26	57	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2357	106	228	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.586 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1381 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2463	7050	No
v_3 or v_{av34}	976 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1381	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 15.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.317

Space mean speed in ramp influence area, S_R = 57.7 mph

Space mean speed in outer lanes, S_0 = 63.3 mph

Space mean speed for all vehicles, S = 59.8 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Pocket PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5137	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	286	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	231	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5137	286	231	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1396	78	63	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	5947	314	254	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.586 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 3484 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6261	7050	No

v_{3} or v_{av34} = 2463 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? No

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3484	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L = 33.1$ pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, $M_S = 0.474$

Space mean speed in ramp influence area, $S_R = 54.1$ mph

Space mean speed in outer lanes, $S_0 = 57.5$ mph

Space mean speed for all vehicles, $S = 55.4$ mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Pocket AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2133	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	208	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	97	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2133	208	97	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	580	57	26	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2469	228	106	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 1454 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2697	7050	No

v_3 or v_{av34} = 1015 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1454	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 16.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.314

Space mean speed in ramp influence area, S_R = 57.8 mph

Space mean speed in outer lanes, S_0 = 63.1 mph

Space mean speed for all vehicles, S = 59.7 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Pocket PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	5423	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	231	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	286	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	5423	231	286	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1474	63	78	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	6278	254	314	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 3696 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	6532	7050	No
v_3 or v_{av34}	2582 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3696	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 33.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.496

Space mean speed in ramp influence area, S_R = 53.6 mph

Space mean speed in outer lanes, S_0 = 56.8 mph

Space mean speed for all vehicles, S = 54.8 mph

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4066	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1105	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2276	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2276	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	54.8	mi/h
Number of lanes, N	2	
Density, D	41.6	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year:
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4308	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1171	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2412	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2412	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2078	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	565	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1163	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1163	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	17.9	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2755	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	749	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1542	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1542	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	23.7	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, NB AM
From/To:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3950	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1073	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2211	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2211	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	56.7	mi/h
Number of lanes, N	2	
Density, D	39.0	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, NB PM
From/To:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4020	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1092	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2250	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2250	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	55.6	mi/h
Number of lanes, N	2	
Density, D	40.5	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, SB AM
From/To:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4072	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1107	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2279	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2279	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	54.7	mi/h
Number of lanes, N	2	
Density, D	41.7	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, SB PM
From/To:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3740	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1016	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2094	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2094	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	2	
Density, D	35.1	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Bruceville AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3771	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	731	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3771	731		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1025	199		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4222	803		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4222 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4222	4700	No
$v_{FO} = v - v_R$	3419	4700	No
v_R	803	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4222	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 38.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.500

Space mean speed in ramp influence area, S_R = 53.5 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.5 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Bruceville PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3433	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	648	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3433	648		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	933	176		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3843	711		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 3843 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3843	4700	No
$v_{FO} = v - v_R$	3132	4700	No
v_R	711	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	3843	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_D = 35.5$ pc/mi/ln
R

Level of service for ramp-freeway junction areas of influence E

_____Speed Estimation_____

Intermediate speed variable, $D_S = 0.492$

Space mean speed in ramp influence area, $S_R = 53.7$ mph

Space mean speed in outer lanes, $S_0 = N/A$ mph

Space mean speed for all vehicles, $S = 53.7$ mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Mack AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4072	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	342	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4072	342		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1107	93		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4559	375		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4559 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4559	4700	No
$v_{FO} = v_F - v_R$	4184	4700	No
v_R	375	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4559	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 41.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.462

Space mean speed in ramp influence area, S_R = 54.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.4 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Mack PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3740	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	495	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3740	495		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1016	135		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4187	543		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4187 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4187	4700	No
$v_{FO} = v - v_R$	3644	4700	No
v_R	543	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4187	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 38.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.477

Space mean speed in ramp influence area, S_R = 54.0 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.0 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 ON Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	1916	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	180	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	1916	180		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	521	49		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2145	198		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 2145 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	2343	4700	No

v v 0 pc/h (Equation 25-4 or 25-5)
3 or av34

Is v v > 2700 pc/h? No
3 or av34

Is v v > 1.5 v /2 No
3 or av34 12

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2145	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 21.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.341

Space mean speed in ramp influence area, S_R = 57.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 57.2 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 ON Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2482	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	303	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2482	303		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	674	82		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2779	333		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 2779 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	3112	4700	No
v v 3 or av34	0 pc/h	(Equation 25-4 or 25-5)	
Is v v 3 or av34	> 2700 pc/h?	No	
Is v v 3 or av34	> 1.5 v /2 12	No	

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2779	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 27.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.388

Space mean speed in ramp influence area, S_R = 56.1 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 56.1 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4066	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	741	vph
Length of first accel/decel lane	175	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4066	741		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1105	201		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4552	813		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4552 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4552	4700	No
$v_{FO} = v - v_R$	3739	4700	No
v_R	813	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4552	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 41.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.501

Space mean speed in ramp influence area, S_R = 53.5 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.5 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4308	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	736	vph
Length of first accel/decel lane	175	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4308	736		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1171	200		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4823	808		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4823 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4823	4700	Yes
$v_{FO} = v - v_R$	4015	4700	No
v_R	808	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 25-15 or 25-16)	

Is v_{3} or v_{av34} > 2700 pc/h? No

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12}	4823	4600	No !

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 44.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.501

Space mean speed in ramp influence area, S_R = 53.5 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.5 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 ON Loop Mack AM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2773	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1068	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2773	1068		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	754	290		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3105	1172		pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 1.000 Using Equation 0

$v_{12} = v_{F} (P_{FM}) =$ 3105 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4277	4700	No

v_3 or v_{av34} = 0 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3105	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 36.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.584

Space mean speed in ramp influence area, S_R = 51.6 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 51.6 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 ON Loop Mack PM
Junction:
Jurisdiction:
Analysis Year: Existing
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2464	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1298	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2464	1298		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	670	353		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2759	1425		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 2759 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	4184	4700	No

v v 0 pc/h (Equation 25-4 or 25-5)
3 or av34

Is v v > 2700 pc/h? No
3 or av34

Is v v > 1.5 v /2 No
3 or av34 12

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2759	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 35.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.559

Space mean speed in ramp influence area, S_R = 52.1 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 52.1 mph

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: N of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores: SA07-0088A

Flow Inputs and Adjustments

Volume, V	6950	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1889	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2682	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2682	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: N of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description:

Flow Inputs and Adjustments

Volume, V	3530	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	959	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1362	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1362	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	21.0	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2850	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	774	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1100	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1100	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	16.9	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: N of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	7000	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1902	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2701	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2701	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, NB AM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	7530	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2046	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2906	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2906	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, NB PM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3630	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	986	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1401	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1401	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	21.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, SB AM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3090	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	840	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1192	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1192	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	18.3	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, SB PM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	7540	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2049	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2909	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2909	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores: SA07-0088A

Flow Inputs and Adjustments

Volume, V	6530	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1774	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2520	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2520	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
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Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description:

Flow Inputs and Adjustments

Volume, V	3230	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	878	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1246	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1246	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	19.2	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2970	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	807	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1146	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1146	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	17.6	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	6860	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1864	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2647	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2647	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6530	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	390	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6530	390		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1774	106		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	7559	428		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3637 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	7559	7050	Yes
$v_{FO} = v_F - v_R$	7131	7050	Yes
v_R	428	3800	No

v_3 or v_{av34} = 3922 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 4859 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4859	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 32.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.467

Space mean speed in ramp influence area, S_R = 54.3 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 57.6 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3230	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	190	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3230	190		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	878	52		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3739	209		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 1797 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3739	7050	No
$v_{FO} = v - v_R$	3530	7050	No
v_R	209	3800	No

v_3 or v_{av34} = 1942 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2136 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2136	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 9.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.447

Space mean speed in ramp influence area, S_R = 54.7 mph

Space mean speed in outer lanes, S_0 = 69.0 mph

Space mean speed for all vehicles, S = 60.0 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6950	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	310	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6950	310		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1889	84		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	8045	340		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.543 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4526 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8045	7050	Yes
$v_{FO} = v - v_R$	7705	7050	Yes
v_R	340	2000	No
v_3 or v_{av34}	3519 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 5345 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5345	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 48.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.459

Space mean speed in ramp influence area, S_R = 54.5 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 57.5 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3530	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	480	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3530	480		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	959	130		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4086	527		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.634 Using Equation 5

$v_{12} = v_R + (v - v_F) P_{FD}$ = 2782 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4086	7050	No
$v_{FO} = v - v_R$	3559	7050	No
v_R	527	2000	No

v_3 or v_{av34} 1304 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2782	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 26.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.475

Space mean speed in ramp influence area, S_R = 54.1 mph

Space mean speed in outer lanes, S_0 = 70.1 mph

Space mean speed for all vehicles, S = 58.3 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6140	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	120	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	690	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6140	120	690	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1668	33	187	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7108	132	757	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.607 Using Equation 1

$v_{12} = v_{12}(P_{FM})$ = 4314 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7240	7050	Yes

$v_{3 \text{ or } av34}$ = 2794 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 No

If yes, v_{12A} = 4408 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4408	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 34.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.613

Space mean speed in ramp influence area, S_R = 50.9 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 52.7 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3040	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	80	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	410	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3040	80	410	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	826	22	111	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3519	88	450	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.607 Using Equation 1

$v_{12} = v_{12}(P_{FM})$ = 2136 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3607	7050	No

$v_{3 \text{ or } av34}$ = 1383 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? No

Is $v_{3 \text{ or } av34} > 1.5\, v_{12}/2$ No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2136	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 16.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.284

Space mean speed in ramp influence area, S_R = 58.5 mph

Space mean speed in outer lanes, S_0 = 61.8 mph

Space mean speed for all vehicles, S = 59.7 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6640	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	410	vph
Length of first accel/decel lane	450	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	480	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6640	410	480	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1804	111	130	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7687	450	527	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.590 Using Equation 1

$v_{12} = v_{12}(P_{FM})$ = 4536 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8137	7050	Yes

v_{3} or v_{av34} = 3151 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? Yes

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4987 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4987	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 44.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.186

Space mean speed in ramp influence area, S_R = 37.7 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 42.3 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6260	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	690	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	120	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6260	690	120	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1701	187	33	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7247	757	132	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 4453 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8004	7050	Yes

$v_{3 \text{ or } av34}$ = 2794 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 No

If yes, v_{12A} = 4547 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4547	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 38.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.013

Space mean speed in ramp influence area, S_R = 41.7 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 45.6 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3050	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	220	vph
Length of first accel/decel lane	450	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	360	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3050	220	360	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	829	60	98	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3531	242	395	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.590 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2084 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3773	7050	No
v_3 or v_{av34}	1447 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2084	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L$ = 20.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.329

Space mean speed in ramp influence area, S_R = 57.4 mph

Space mean speed in outer lanes, S_0 = 61.6 mph

Space mean speed for all vehicles, S = 59.0 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3120	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	410	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	80	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3120	410	80	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	848	111	22	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3612	450	88	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 2219 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4062	7050	No

$v_{3 \text{ or } av34}$ = 1393 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? No

Is $v_{3 \text{ or } av34} > 1.5\, v_{12}/2$ No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2219	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 17.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.285

Space mean speed in ramp influence area, S_R = 58.4 mph

Space mean speed in outer lanes, S_0 = 61.8 mph

Space mean speed for all vehicles, S = 59.6 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7050	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	480	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	410	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7050	480	410	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1916	130	111	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8161	527	450	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.583 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4759 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8688	7050	Yes

$v_{3 \text{ or } av34}$ = 3402 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 No

If yes, v_{12A} = 5461 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5461	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 50.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.862

Space mean speed in ramp influence area, S_R = 22.2 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 27.3 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3270	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	360	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	220	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3270	360	220	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	889	98	60	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3785	395	242	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.583 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2207 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4180	7050	No

v_3 or v_{av34} v_{av34} = 1578 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2207	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 24.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.360

Space mean speed in ramp influence area, S_R = 56.7 mph

Space mean speed in outer lanes, S_0 = 61.1 mph

Space mean speed for all vehicles, S = 58.3 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2850	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	290	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2850	290		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	774	79		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3299	318		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 1659 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3299	7050	No
$v_{FO} = v_F - v_R$	2981	7050	No
v_R	318	3800	No

v_3 or v_{av34} = v_{12} = 1640 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1885 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	1885	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 7.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.457

Space mean speed in ramp influence area, S_R = 54.5 mph

Space mean speed in outer lanes, S_0 = 69.7 mph

Space mean speed for all vehicles, S = 60.1 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7000	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	820	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7000	820		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1902	223		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	8103	900		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4141 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8103	7050	Yes
$v_{FO} = v_F - v_R$	7203	7050	Yes
v_R	900	3800	No
v_3 or v_{av34}	3962 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 5403 (Equation 25-18)

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12A}	5403	4600	No !

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 37.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.509

Space mean speed in ramp influence area, S_R = 53.3 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 56.6 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3090	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	570	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3090	570		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	840	155		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3577	626		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.642 Using Equation 5

$v_{12} = v_R + (v - v_F) P_{FD}$ = 2520 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3577	7050	No
$v_{FO} = v - v_R$	2951	7050	No
v_R	626	2000	No

v_3 or v_{av34} = 1057 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2520	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 24.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.484

Space mean speed in ramp influence area, S_R = 53.9 mph

Space mean speed in outer lanes, S_0 = 71.1 mph

Space mean speed for all vehicles, S = 58.0 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7540	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1000	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7540	1000		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2049	272		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	8728	1098		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.491 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4847 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8728	7050	Yes
$v_{FO} = v_F - v_R$	7630	7050	Yes
v_R	1098	2000	No
v_3 or v_{av34}	3881 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 6028 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6028	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 54.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.527

Space mean speed in ramp influence area, S_R = 52.9 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 56.0 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2560	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	120	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	290	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2560	120	290	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	696	33	79	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2963	132	318	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.595 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1763 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3095	7050	No

v_3 or v_{av34} v_{12} = 1200 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1763	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_{A} - 0.00627\ L$ = 16.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.304

Space mean speed in ramp influence area, S_R = 58.0 mph

Space mean speed in outer lanes, S_0 = 62.5 mph

Space mean speed for all vehicles, S = 59.7 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6180	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	140	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	540	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6180	140	540	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1679	38	147	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7154	154	593	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.595 Using Equation 1

$v_{12} = v_F (P_{FM}) =$ 4256 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7308	7050	Yes

v_3 or v_{av34} = 2898 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4454 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4454	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{R12} + 0.0078 v_{A} - 0.00627 L_{R}$ = 37.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.669

Space mean speed in ramp influence area, S_R = 49.6 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 51.8 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2520	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	60	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	270	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2520	60	270	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	685	16	73	v
Trucks and buses	2	2	2	%
Recreational vehicles	13	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.965	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2838	66	296	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.586 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 1663 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2904	7050	No

$v_{3 \text{ or } av34}$ = 1175 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? No

Is $v_{3 \text{ or } av34} > 1.5 v_{12}/2$ No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1663	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 17.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.322

Space mean speed in ramp influence area, S_R = 57.6 mph

Space mean speed in outer lanes, S_0 = 62.6 mph

Space mean speed for all vehicles, S = 59.5 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6540	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	160	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	300	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6540	160	300	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1777	43	82	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7571	176	329	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.586 Using Equation 1

$v_{12} = v_{12}(P_{FM})$ = 4436 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7747	7050	Yes

v_3 or v_{av34} = 3135 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4871 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4871	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 42.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.907

Space mean speed in ramp influence area, S_R = 44.1 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 47.7 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2680	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	290	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	120	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2680	290	120	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	728	79	33	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3102	318	132	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 1906 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3420	7050	No

$v_{3 \text{ or } av34}$ = 1196 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? No

Is $v_{3 \text{ or } av34} > 1.5\, v_{12}/2$ No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1906	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 14.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.265

Space mean speed in ramp influence area, S_R = 58.9 mph

Space mean speed in outer lanes, S_0 = 62.5 mph

Space mean speed for all vehicles, S = 60.1 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6320	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	540	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	140	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6320	540	140	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1717	147	38	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7316	593	154	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4495 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7909	7050	Yes

v_3 or v_{av34} 2821 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4616 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4616	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 37.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.942

Space mean speed in ramp influence area, S_R = 43.3 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 47.0 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2580	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	270	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	60	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2580	270	60	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	701	73	16	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2987	296	66	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 1758 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3283	7050	No
v_{3} or v_{av34}	1229 pc/h	(Equation 25-4 or 25-5)	
Is v_{3} or v_{av34} > 2700 pc/h?			No
Is v_{3} or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1758	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 18.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.323

Space mean speed in ramp influence area, S_R = 57.6 mph

Space mean speed in outer lanes, S_0 = 62.4 mph

Space mean speed for all vehicles, S = 59.3 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6700	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	300	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	160	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6700	300	160	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1821	82	43	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7756	329	176	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 4566 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8085	7050	Yes

v_{3} or v_{av34} = 3190 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? Yes

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5056 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5056	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_{A} - 0.00627\ L$ = 44.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.144

Space mean speed in ramp influence area, S_R = 38.7 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 43.2 mph

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4170	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1133	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2334	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2334	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	52.8	mi/h
Number of lanes, N	2	
Density, D	44.2	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4303	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1169	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2409	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2409	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2309	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	627	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1293	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1293	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	19.9	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2997	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	814	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1678	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1678	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	64.6	mi/h
Number of lanes, N	2	
Density, D	26.0-	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, NB AM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4315	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1173	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2415	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2415	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, NB PM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4393	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1194	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2459	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2459	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, SB AM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4449	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1209	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2490	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2490	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, SB PM
From/To:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4090	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1111	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2290	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2290	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	54.3	mi/h
Number of lanes, N	2	
Density, D	42.2	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4170	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	840	vph
Length of first accel/decel lane	175	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4170	840		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1133	228		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4669	922		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD}$ = 4669 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4669	4700	No
$v_{FO} = v - v_R$	3747	4700	No
v_R	922	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4669	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 42.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.511

Space mean speed in ramp influence area, S_R = 53.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.2 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4303	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	860	vph
Length of first accel/decel lane	175	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4303	860		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1169	234		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4817	944		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4817 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4817	4700	Yes
$v_{FO} = v_F - v_R$	3873	4700	No
v_R	944	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4817	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 44.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.513

Space mean speed in ramp influence area, S_R = 53.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.2 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 ON Loop Mack AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3028	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1120	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3028	1120		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	823	304		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3390	1230		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 3390 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	4620	4700	No
v v 3 or av34	0 pc/h	(Equation 25-4 or 25-5)	
Is v v 3 or av34 > 2700 pc/h?			No
Is v v 3 or av34 > 1.5 v /2 12			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3390	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L$ = 39.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.699

Space mean speed in ramp influence area, S_R = 48.9 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.9 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 ON Loop Mack PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2693	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1430	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2693	1430		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	732	389		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3015	1570		pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)
P_{FM} = 1.000 Using Equation 0
$v_{12} = v_F (P_{FM})$ = 3015 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4585	4700	No

v_3 or v_{av34} v_{av34} = 0 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3015	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_{A} - 0.00627\ L$ = 38.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.686

Space mean speed in ramp influence area, S_R = 49.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.2 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Bruceville AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4141	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	830	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4141	830		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1125	226		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4636	911		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)
P_{FD} = 1.000 Using Equation 0
$v_{12} = v_R + (v - v_R) P_{FD}$ = 4636 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4636	4700	No
$v_{FO} = v - v_R$	3725	4700	No
v_R	911	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4636	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 42.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.510

Space mean speed in ramp influence area, S_R = 53.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.3 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Bruceville PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3774	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	700	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3774	700		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1026	190		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4225	768		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4225 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4225	4700	No
$v_{FO} = v - v_R$	3457	4700	No
v_R	768	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_{3} or v_{av34} > 2700 pc/h? No

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4225	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 38.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.497

Space mean speed in ramp influence area, S_R = 53.6 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.6 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Mack AM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4449	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	350	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4449	350		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1209	95		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4981	384		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4981 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4981	4700	Yes
$v_{FO} = v - v_R$	4597	4700	No
v_R	384	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4981	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 45.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.463

Space mean speed in ramp influence area, S_R = 54.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.4 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Mack PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4090	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	510	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4090	510		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1111	139		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4579	560		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD}$ = 4579 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4579	4700	No
$v_{FO} = v - v_R$	4019	4700	No
v_R	560	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4579	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 41.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.478

Space mean speed in ramp influence area, S_R = 54.0 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.0 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 ON Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2093	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	240	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2093	240		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	569	65		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2343	263		pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)
P_{FM} = 1.000 Using Equation 0
$v_{12} = v_{12} (P_{FM}) =$ 2343 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2606	4700	No

$v_{3 \text{ or } av34}$ v_{av34} 0 pc/h (Equation 25-4 or 25-5)
Is $v_{3 \text{ or } av34}$ v_{av34} > 2700 pc/h? No
Is $v_{3 \text{ or } av34}$ v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2343	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 23.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.353

Space mean speed in ramp influence area, S_R = 56.9 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 56.9 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 ON Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2643	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	410	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2643	410		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	718	111		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2959	450		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 2959 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	3409	4700	No

v v 0 pc/h (Equation 25-4 or 25-5)
3 or av34

Is v v > 2700 pc/h? No
3 or av34

Is v v > 1.5 v /2 No
3 or av34 12

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2959	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 30.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.418

Space mean speed in ramp influence area, S_R = 55.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 55.4 mph

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores: SA07-0088A

Flow Inputs and Adjustments

Volume, V	7870	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2139	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3037	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3037	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description:

Flow Inputs and Adjustments

Volume, V	4680	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1272	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1806	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1806	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	63.9	mi/h
Number of lanes, N	3	
Density, D	28.3	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3740	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1016	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1443	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1443	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	22.2	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S N of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	7880	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2141	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3041	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3041	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, NB AM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	8320	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2261	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3210	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3210	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, NB PM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4510	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1226	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1740	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1740	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	64.3	mi/h
Number of lanes, N	3	
Density, D	27.0	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, SB AM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3810	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1035	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1470	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1470	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	22.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, SB PM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	8280	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2250	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3195	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3195	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores: SA07-0088A

Flow Inputs and Adjustments

Volume, V	7030	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1910	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2713	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2713	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description:

Flow Inputs and Adjustments

Volume, V	3730	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1014	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1439	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1439	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	22.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3280	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	891	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1266	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1266	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	19.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	7370	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2003	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2844	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2844	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7030	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	890	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7030	890		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1910	242		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	8138	977		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4199 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8138	7050	Yes
$v_{FO} = v - v_R$	7161	7050	Yes
v_R	977	3800	No

v_3 or v_{av34} 3939 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 5438 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5438	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 37.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.516

Space mean speed in ramp influence area, S_R = 53.1 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 56.5 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3730	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	690	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3730	690		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1014	187		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4318	757		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2359 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4318	7050	No
$v_{FO} = v_F - v_R$	3561	7050	No
v_R	757	3800	No

v_3 or v_{av34} = 1959 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 2467 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	2467	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 12.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, D_S = 0.496

Space mean speed in ramp influence area, S_R = 53.6 mph

Space mean speed in outer lanes, S_0 = 68.0 mph

Space mean speed for all vehicles, S = 58.9 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7870	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	440	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7870	440		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2139	120		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	9110	483		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.510 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4883 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	9110	7050	Yes
$v_{FO} = v - v_R$	8627	7050	Yes
v_R	483	2000	No
v_3 or v_{av34}	4227 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 6410 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6410	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 58.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.471

Space mean speed in ramp influence area, S_R = 54.2 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 56.9 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4680	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	820	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4680	820		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1272	223		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	5418	900		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.583 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD}$ = 3535 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5418	7050	No
$v_{FO} = v - v_R$	4518	7050	No
v_R	900	2000	No

v_3 or v_{av34} = 1883 pc/h (Equation 25-15 or 25-16)

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	3535	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, D = 4.252 + 0.0086 v - 0.009 L = 33.3 pc/mi/ln
R 12 D
Level of service for ramp-freeway junction areas of influence D

_____Speed Estimation_____

Intermediate speed variable, D = 0.509
S
Space mean speed in ramp influence area, S = 53.3 mph
R
Space mean speed in outer lanes, S = 67.9 mph
0
Space mean speed for all vehicles, S = 57.6 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6140	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	110	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp 1620 vph
Position of adjacent Ramp Downstream
Type of adjacent Ramp On
Distance to adjacent Ramp 1380 ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6140	110	1620	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1668	30	440	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7108	121	1778	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)
P_{FM} = 0.607 Using Equation 1
$v_{12} = v_{12}(P_{FM}) =$ 4314 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7229	7050	Yes

v_{3} or v_{av34} 2794 pc/h (Equation 25-4 or 25-5)
Is v_{3} or v_{av34} > 2700 pc/h? Yes
Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4408 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4408	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 34.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.609

Space mean speed in ramp influence area, S_R = 51.0 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 52.8 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3040	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	40	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	1600	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3040	40	1600	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	826	11	435	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3519	44	1757	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.607 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 2136 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3563	7050	No

$v_{3 \text{ or } av34}$ = 1383 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? No

Is $v_{3 \text{ or } av34} > 1.5\, v_{12}/2$ No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2136	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L_A$ = 15.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.282

Space mean speed in ramp influence area, S_R = 58.5 mph

Space mean speed in outer lanes, S_0 = 61.8 mph

Space mean speed for all vehicles, S = 59.8 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7430	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	410	vph
Length of first accel/decel lane	450	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	480	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7430	410	480	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2019	111	130	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8601	450	527	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.590 Using Equation 1

$v_{12} = v_{12} (P_{FM})$ = 5075 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9051	7050	Yes

v_3 or v_{av34} = 3526 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5901 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5901	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 52.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 2.524

Space mean speed in ramp influence area, S_R = 6.9 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 9.4 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3860	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	200	vph
Length of first accel/decel lane	450	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	450	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3860	200	450	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1049	54	122	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4468	220	494	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.590 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 2637 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4688	7050	No

$v_{3 \text{ or } av34}$ = 1831 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? No

Is $v_{3 \text{ or } av34} > 1.5\, v_{12}/2$ No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2637	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_{A} - 0.00627\ L$ = 24.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.357

Space mean speed in ramp influence area, S_R = 56.8 mph

Space mean speed in outer lanes, S_0 = 60.2 mph

Space mean speed for all vehicles, S = 58.1 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6250	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1620	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	110	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6250	1620	110	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1698	440	30	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7235	1778	121	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 4446 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9013	7050	Yes

$v_{3 \text{ or } av34}$ 2789 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? Yes

Is $v_{3 \text{ or } av34} > 1.5 v_{12}/2$ No

If yes, v_{12A} = 4535 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4535	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 45.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 2.380

Space mean speed in ramp influence area, S_R = 10.3 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 13.6 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3080	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1600	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	40	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3080	1600	40	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	837	435	11	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3565	1757	44	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 2191 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5322	7050	No

$v_{3 \text{ or } av34}$ = 1374 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? No

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2191	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L_A$ = 27.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.431

Space mean speed in ramp influence area, S_R = 55.1 mph

Space mean speed in outer lanes, S_0 = 61.9 mph

Space mean speed for all vehicles, S = 56.7 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7840	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	480	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	410	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7840	480	410	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2130	130	111	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9076	527	450	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.583 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 5292 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9603	7050	Yes

v_3 or v_{av34} = 3784 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 6376 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6376	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 57.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 4.188

Space mean speed in ramp influence area, S_R = -31.3 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4060	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	450	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	200	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4060	450	200	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1103	122	54	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	4700	494	220	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.583 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 2741 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	5194	7050	No

v_{3} or v_{av34} 1959 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? No

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2741	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 29.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.406

Space mean speed in ramp influence area, S_R = 55.7 mph

Space mean speed in outer lanes, S_0 = 59.7 mph

Space mean speed for all vehicles, S = 57.1 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3740	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1180	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3740	1180		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1016	321		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4329	1295		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 2660 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4329	7050	No
$v_{FO} = v - v_R$	3034	7050	No
v_R	1295	3800	No

v_3 or v_{av34} = 1669 pc/h (Equation 25-15 or 25-16)

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	2660	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_D = 13.6$ pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

_____Speed Estimation_____

Intermediate speed variable, $D_S = 0.545$

Space mean speed in ramp influence area, $S_R = 52.5$ mph

Space mean speed in outer lanes, $S_0 = 68.7$ mph

Space mean speed for all vehicles, $S = 57.7$ mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7880	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1700	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7880	1700		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2141	462		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	9122	1866		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 5131 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	9122	7050	Yes
$v_{FO} = v - v_R$	7256	7050	Yes
v_R	1866	3800	No

v_3 or v_{av34} = 3991 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 6422 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6422	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 46.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.596

Space mean speed in ramp influence area, S_R = 51.3 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 54.6 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3810	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	570	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3810	570		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1035	155		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4410	626		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.621 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD} = 2976$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4410	7050	No
$v_{FO} = v - v_R$	3784	7050	No
v_R	626	2000	No

v_3 or v_{av34} = 1434 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2976	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 28.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.484

Space mean speed in ramp influence area, S_R = 53.9 mph

Space mean speed in outer lanes, S_0 = 69.6 mph

Space mean speed for all vehicles, S = 58.1 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8280	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1020	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8280	1020		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2250	277		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	9585	1120		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.469 Using Equation 5

$v_{12} = v_R + (v - v_F) P_{FD}$ = 5089 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	9585	7050	Yes
$v_{FO} = v - v_R$	8465	7050	Yes
v_R	1120	2000	No
v_3 or v_{av34}	4496 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 6885 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6885	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 62.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.529

Space mean speed in ramp influence area, S_R = 52.8 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 55.7 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2560	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	470	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	250	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2560	470	250	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	696	128	68	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2963	516	274	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.595 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1763 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3479	7050	No

v_3 or v_{av34} 1200 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1763	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 19.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.316

Space mean speed in ramp influence area, S_R = 57.7 mph

Space mean speed in outer lanes, S_0 = 62.5 mph

Space mean speed for all vehicles, S = 59.3 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6180	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	780	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	410	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6180	780	410	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1679	212	111	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7154	856	450	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.595 Using Equation 1

$v_{12} = v_F (P_{FM}) =$ 4256 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8010	7050	Yes

v_3 or v_{av34} 2898 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4454 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4454	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 42.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.067

Space mean speed in ramp influence area, S_R = 40.5 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 44.7 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3240	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	60	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	440	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3240	60	440	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	880	16	120	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3751	66	483	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.586 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2198 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3817	7050	No

v_3 or v_{av34} = 1553 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2198	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 21.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.338

Space mean speed in ramp influence area, S_R = 57.2 mph

Space mean speed in outer lanes, S_0 = 61.2 mph

Space mean speed for all vehicles, S = 58.8 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7260	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	160	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp 460 vph
Position of adjacent Ramp Downstream
Type of adjacent Ramp On
Distance to adjacent Ramp 1000 ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7260	160	460	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1973	43	125	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8404	176	505	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)
P_{FM} = 0.586 Using Equation 1
$v_{12} = v_F (P_{FM})$ = 4924 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8580	7050	Yes

v_3 or v_{av34} 3480 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5704 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5704	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 49.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.695

Space mean speed in ramp influence area, S_R = 26.0 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 31.3 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3030	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	250	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	470	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3030	250	470	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	823	68	128	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3508	274	516	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 2156 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3782	7050	No

$v_{3 \text{ or } av34}$ = 1352 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? No

Is $v_{3 \text{ or } av34} > 1.5\, v_{12}/2$ No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2156	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 16.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.273

Space mean speed in ramp influence area, S_R = 58.7 mph

Space mean speed in outer lanes, S_0 = 61.9 mph

Space mean speed for all vehicles, S = 59.8 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6960	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	410	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	780	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6960	410	780	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1891	111	212	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8057	450	856	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4951 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8507	7050	Yes

v_3 or v_{av34} 3106 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5357 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5357	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 42.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.526

Space mean speed in ramp influence area, S_R = 29.9 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 35.1 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Pocket AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3300	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	440	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	60	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3300	440	60	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	897	120	16	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3820	483	66	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 2249 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4303	7050	No

v_{3} or v_{av34} = 1571 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? No

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2249	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L$ = 24.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.353

Space mean speed in ramp influence area, S_R = 56.9 mph

Space mean speed in outer lanes, S_0 = 61.1 mph

Space mean speed for all vehicles, S = 58.4 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Pocket PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7420	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	460	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	160	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7420	460	160	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2016	125	43	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8589	505	176	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 5056 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9094	7050	Yes

v_3 or v_{av34} 3533 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5889 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5889	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_{A} - 0.00627\ L$ = 52.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 2.626

Space mean speed in ramp influence area, S_R = 4.6 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 6.3 mph

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, NB AM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4322	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1174	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2419	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2419	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, NB PM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4399	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1195	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2462	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2462	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, SB AM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4467	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1214	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2501	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2501	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, SB PM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4102	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1115	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2296	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2296	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	54.1	mi/h
Number of lanes, N	2	
Density, D	42.4	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4186	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1137	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2343	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2343	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	52.5	mi/h
Number of lanes, N	2	
Density, D	44.6	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4334	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1178	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2426	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2426	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2381	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	647	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1333	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1333	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	20.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3019	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	820	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1690	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1690	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	64.6	mi/h
Number of lanes, N	2	
Density, D	26.2	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4186	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	860	vph
Length of first accel/decel lane	175	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4186	860		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1137	234		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4686	944		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)
P_{FD} = 1.000 Using Equation 0
$v_{12} = v_R + (v - v_R) P_{FD}$ = 4686 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4686	4700	No
$v_{FO} = v - v_R$	3742	4700	No
v_R	944	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	4686	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 43.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.513

Space mean speed in ramp influence area, S_R = 53.2 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.2 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4334	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	900	vph
Length of first accel/decel lane	175	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4334	900		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1178	245		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4852	988		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD}$ = 4852 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4852	4700	Yes
$v_{FO} = v - v_R$	3864	4700	No
v_R	988	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4852	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 44.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.517

Space mean speed in ramp influence area, S_R = 53.1 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.1 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 ON Loop Mack AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3028	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1130	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3028	1130		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	823	307		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3390	1241		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 3390 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	4631	4700	No

v v 0 pc/h (Equation 25-4 or 25-5)
3 or av34

Is v v > 2700 pc/h? No
3 or av34

Is v v > 1.5 v /2 No
3 or av34 12

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3390	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 39.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.704

Space mean speed in ramp influence area, S_R = 48.8 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.8 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 ON Loop Mack PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2693	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1440	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2693	1440		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	732	391		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3015	1581		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 3015 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	4596	4700	No

v v 0 pc/h (Equation 25-4 or 25-5)
3 or av34

Is v v > 2700 pc/h? No
3 or av34

Is v v > 1.5 v /2 No
3 or av34 12

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3015	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 39.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.690

Space mean speed in ramp influence area, S_R = 49.1 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 49.1 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Bruceville AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4150	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	840	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4150	840		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1128	228		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4646	922		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD}$ = 4646 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4646	4700	No
$v_{FO} = v - v_R$	3724	4700	No
v_R	922	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	4646	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 42.4 pc/mi/ln
Level of service for ramp-freeway junction areas of influence E

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.511
Space mean speed in ramp influence area, S_R = 53.2 mph
Space mean speed in outer lanes, S_0 = N/A mph
Space mean speed for all vehicles, S = 53.2 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Bruceville PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3780	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	710	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3780	710		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1027	193		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4232	779		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4232 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4232	4700	No
$v_{FO} = v_F - v_R$	3453	4700	No
v_R	779	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4232	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 38.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.498

Space mean speed in ramp influence area, S_R = 53.5 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.5 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Mack AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4467	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	360	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4467	360		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1214	98		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	5001	395		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD} = 5001$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5001	4700	Yes
$v_{FO} = v - v_R$	4606	4700	No
v_R	395	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5001	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 45.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.464

Space mean speed in ramp influence area, S_R = 54.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.3 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Mack PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4102	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	520	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4102	520		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1115	141		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4592	571		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD}$ = 4592 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4592	4700	No
$v_{FO} = v - v_R$	4021	4700	No
v_R	571	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 25-15 or 25-16)	

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	4592	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D = 4.252 + 0.0086\ v_{12} - 0.009\ L_D = 41.9$ pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

_____Speed Estimation_____

Intermediate speed variable, $D_S = 0.479$

Space mean speed in ramp influence area, $S_R = 54.0$ mph

Space mean speed in outer lanes, $S_0 = N/A$ mph

Space mean speed for all vehicles, $S = 54.0$ mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 ON Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2093	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	320	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2093	320		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	569	87		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2343	351		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 2343 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	2694	4700	No

v v 0 pc/h (Equation 25-4 or 25-5)
3 or av34

Is v v > 2700 pc/h? No
3 or av34

Is v v > 1.5 v /2 No
3 or av34 12

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2343	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 24.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.358

Space mean speed in ramp influence area, S_R = 56.8 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 56.8 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 ON Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Base + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2643	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	440	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2643	440		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	718	120		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2959	483		pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)
P_{FM} = 1.000 Using Equation 0
$v_{12} = v_F (P_{FM})$ = 2959 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3442	4700	No

v_3 or v_{av34} = 0 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2959	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 30.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.422

Space mean speed in ramp influence area, S_R = 55.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 55.3 mph

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: N of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores: SA07-0088A

Flow Inputs and Adjustments

Volume, V	7409	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2013	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2859	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2859	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
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Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: N of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description:

Flow Inputs and Adjustments

Volume, V	3289	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	894	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1269	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1269	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	19.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
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Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2790	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	758	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1077	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1077	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	16.6	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: N of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	8716	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2368	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3363	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3363	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, NB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	7709	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2095	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2975	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2975	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, NB PM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3436	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	934	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1326	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1326	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	20.4	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, SB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3042	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	827	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1174	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1174	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	18.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, SB PM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	9206	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2502	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3552	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3552	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores: SA07-0088A

Flow Inputs and Adjustments

Volume, V	7319	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1989	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2824	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2824	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description:

Flow Inputs and Adjustments

Volume, V	3016	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	820	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1164	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1164	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	17.9	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2818	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	766	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1087	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1087	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	16.7	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	8666	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2355	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3344	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3344	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7319	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	960	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7319	960		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1989	261		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	8473	1054		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4393 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8473	7050	Yes
$v_{FO} = v_F - v_R$	7419	7050	Yes
v_R	1054	3800	No
v_3 or v_{av34}	4080 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 5773 (Equation 25-18)

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12A}	5773	4600	No !

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 40.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.523

Space mean speed in ramp influence area, S_R = 53.0 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 56.2 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3016	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	450	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3016	450		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	820	122		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3491	494		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 1843 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3491	7050	No
$v_{FO} = v - v_R$	2997	7050	No
v_R	494	3800	No

v_3 or v_{av34} 1648 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1994 (Equation 25-18)

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12A}	1994	4600	No

!

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 7.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.472

Space mean speed in ramp influence area, S_R = 54.1 mph

Space mean speed in outer lanes, S_0 = 69.4 mph

Space mean speed for all vehicles, S = 59.8 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7409	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	810	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7409	810		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2013	220		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	8577	889		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.505 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 4769 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8577	7050	Yes
$v_{FO} = v_F - v_R$	7688	7050	Yes
v_R	889	2000	No
v_3 or v_{av34}	3808 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 5877 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5877	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 53.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.508

Space mean speed in ramp influence area, S_R = 53.3 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 56.4 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3289	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	660	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3289	660		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	894	179		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3807	725		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.631 Using Equation 5

$v_{12} = v_R + (v - v_F) P_{FD}$ = 2671 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3807	7050	No
$v_{FO} = v - v_R$	3082	7050	No
v_R	725	2000	No

v_3 or v_{av34} 1136 pc/h (Equation 25-15 or 25-16)

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	2671	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D = 4.252 + 0.0086\ v_{12} - 0.009\ L_R = 25.9$ pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

_____Speed Estimation_____

Intermediate speed variable, $D_S = 0.493$

Space mean speed in ramp influence area, $S_R = 53.7$ mph

Space mean speed in outer lanes, $S_0 = 70.8$ mph

Space mean speed for all vehicles, $S = 57.8$ mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6359	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	160	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	890	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6359	160	890	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1728	43	242	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7361	176	977	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.607 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4467 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7537	7050	Yes

v_3 or v_{av34} 2894 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4661 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4661	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 36.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.739

Space mean speed in ramp influence area, S_R = 48.0 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 50.6 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2701	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	150	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	690	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2701	150	690	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	734	41	187	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3127	165	757	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.607 Using Equation 1

$v_{12} = v_{12} (P_{FM})$ = 1898 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3292	7050	No

$v_{3 \text{ or } av34}$ = 1229 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? No

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1898	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 14.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.278

Space mean speed in ramp influence area, S_R = 58.6 mph

Space mean speed in outer lanes, S_0 = 62.4 mph

Space mean speed for all vehicles, S = 60.0 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6599	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	410	vph
Length of first accel/decel lane	450	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp 700 vph
Position of adjacent Ramp Downstream
Type of adjacent Ramp On
Distance to adjacent Ramp 1000 ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6599	410	700	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1793	111	190	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7639	450	768	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)
P_{FM} = 0.590 Using Equation 1
$v_{12} = v_F (P_{FM})$ = 4508 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8089	7050	Yes

v_3 or v_{av34} 3131 pc/h (Equation 25-4 or 25-5)
Is v_3 or v_{av34} > 2700 pc/h? Yes
Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4939 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4939	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 44.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.144

Space mean speed in ramp influence area, S_R = 38.7 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 43.2 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2827	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	220	vph
Length of first accel/decel lane	450	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	650	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2827	220	650	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	768	60	177	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3273	242	714	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.590 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1931 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3515	7050	No

v_3 or v_{av34} v_{av34} = 1342 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

_____Flow Entering Merge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12}	1931	4400	No !

_____Level of Service Determination (if not F)_____

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L$ = 19.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

_____Speed Estimation_____

Intermediate speed variable, M_S = 0.324

Space mean speed in ramp influence area, S_R = 57.6 mph

Space mean speed in outer lanes, S_0 = 62.0 mph

Space mean speed for all vehicles, S = 59.2 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6519	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	890	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	160	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6519	890	160	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1771	242	43	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7546	977	176	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 4637 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8523	7050	Yes

v_{3} or v_{av34} 2909 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? Yes

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4846 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4846	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 42.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.547

Space mean speed in ramp influence area, S_R = 29.4 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 34.6 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2806	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	690	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	150	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2806	690	150	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	762	187	41	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3248	757	165	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1996 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4005	7050	No
v_3 or v_{av34}	1252 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1996	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L_A$ = 18.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.290

Space mean speed in ramp influence area, S_R = 58.3 mph

Space mean speed in outer lanes, S_0 = 62.3 mph

Space mean speed for all vehicles, S = 59.5 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7009	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	700	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	410	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7009	700	410	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1905	190	111	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8114	768	450	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.583 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4731 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8882	7050	Yes

v_3 or v_{av34} = 3383 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 5414 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5414	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 52.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 2.194

Space mean speed in ramp influence area, S_R = 14.5 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 18.8 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2981	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	650	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	220	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2981	650	220	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	810	177	60	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3451	714	242	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.583 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2012 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4165	7050	No
v_3 or v_{av34}	1439 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2012	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{R12} + 0.0078 v_{A} - 0.00627 L$ = 25.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.367

Space mean speed in ramp influence area, S_R = 56.6 mph

Space mean speed in outer lanes, S_0 = 61.6 mph

Space mean speed for all vehicles, S = 58.2 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2790	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	540	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2790	540		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	758	147		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3230	593		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 1780 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3230	7050	No
$v_{FO} = v - v_R$	2637	7050	No
v_R	593	3800	No

v_3 or v_{av34} 1450 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 1845 (Equation 25-18)

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12A}	1845	4600	No !

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 6.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.481

Space mean speed in ramp influence area, S_R = 53.9 mph

Space mean speed in outer lanes, S_0 = 69.8 mph

Space mean speed for all vehicles, S = 59.8 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8716	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1040	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8716	1040		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2368	283		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	10090	1142		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 5169 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10090	7050	Yes
$v_{FO} = v - v_R$	8948	7050	Yes
v_R	1142	3800	No

v_3 or v_{av34} = 4921 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 7390 (Equation 25-18)

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12A}	7390	4600	No !

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 54.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.531

Space mean speed in ramp influence area, S_R = 52.8 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 55.5 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3042	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	760	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3042	760		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	827	207		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3521	834		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.634 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD}$ = 2537 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3521	7050	No
$v_{FO} = v - v_R$	2687	7050	No
v_R	834	2000	No

v_3 or v_{av34} = 984 pc/h (Equation 25-15 or 25-16)

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	2537	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_R = 24.7$ pc/mi/ln
D

Level of service for ramp-freeway junction areas of influence C

_____Speed Estimation_____

Intermediate speed variable, $D_S = 0.503$

Space mean speed in ramp influence area, $S_R = 53.4$ mph

Space mean speed in outer lanes, $S_0 = 71.3$ mph

Space mean speed for all vehicles, $S = 57.5$ mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9206	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1220	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9206	1220		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2502	332		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	10657	1339		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.432 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5364 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	10657	7050	Yes
$v_{FO} = v_F - v_R$	9318	7050	Yes
v_R	1339	2000	No
v_3 or v_{av34}	5293 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 7957 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7957	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 71.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.549

Space mean speed in ramp influence area, S_R = 52.4 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 55.0 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2412	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	190	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	390	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2412	190	390	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	655	52	106	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2792	209	428	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.595 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1661 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3001	7050	No

v_3 or v_{av34} 1131 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1661	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 16.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.303

Space mean speed in ramp influence area, S_R = 58.0 mph

Space mean speed in outer lanes, S_0 = 62.7 mph

Space mean speed for all vehicles, S = 59.7 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7676	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	280	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	710	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7676	280	710	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2086	76	193	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8886	307	779	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.595 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 5286 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9193	7050	Yes

v_3 or v_{av34} 3600 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 6186 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6186	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 52.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 2.854

Space mean speed in ramp influence area, S_R = -0.6 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = mph

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Phone: Fax:
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Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2580	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	100	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	300	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2580	100	300	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	701	27	82	v
Trucks and buses	2	2	2	%
Recreational vehicles	13	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.965	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2905	110	329	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.586 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 1702 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3015	7050	No

v_{3} or v_{av34} = 1203 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? No

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1702	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_{A} - 0.00627\ L$ = 17.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.324

Space mean speed in ramp influence area, S_R = 57.6 mph

Space mean speed in outer lanes, S_0 = 62.5 mph

Space mean speed for all vehicles, S = 59.4 mph

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Phone: Fax:
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Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8276	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	290	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	440	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8276	290	440	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2249	79	120	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9580	318	483	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.586 Using Equation 1

$v_{12} = v_{12}(P_{FM})$ = 5613 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9898	7050	Yes

v_{3} or v_{av34} 3967 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? Yes

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 6880 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6880	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 59.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 5.513

Space mean speed in ramp influence area, S_R = -61.8 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = mph

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Phone: Fax:
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Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2545	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	390	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	190	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2545	390	190	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	692	106	52	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2946	428	209	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1810 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3374	7050	No
v_3 or v_{av34}	1136 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1810	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 14.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.265

Space mean speed in ramp influence area, S_R = 58.9 mph

Space mean speed in outer lanes, S_0 = 62.7 mph

Space mean speed for all vehicles, S = 60.1 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7956	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	710	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	280	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7956	710	280	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2162	193	76	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9210	779	307	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 5659 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9989	7050	Yes

v_{3} or v_{av34} v_{av34} = 3551 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? Yes

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 6510 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6510	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 53.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 5.939

Space mean speed in ramp influence area, S_R = -71.6 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = mph

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Phone: Fax:
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Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2580	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	300	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	100	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2580	300	100	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	701	82	27	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2987	329	110	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 1758 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3316	7050	No

$v_{3 \text{ or } av34}$ = 1229 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? No

Is $v_{3 \text{ or } av34} > 1.5\, v_{12}/2$ No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1758	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_{A} - 0.00627\ L$ = 19.1 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.324

Space mean speed in ramp influence area, S_R = 57.5 mph

Space mean speed in outer lanes, S_0 = 62.4 mph

Space mean speed for all vehicles, S = 59.2 mph

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Phone: Fax:
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Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8276	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	440	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	290	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8276	440	290	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2249	120	79	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9580	483	318	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_{12}(P_{FM})$ = 5640 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10063	7050	Yes

v_{3} or v_{av34} = 3940 pc/h (Equation 25-4 or 25-5)

Is v_{3} or v_{av34} > 2700 pc/h? Yes

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 6880 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6880	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 60.2 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 6.442

Space mean speed in ramp influence area, S_R = -83.2 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = mph

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, NB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4470	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1215	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2502	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2502	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, NB PM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4474	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1216	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2504	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2504	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, SB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4790	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1302	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2681	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2681	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, SB PM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4180	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1136	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2340	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2340	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	52.6	mi/h
Number of lanes, N	2	
Density, D	44.5	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3980	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1082	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2228	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2228	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	56.3	mi/h
Number of lanes, N	2	
Density, D	39.6	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Cum No proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4330	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1177	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2424	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2424	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2490	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	677	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1394	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1394	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	21.4	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2640	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	717	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1478	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1478	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	22.7	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3980	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1020	vph
Length of first accel/decel lane	175	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3980	1020		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1082	277		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4456	1120		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4456 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4456	4700	No
$v_{FO} = v - v_R$	3336	4700	No
v_R	1120	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4456	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 41.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.529

Space mean speed in ramp influence area, S_R = 52.8 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 52.8 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4330	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1030	vph
Length of first accel/decel lane	175	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4330	1030		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1177	280		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4848	1131		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4848 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4848	4700	Yes
$v_{FO} = v - v_R$	3717	4700	No
v_R	1131	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	4848	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 44.4 pc/mi/ln
Level of service for ramp-freeway junction areas of influence F

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.530
Space mean speed in ramp influence area, S_R = 52.8 mph
Space mean speed in outer lanes, S_0 = N/A mph
Space mean speed for all vehicles, S = 52.8 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 ON Loop Mack AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3160	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1150	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3160	1150		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	859	312		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3538	1262		pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)
P_{FM} = 1.000 Using Equation 0
$v_{12} = v_{12} (P_{FM}) =$ 3538 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4800	4700	Yes

$v_{3 \text{ or } av34}$ = 0 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? No

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3538	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L$ = 40.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.777

Space mean speed in ramp influence area, S_R = 47.1 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 47.1 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 ON Loop Mack PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2704	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1480	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2704	1480		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	735	402		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3027	1625		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 3027 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	4652	4700	No

v v 0 pc/h (Equation 25-4 or 25-5)
3 or av34

Is v v > 2700 pc/h? No
3 or av34

Is v v > 1.5 v /2 No
3 or av34 12

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3027	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 39.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.712

Space mean speed in ramp influence area, S_R = 48.6 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.6 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Bruceville AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4480	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1080	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4480	1080		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1217	293		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	5016	1186		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD} = 5016$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5016	4700	Yes
$v_{FO} = v - v_R$	3830	4700	No
v_R	1186	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5016	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 45.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.535

Space mean speed in ramp influence area, S_R = 52.7 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 52.7 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Bruceville PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3854	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	700	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3854	700		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1047	190		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4315	768		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD}$ = 4315 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4315	4700	No
$v_{FO} = v - v_R$	3547	4700	No
v_R	768	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4315	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 39.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.497

Space mean speed in ramp influence area, S_R = 53.6 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.6 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Mack AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4790	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	350	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4790	350		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1302	95		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	5363	384		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD} = 5363$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5363	4700	Yes
$v_{FO} = v - v_R$	4979	4700	Yes
v_R	384	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 25-15 or 25-16)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5363	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 48.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.463

Space mean speed in ramp influence area, S_R = 54.4 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.4 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Mack PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4180	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	510	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4180	510		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1136	139		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4680	560		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD} = 4680$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4680	4700	No
$v_{FO} = v - v_R$	4120	4700	No
v_R	560	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4680	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 42.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.478

Space mean speed in ramp influence area, S_R = 54.0 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.0 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 ON Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2151	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	360	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2151	360		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	585	98		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2408	395		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 2408 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	2803	4700	No
v v 3 or av34	0 pc/h	(Equation 25-4 or 25-5)	
Is v v 3 or av34 > 2700 pc/h?			No
Is v v 3 or av34 > 1.5 v /2 12			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2408	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 25.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.364

Space mean speed in ramp influence area, S_R = 56.6 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 56.6 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 ON Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2160	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	510	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2160	510		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	587	139		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2418	560		pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)
P_{FM} = 1.000 Using Equation 0
$v_{12} = v_{12} (P_{FM}) =$ 2418 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	2978	4700	No

$v_{3 or av34}$ v_{12} 0 pc/h (Equation 25-4 or 25-5)

Is $v_{3 or av34}$ v_{12} > 2700 pc/h? No

Is $v_{3 or av34}$ v_{12} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2418	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 26.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.377

Space mean speed in ramp influence area, S_R = 56.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 56.3 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7580	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	720	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	410	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7580	720	410	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2060	196	111	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8775	790	450	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.583 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 5117 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9565	7050	Yes

v_3 or v_{av34} 3658 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 6075 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6075	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 57.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 4.044

Space mean speed in ramp influence area, S_R = -28.0 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3374	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	780	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	200	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3374	780	200	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	917	212	54	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3906	856	220	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.583 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 2278 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4762	7050	No

v_3 or v_{av34} = 1628 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2278	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 28.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, M_S = 0.397

Space mean speed in ramp influence area, S_R = 55.9 mph

Space mean speed in outer lanes, S_0 = 60.9 mph

Space mean speed for all vehicles, S = 57.5 mph

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores: SA07-0088A

Flow Inputs and Adjustments

Volume, V	7460	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2027	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	2879	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2879	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description:

Flow Inputs and Adjustments

Volume, V	3283	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	892	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1267	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1267	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	19.5	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2933	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	797	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1132	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1132	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	17.4	pc/mi/ln
Level of service, LOS	B	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	8950	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2432	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3454	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3454	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3045	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	900	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3045	900		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	827	245		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %	%	
Length	0.00 mi	0.00 mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3525	988		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)
P_{FD} = 0.450 Using Equation 0
$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2130 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3525	7050	No
$v_{FO} = v_F - v_R$	2537	7050	No
v_R	988	3800	No

v_3 or v_{av34} 1395 pc/h (Equation 25-15 or 25-16)

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	2130	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_R = 9.1$ pc/mi/ln
D
Level of service for ramp-freeway junction areas of influence A

_____Speed Estimation_____

Intermediate speed variable, $D_S = 0.517$
Space mean speed in ramp influence area, $S_R = 53.1$ mph
Space mean speed in outer lanes, $S_0 = 69.8$ mph
Space mean speed for all vehicles, $S = 58.7$ mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9560	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1880	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9560	1880		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2598	511		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	11067	2064		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 6115 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	11067	7050	Yes
$v_{FO} = v_F - v_R$	9003	7050	Yes
v_R	2064	3800	No
v_3 or v_{av34}	4952 pc/h	(Equation 25-15 or 25-16)	

Is v_{3} or v_{av34} > 2700 pc/h? Yes

Is v_{3} or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 8367 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8367	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 62.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.614

Space mean speed in ramp influence area, S_R = 50.9 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 53.7 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3199	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	730	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3199	730		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	869	198		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3703	801		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.631 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD}$ = 2631 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3703	7050	No
$v_{FO} = v - v_R$	2902	7050	No
v_R	801	2000	No
v_3 or v_{av34}	1072 pc/h	(Equation 25-15 or 25-16)	

Is v_{3} or v_{av34} > 2700 pc/h? No

Is v_{3} or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2631	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 25.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, D_S = 0.500

Space mean speed in ramp influence area, S_R = 53.5 mph

Space mean speed in outer lanes, S_0 = 71.0 mph

Space mean speed for all vehicles, S = 57.6 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB OFF Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9960	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1250	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9960	1250		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2707	340		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	11530	1372		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.409 Using Equation 5

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 5523 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	11530	7050	Yes
$v_{FO} = v_F - v_R$	10158	7050	Yes
v_R	1372	2000	No

v_3 or v_{av34} = 6007 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 8830 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	8830	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 78.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.551

Space mean speed in ramp influence area, S_R = 52.3 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 54.8 mph

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Phone: Fax:
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Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2415	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	370	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	370	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2415	370	370	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	656	101	101	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	2796	406	406	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.595 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1663 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3202	7050	No
v_3 or v_{av34}	1133 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1663	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 17.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.308

Space mean speed in ramp influence area, S_R = 57.9 mph

Space mean speed in outer lanes, S_0 = 62.7 mph

Space mean speed for all vehicles, S = 59.5 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7680	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	630	vph
Length of first accel/decel lane	620	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	640	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7680	630	640	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2087	171	174	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8890	692	703	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.595 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 5288 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9582	7050	Yes

v_3 or v_{av34} 3602 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 6190 (Equation 25-8)

_____Flow Entering Merge Influence Area_____

	Actual	Max Desirable	Violation?
v_{12A}	6190	4400	No !

_____Level of Service Determination (if not F)_____

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 54.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

_____Speed Estimation_____

Intermediate speed variable, M_S = 4.078

Space mean speed in ramp influence area, S_R = -28.8 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2688	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	100	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	410	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2688	100	410	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	730	27	111	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3112	110	450	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.586 Using Equation 1

$v_{12} = v_{12}(P_{FM})$ = 1823 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3222	7050	No

$v_{3 \text{ or } av34}$ = 1289 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? No

Is $v_{3 \text{ or } av34} > 1.5\, v_{12}/2$ No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1823	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 18.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.327

Space mean speed in ramp influence area, S_R = 57.5 mph

Space mean speed in outer lanes, S_0 = 62.2 mph

Space mean speed for all vehicles, S = 59.3 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Loop Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8710	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	290	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	560	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8710	290	560	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2367	79	152	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10083	318	615	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.586 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 5908 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10401	7050	Yes

$v_{3 \text{ or } av34}$ = 4175 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34} > 2700$ pc/h? Yes

Is $v_{3 \text{ or } av34} > 1.5 v_{12}/2$ No

If yes, v_{12A} = 7383 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7383	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 63.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 8.921

Space mean speed in ramp influence area, S_R = -140.2 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2674	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	370	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	370	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2674	370	370	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	727	101	101	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3095	406	406	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1902 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3501	7050	No
v_3 or v_{av34}	1193 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1902	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_R + 0.0078\ v_{12} - 0.00627\ L_A$ = 15.0 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.268

Space mean speed in ramp influence area, S_R = 58.8 mph

Space mean speed in outer lanes, S_0 = 62.5 mph

Space mean speed for all vehicles, S = 60.0 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8310	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	640	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	630	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8310	640	630	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2258	174	171	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	9620	703	692	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 5911 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	10323	7050	Yes

v_3 or v_{av34} = 3709 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 6920 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6920	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 56.3 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 8.203

Space mean speed in ramp influence area, S_R = -123.7 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2758	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	410	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	100	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2758	410	100	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	749	111	27	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3193	450	110	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1880 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3643	7050	No

v_3 or v_{av34} = 1313 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1880	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 20.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.333

Space mean speed in ramp influence area, S_R = 57.3 mph

Space mean speed in outer lanes, S_0 = 62.1 mph

Space mean speed for all vehicles, S = 59.0 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 SB ON Slip Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	9000	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	560	vph
Length of first accel/decel lane	400	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	290	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	9000	560	290	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	2446	152	79	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	10418	615	318	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.589 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 6133 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	11033	7050	Yes

$v_{3 \text{ or } av34}$ = 4285 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 No

If yes, v_{12A} = 7718 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	7718	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 67.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 16.513

Space mean speed in ramp influence area, S_R = -314.8 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 508.8 mph

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores: SA07-0088A

Flow Inputs and Adjustments

Volume, V	8120	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2207	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3133	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3133	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description:

Flow Inputs and Adjustments

Volume, V	3870	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1052	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1493	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1493	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	23.0	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3045	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	827	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1175	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1175	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	18.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 S N of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	9560	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2598	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3689	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3689	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, NB AM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	8300	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2255	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3203	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3203	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, NB PM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4000	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1087	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1543	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1543	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	23.8	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, SB AM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3199	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	869	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	1234	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1234	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	3	
Density, D	19.0	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 6/27/2007
Analysis Time Period:
Freeway/Direction: I-5 N of Meadowview, SB PM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	9960	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	2707	v
Trucks and buses	13	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.939	
Driver population factor, fp	1.00	
Flow rate, vp	3843	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	3	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	3.0	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	3843	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	3	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7460	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1100	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp	vph
Position of adjacent ramp	
Type of adjacent ramp	
Distance to adjacent ramp	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7460	1100		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2027	299		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	8636	1208		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD}$ = 4551 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8636	7050	Yes
$v_{FO} = v - v_R$	7428	7050	Yes
v_R	1208	3800	No

v_3 or v_{av34} 4085 pc/h (Equation 25-15 or 25-16)

Is v_{3} or v_{av34} > 2700 pc/h? Yes

Is v_{3} or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 5936 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5936	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 41.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.537

Space mean speed in ramp influence area, S_R = 52.7 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 55.9 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3283	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	2	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	830	vph
Length of first accel/decel lane	0	ft
Length of second accel/decel lane	1500	ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3283	830		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	892	226		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3800	911		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.450 Using Equation 0

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2211 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	3800	7050	No
$v_{FO} = v_F - v_R$	2889	7050	No
v_R	911	3800	No

v_3 or v_{av34} 1589 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2211	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 9.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence A

Speed Estimation

Intermediate speed variable, D_S = 0.510

Space mean speed in ramp influence area, S_R = 53.3 mph

Space mean speed in outer lanes, S_0 = 69.0 mph

Space mean speed for all vehicles, S = 58.9 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	8120	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	950	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	8120	950		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	2207	258		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	9400	1043		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.477 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD}$ = 5029 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	9400	7050	Yes
$v_{FO} = v - v_R$	8357	7050	Yes
v_R	1043	2000	No

v_3 or v_{av34} = 4371 pc/h (Equation 25-15 or 25-16)

Is v_{3} or v_{av34} > 2700 pc/h? Yes

Is v_{3} or v_{av34} > 1.5 v_{12} /2 Yes

If yes, v_{12A} = 6700 (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	6700	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 60.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.522

Space mean speed in ramp influence area, S_R = 53.0 mph

Space mean speed in outer lanes, S_0 = 64.7 mph

Space mean speed for all vehicles, S = 55.9 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB OFF Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3870	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	850	vph
Length of first accel/decel lane	150	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3870	850		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1052	231		v
Trucks and buses	13	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.939	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4480	933		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 0.605 Using Equation 5

$v_{12} = v_R + (v - v_R) P_{FD}$ = 3079 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4480	7050	No
$v_{FO} = v - v_R$	3547	7050	No
v_R	933	2000	No

v_3 or v_{av34} = 1401 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3079	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 29.4 pc/mi/ln

Level of service for ramp-freeway junction areas of influence D

Speed Estimation

Intermediate speed variable, D_S = 0.512

Space mean speed in ramp influence area, S_R = 53.2 mph

Space mean speed in outer lanes, S_0 = 69.7 mph

Space mean speed for all vehicles, S = 57.5 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6360	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	180	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	1580	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6360	180	1580	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1728	49	429	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7362	198	1735	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.607 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4468 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	7560	7050	Yes

v_3 or v_{av34} 2894 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4662 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4662	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L$ = 36.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.751

Space mean speed in ramp influence area, S_R = 47.7 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 50.4 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2702	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	120	vph
Length of first accel/decel lane	1050	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	1490	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2702	120	1490	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	734	33	405	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3128	132	1636	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.607 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1898 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3260	7050	No

v_3 or v_{av34} 1230 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1898	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 14.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

Intermediate speed variable, M_S = 0.277

Space mean speed in ramp influence area, S_R = 58.6 mph

Space mean speed in outer lanes, S_0 = 62.4 mph

Space mean speed for all vehicles, S = 60.0 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Pocket AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7170	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	410	vph
Length of first accel/decel lane	450	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	720	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	7170	410	720	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1948	111	196	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	8300	450	790	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.590 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 4898 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	8750	7050	Yes

$v_{3 \text{ or } av34}$ = 3402 pc/h (Equation 25-4 or 25-5)

Is $v_{3 \text{ or } av34}$ > 2700 pc/h? Yes

Is $v_{3 \text{ or } av34}$ > 1.5 v_{12} /2 No

If yes, v_{12A} = 5600 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	5600	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 49.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 1.944

Space mean speed in ramp influence area, S_R = 20.3 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = 25.3 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Loop Pocket PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3234	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	200	vph
Length of first accel/decel lane	450	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	780	vph
Position of adjacent Ramp	Downstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1000	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3234	200	780	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	879	54	212	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3744	220	856	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.590 Using Equation 1

$v_{12} = v_{12} (P_{FM}) =$ 2209 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	3964	7050	No
v_3 or v_{av34}	1535 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2209	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 21.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.334

Space mean speed in ramp influence area, S_R = 57.3 mph

Space mean speed in outer lanes, S_0 = 61.3 mph

Space mean speed for all vehicles, S = 58.8 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	6540	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1580	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	180	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	6540	1580	180	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	1777	429	49	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	7571	1735	198	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_F (P_{FM}) =$ 4652 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	9306	7050	Yes

v_3 or v_{av34} = 2919 pc/h (Equation 25-4 or 25-5)

Is v_3 or v_{av34} > 2700 pc/h? Yes

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 4871 (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12A}	4871	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_{12} + 0.0078 v_R - 0.00627 L_A$ = 47.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 3.113

Space mean speed in ramp influence area, S_R = -6.6 mph

Space mean speed in outer lanes, S_0 = 56.1 mph

Space mean speed for all vehicles, S = mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 6/27/2007
Analysis time period:
Freeway/Dir of Travel: I-5 NB ON Slip Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	3	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2786	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1490	vph
Length of first accel/decel lane	1320	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? Yes

Volume on adjacent Ramp	120	vph
Position of adjacent Ramp	Upstream	
Type of adjacent Ramp	On	
Distance to adjacent Ramp	1380	ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2786	1490	120	vph
Peak-hour factor, PHF	0.92	0.92	0.92	
Peak 15-min volume, v15	757	405	33	v
Trucks and buses	13	2	2	%
Recreational vehicles	0	0	0	%
Terrain type:	Level	Level	Level	
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5	1.5	
Recreational vehicle PCE, ER	1.2	1.2	1.2	
Heavy vehicle adjustment, fHV	0.939	0.990	0.990	
Driver population factor, fP	1.00	1.00	1.00	
Flow rate, vp	3225	1636	132	pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)

P_{FM} = 0.614 Using Equation 1

$v_{12} = v_F (P_{FM})$ = 1982 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4861	7050	No
v_3 or v_{av34}	1243 pc/h	(Equation 25-4 or 25-5)	
Is v_3 or v_{av34} > 2700 pc/h?			No
Is v_3 or v_{av34} > 1.5 v_{12} /2			No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	1982	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734 v_R + 0.0078 v_{12} - 0.00627 L_A$ = 24.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.374

Space mean speed in ramp influence area, S_R = 56.4 mph

Space mean speed in outer lanes, S_0 = 62.3 mph

Space mean speed for all vehicles, S = 57.8 mph

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, NB AM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4477	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1217	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2506	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2506	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, NB PM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4481	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1218	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2508	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2508	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, SB AM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4807	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1306	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2691	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2691	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: N of Mack, SB PM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4192	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1139	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2347	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2347	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	52.3	mi/h
Number of lanes, N	2	
Density, D	44.8	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, NB AM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	3995	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1086	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2236	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2236	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	56.0	mi/h
Number of lanes, N	2	
Density, D	39.9	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, NB PM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	4360	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	1185	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	2441	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	2441	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	2	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, SB AM
From/To:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2559	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	695	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1432	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1432	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	22.0	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.21

Phone: Fax:
E-mail:

Operational Analysis

Analyst: BP
Agency or Company: Fehr & Peers
Date Performed: 7/2/2007
Analysis Time Period:
Freeway/Direction: S of Cosumnes, SB PM
From/To:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Flow Inputs and Adjustments

Volume, V	2659	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	723	v
Trucks and buses	6	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.971	
Driver population factor, fp	1.00	
Flow rate, vp	1488	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft

Right-shoulder lateral clearance	6.0	ft
Interchange density	0.50	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	0.0	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	65.0	mi/h

Urban Freeway

LOS and Performance Measures

Flow rate, vp	1488	pc/h/ln
Free-flow speed, FFS	65.0	mi/h
Average passenger-car speed, S	65.0	mi/h
Number of lanes, N	2	
Density, D	22.9	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 OFF Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3995	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1040	vph
Length of first accel/decel lane	175	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3995	1040		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1086	283		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4473	1142		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4473 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4473	4700	No
$v_{FO} = v - v_R$	3331	4700	No
v_R	1142	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	4473	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D = 4.252 + 0.0086 v_{12} - 0.009 L_D = 41.1$ pc/mi/ln
R

Level of service for ramp-freeway junction areas of influence E

_____Speed Estimation_____

Intermediate speed variable, $D_S = 0.531$

Space mean speed in ramp influence area, $S_R = 52.8$ mph

Space mean speed in outer lanes, $S_0 = N/A$ mph

Space mean speed for all vehicles, $S = 52.8$ mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 OFF Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4360	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1070	vph
Length of first accel/decel lane	175	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4360	1070		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1185	291		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4881	1175		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD}$ = 4881 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4881	4700	Yes
$v_{FO} = v - v_R$	3706	4700	No
v_R	1175	2000	No
v_3 or v_{av34}	0 pc/h	(Equation 25-15 or 25-16)	

Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12
If yes, v = (Equation 25-18)
12A

_____Flow Entering Diverge Influence Area_____

	Actual	Max Desirable	Violation?
v	4881	4600	No
12			!

_____Level of Service Determination (if not F)_____

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 44.7 pc/mi/ln
Level of service for ramp-freeway junction areas of influence F

_____Speed Estimation_____

Intermediate speed variable, D_S = 0.534
Space mean speed in ramp influence area, S_R = 52.7 mph
Space mean speed in outer lanes, S_0 = N/A mph
Space mean speed for all vehicles, S = 52.7 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 ON Loop Mack AM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3160	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1160	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3160	1160		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	859	315		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3538	1273		pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)
P_{FM} = 1.000 Using Equation 0
$v_{12} = v_F (P_{FM})$ = 3538 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4811	4700	Yes

v_3 or v_{av34} = 0 pc/h (Equation 25-4 or 25-5)
Is v_3 or v_{av34} > 2700 pc/h? No
Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3538	4400	No !

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 40.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, M_S = 0.783

Space mean speed in ramp influence area, S_R = 47.0 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 47.0 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: NB 99 ON Loop Mack PM
Junction:
Jurisdiction:
Analysis Year: Cum No Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2704	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	1490	vph
Length of first accel/decel lane	250	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2704	1490		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	735	405		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	3027	1636		pcph

Estimation of V12 Merge Areas

L_{EQ} = (Equation 25-2 or 25-3)
P_{FM} = 1.000 Using Equation 0
$v_{12} = v_{12} (P_{FM}) =$ 3027 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
v_{FO}	4663	4700	No

$v_{3 or av34}$ = 0 pc/h (Equation 25-4 or 25-5)
Is $v_{3 or av34}$ > 2700 pc/h? No
Is $v_{3 or av34}$ > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3027	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 39.5 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, M_S = 0.717

Space mean speed in ramp influence area, S_R = 48.5 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 48.5 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Bruceville AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4489	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	1090	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4489	1090		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1220	296		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	5026	1197		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD} = 5026$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5026	4700	Yes
$v_{FO} = v - v_R$	3829	4700	No
v_R	1197	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5026	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 45.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.536

Space mean speed in ramp influence area, S_R = 52.7 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 52.7 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Bruceville PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	3860	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	710	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	3860	710		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1049	193		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4322	779		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_R) P_{FD}$ = 4322 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4322	4700	No
$v_{FO} = v - v_R$	3543	4700	No
v_R	779	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4322	4600	No

!

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 39.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.498

Space mean speed in ramp influence area, S_R = 53.5 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 53.5 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Mack AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4807	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	360	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4807	360		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1306	98		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	5382	395		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD} = 5382$ pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	5382	4700	Yes
$v_{FO} = v - v_R$	4987	4700	Yes
v_R	395	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	5382	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 48.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence F

Speed Estimation

Intermediate speed variable, D_S = 0.464

Space mean speed in ramp influence area, S_R = 54.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.3 mph

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Phone: Fax:
E-mail:

Diverge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 OFF Mack PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4192	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	510	vph
Length of first accel/decel lane	200	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent ramp vph
Position of adjacent ramp
Type of adjacent ramp
Distance to adjacent ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	4192	510		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	1139	139		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	0.00 %	0.00 %		%
Length	0.00 mi	0.00 mi		mi
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	4693	560		pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 25-8 or 25-9)

P_{FD} = 1.000 Using Equation 0

$v_{12} = v_R + (v - v_F) P_{FD}$ = 4693 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4693	4700	No
$v_{FO} = v - v_R$	4133	4700	No
v_R	560	2000	No

v_3 or v_{av34} = 0 pc/h (Equation 25-15 or 25-16)

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = (Equation 25-18)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	4693	4600	No !

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 42.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence E

Speed Estimation

Intermediate speed variable, D_S = 0.478

Space mean speed in ramp influence area, S_R = 54.0 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 54.0 mph

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Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 ON Cosumnes AM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2151	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	440	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2151	440		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	585	120		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2408	483		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 2408 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	2891	4700	No

v v 0 pc/h (Equation 25-4 or 25-5)
3 or av34

Is v v > 2700 pc/h? No
3 or av34

Is v v > 1.5 v /2 No
3 or av34 12

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2408	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{12} + 0.0078\ v_R - 0.00627\ L_A$ = 25.9 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.370

Space mean speed in ramp influence area, S_R = 56.5 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 56.5 mph

HCS+: Ramps and Ramp Junctions Release 5.21

Phone: Fax:
E-mail:

Merge Analysis

Analyst: BP
Agency/Co.: Fehr & Peers
Date performed: 7/2/2007
Analysis time period:
Freeway/Dir of Travel: SB 99 ON Cosumnes PM
Junction:
Jurisdiction:
Analysis Year: Cum + Proj
Description: Delta Shores

Freeway Data

Type of analysis	Merge	
Number of lanes in freeway	2	
Free-flow speed on freeway	65.0	mph
Volume on freeway	2160	vph

On Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-flow speed on ramp	35.0	mph
Volume on ramp	540	vph
Length of first accel/decel lane	300	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist? No

Volume on adjacent Ramp vph
Position of adjacent Ramp
Type of adjacent Ramp
Distance to adjacent Ramp ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway	Ramp	Adjacent Ramp	
Volume, V (vph)	2160	540		vph
Peak-hour factor, PHF	0.92	0.92		
Peak 15-min volume, v15	587	147		v
Trucks and buses	6	2		%
Recreational vehicles	0	0		%
Terrain type:	Level	Level		
Grade	%	%	%	
Length	mi	mi	mi	
Trucks and buses PCE, ET	1.5	1.5		
Recreational vehicle PCE, ER	1.2	1.2		
Heavy vehicle adjustment, fHV	0.971	0.990		
Driver population factor, fP	1.00	1.00		
Flow rate, vp	2418	593		pcph

Estimation of V12 Merge Areas

L = (Equation 25-2 or 25-3)
EQ
P = 1.000 Using Equation 0
FM
v = v (P) = 2418 pc/h
12 F FM

Capacity Checks

	Actual	Maximum	LOS F?
v FO	3011	4700	No

v v 0 pc/h (Equation 25-4 or 25-5)
3 or av34
Is v v > 2700 pc/h? No
3 or av34
Is v v > 1.5 v /2 No
3 or av34 12

If yes, v_{12A} = (Equation 25-8)

Flow Entering Merge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2418	4400	No

!

Level of Service Determination (if not F)

Density, $D_R = 5.475 + 0.00734\ v_{R12} + 0.0078\ v_A - 0.00627\ L_A$ = 26.8 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable, M_S = 0.379

Space mean speed in ramp influence area, S_R = 56.3 mph

Space mean speed in outer lanes, S_0 = N/A mph

Space mean speed for all vehicles, S = 56.3 mph