

EMERSON PROPERTY PROJECT

PARTIALLY RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

AND

RESPONSES TO COMMENTS

SCH# 2007052073

APPENDICES (D1, D2, E1, F1, F2, R, AND S)

PREPARED FOR



APRIL 2010



APPENDIX D 1

APPENDIX

EMERSON RANCH PROJECT TRAFFIC IMPACT STUDY CITY OF OAKLEY

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MARCH, 2010

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**Table A-1
Emerson Ranch Project
TRIP GENERATION CALCULATIONS**

Land Use	ITE Code	Size	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Shopping Center	820	208,459 sq. ft.	10,193	177	134	311	474	493	967
With 11% Internal Trip Reduction			9,071	158	119	276	422	439	861
29% Shopping Center Pass-By Reduction			2,631	46	34	80	122	127	250
Shopping Center Trip Generation			6,441	112	84	196	299	312	611
Supermarket	854	65,000 sq. ft.	6,646	142	91	233	348	334	683
With 11% Internal Trip Reduction			5,915	127	81	208	310	298	607
36% Supermarket Pass-By Reduction			2,129	46	29	75	112	107	219
Supermarket Trip Generation			3,785	81	52	133	198	190	388
Fast Food Restaurant w/Drive Thru	934	4,587 sq. ft.	2,276	115	111	226	81	75	155
With 11% Internal Trip Reduction			2,025	103	99	201	72	66	138
50% Fast Food Pass-By Reduction			1,013	51	50	101	36	33	69
Fast Food Trip Generation			1,013	51	50	101	36	33	69
Gasoline/Service Station	944	18 pumps	3,034	112	107	219	125	125	250
With 11% Internal Trip Reduction			2,700	99	95	195	111	111	222
42% Service Station Pass-By Reduction			1,134	42	40	82	47	47	93
Service Station Trip Generation			1,566	58	55	113	64	65	129
Internal Trips - Residential to Retail		about 7 %	939	28	26	54	70	52	122
Total Commercial Area Trips		278,046 sq. ft.	11,865	274	215	489	528	548	1,075
Total Residential Trips		578 units	4,219	104	312	416	320	188	509
Net New External Project Trips			16,085	378	527	905	849	736	1,584

Sources: ITE Trip Generation, 8th Edition, Washington D.C., 2008, ITE Trip Generation Handbook, 2nd Edition, Washington D.C., June, 2004.

Summary of Railroad Crossing Queuing and Delay Surveys for the Emerson Ranch Project In the City of Oakley

**Prepared by
Abrams Associates
August, 2009**

EXISTING TRAFFIC OPERATIONS AT THE EAST CYPRESS ROAD RAILROAD CROSSING

Traffic surveys were conducted at the East Cypress Road at-grade railroad crossing during May of 2009 and then supplemented with additional field review conducted during July of 2009. The queues that formed at the crossing when trains came by during the afternoon commute period (between 4:00 to 6:00 PM) were surveyed on six different weekdays. The data from one of these days had to be thrown out due to a fire on the tracks in Stockton that affected service in the area. It is important to note that there were no trains at all during the peak period on two of the five days where valid survey data was collected. Two trains was the maximum number of crossings recorded during any of the surveys and the average was about one train during the PM peak period.

The queues that form at the crossing are directly affected by the length of time that the roadway is closed for trains. The average time for the closures was about 90 seconds with some shorter trains closing the roadway for as little as one minute. The longest closures were for larger freight trains that can close the roadway for over two minutes. The detailed results of the railroad crossing surveys are presented in Tables A-2 and A-3.

On the eastbound approach the roadway can accommodate about 45 vehicles before affecting the Main Street intersection while the westbound approach can only store about 32 vehicles before the signalized intersection of Picasso Drive is affected



TABLE A-2: SUMMARY OF EAST CYPRESS RD TRAIN CROSSING SURVEYS

Train	Date	Arriving Time	Length of Closure	Clear Time ¹
1	7/7/09	5:18pm	90 sec	30 sec
2	7/7/09	5:51pm	60 sec	15 sec
N/A	7/9/09	No Trains between 4:00 and 6:00 pm		
3	7/14/09	4:56PM	60 sec	20 sec
4	7/14/09	5:38pm	120 sec	35 sec
N/A	7/16/09	No Trains between 4:00 and 6:00 pm		
5	7/17/09	5:43 pm	60 sec	20 sec

























¹: Time until traffic begins flowing again.

TABLE A-3: LENGTH OF QUEUES (IN VEHICLES)

Train	Queue Dir.	Time Interval			
		30 sec	60 sec	90 sec	120 sec
1	EB	7	9	19	30
	WB	6	11	16	23
2	EB	6	10	--	--
	WB	3	6	--	--
3	EB	6	13	--	--
	WB	7	12	--	--
4	EB	8	14	18	36
	WB	4	9	14	19
5	EB	6	10	--	--
	WB	8	13	--	--

HCM Signalized Intersection Capacity Analysis
 1: Main Street & SR160 SB Ramps

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.86		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3509		3433	3539	1583	1770	1593		1770	1666	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3509		3433	3539	1583	1770	1593		1770	1666	
Volume (vph)	4	182	11	354	396	32	21	3	77	11	5	11
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	198	12	385	430	35	23	3	84	12	5	12
RTOR Reduction (vph)	0	4	0	0	0	23	0	49	0	0	7	0
Lane Group Flow (vph)	4	206	0	385	430	12	23	38	0	12	10	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	1.0	12.6		12.7	24.3	24.3	2.6	30.9		1.2	29.5	
Effective Green, g (s)	1.0	12.6		12.7	24.3	24.3	2.6	30.9		1.2	29.5	
Actuated g/C Ratio	0.01	0.17		0.17	0.33	0.33	0.04	0.42		0.02	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	24	602		594	1172	524	63	671		29	670	
v/s Ratio Prot	0.00	0.06		c0.11	c0.12		c0.01	c0.05		0.01	0.01	
v/s Ratio Perm						0.02						
v/c Ratio	0.17	0.34		0.65	0.37	0.02	0.37	0.06		0.41	0.01	
Uniform Delay, d1	35.8	26.8		28.3	18.7	16.5	34.6	12.6		35.8	13.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.3	0.3		2.4	0.2	0.0	3.6	0.2		9.3	0.0	
Delay (s)	39.1	27.1		30.7	18.9	16.6	38.2	12.8		45.1	13.2	
Level of Service	D	C		C	B	B	D	B		D	B	
Approach Delay (s)		27.3			24.1			18.1			26.4	
Approach LOS		C			C			B			C	
Intersection Summary												
HCM Average Control Delay			24.2				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.29									
Actuated Cycle Length (s)			73.4				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			33.3%				ICU Level of Service				A	
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis
 2: Main Street & SR160 NB Ramps

Existing AM Volumes
 2/4/2010

























Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↗↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	0.88
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3523		1770	3539	1770	2787
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3523		1770	3539	1770	2787
Volume (vph)	240	7	52	729	41	349
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	261	8	57	792	45	379
RTOR Reduction (vph)	2	0	0	0	0	166
Lane Group Flow (vph)	267	0	57	792	45	213
Turn Type			Prot		custom	
Protected Phases	4		3	8		
Permitted Phases					2	2
Actuated Green, G (s)	14.1		5.1	23.2	40.2	40.2
Effective Green, g (s)	14.1		5.1	23.2	40.2	40.2
Actuated g/C Ratio	0.20		0.07	0.32	0.56	0.56
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	696		126	1150	997	1569
v/s Ratio Prot	0.08		0.03	0.22		
v/s Ratio Perm					0.03	0.14
v/c Ratio	0.38		0.45	0.69	0.05	0.14
Uniform Delay, d1	24.9		31.8	21.0	7.0	7.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4		2.6	1.7	0.1	0.2
Delay (s)	25.2		34.4	22.7	7.1	7.6
Level of Service	C		C	C	A	A
Approach Delay (s)	25.2			23.5	7.5	
Approach LOS	C			C	A	

Intersection Summary

HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	71.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: Main Street & Empire Avenue

Existing AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3528		3433	1863	1583		1819	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.88	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3528		3433	1863	1583		1645	1583
Volume (vph)	10	408	170	174	654	15	224	29	29	29	32	14
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	443	185	189	711	16	243	32	32	32	35	15
RTOR Reduction (vph)	0	0	140	0	2	0	0	0	18	0	0	11
Lane Group Flow (vph)	11	443	45	189	725	0	243	32	14	0	67	4
Turn Type	Prot		Perm	Prot			Prot		Perm	Perm		Perm
Protected Phases	7	4		3	8		5	2		6		6
Permitted Phases			4						2	6		6
Actuated Green, G (s)	0.7	17.8	17.8	12.2	29.3		8.6	31.4	31.4		18.8	18.8
Effective Green, g (s)	0.7	17.8	17.8	12.2	29.3		8.6	31.4	31.4		18.8	18.8
Actuated g/C Ratio	0.01	0.24	0.24	0.17	0.40		0.12	0.43	0.43		0.26	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	17	858	384	294	1408		402	797	677		421	405
v/s Ratio Prot	0.01	0.13		c0.11	c0.21		c0.07	0.02				
v/s Ratio Perm			0.12						0.02		c0.04	0.01
v/c Ratio	0.65	0.52	0.12	0.64	0.52		0.60	0.04	0.02		0.16	0.01
Uniform Delay, d1	36.2	24.1	21.7	28.6	16.7		30.8	12.2	12.1		21.2	20.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	62.0	0.5	0.1	4.8	0.3		2.6	0.1	0.1		0.8	0.0
Delay (s)	98.2	24.6	21.8	33.3	17.0		33.3	12.3	12.2		22.0	20.4
Level of Service	F	C	C	C	B		C	B	B		C	C
Approach Delay (s)		25.1			20.4			28.9			21.7	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM Average Control Delay			23.3			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			73.4			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			44.9%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
4: Main Street & Vintage Parkway

Existing AM Volumes
2/4/2010























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.95	1.00
Satd. Flow (prot)	1770	3516		1770	3460			1760			1776	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.80			0.71	1.00
Satd. Flow (perm)	1770	3516		1770	3460			1471			1331	1583
Volume (vph)	145	630	29	17	732	128	16	2	3	227	5	180
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	158	685	32	18	796	139	17	2	3	247	5	196
RTOR Reduction (vph)	0	3	0	0	13	0	0	2	0	0	0	124
Lane Group Flow (vph)	158	714	0	18	922	0	0	20	0	0	252	72
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	6
Permitted Phases							2			6		6
Actuated Green, G (s)	12.8	41.8		2.7	31.7			32.7			32.7	32.7
Effective Green, g (s)	12.8	41.8		2.7	31.7			32.7			32.7	32.7
Actuated g/C Ratio	0.14	0.47		0.03	0.36			0.37			0.37	0.37
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	254	1648		54	1230			539			488	580
v/s Ratio Prot	c0.09	0.20		0.01	c0.27							
v/s Ratio Perm								0.01			c0.19	0.12
v/c Ratio	0.62	0.43		0.33	0.75			0.04			0.52	0.12
Uniform Delay, d1	35.9	15.8		42.4	25.3			18.1			22.1	18.7
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	4.7	0.2		3.6	2.6			0.1			3.9	0.4
Delay (s)	40.6	16.0		46.0	27.8			18.3			25.9	19.2
Level of Service	D	B		D	C			B			C	B
Approach Delay (s)		20.4			28.2			18.3			23.0	
Approach LOS		C			C			B			C	

Intersection Summary

HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	89.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			






















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Existing AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1678	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.75	1.00			0.95	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1405	1595			1633	
Volume (vph)	1	670	46	17	750	1	52	1	20	2	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	728	50	18	815	1	57	1	22	2	0	3
RTOR Reduction (vph)	0	0	25	0	0	0	0	16	0	0	2	0
Lane Group Flow (vph)	1	728	25	18	816	0	57	7	0	0	3	0
Turn Type	Prot		Perm	Prot			Perm				Perm	
Protected Phases	7	4		3	8			2				6
Permitted Phases			4				2			6		
Actuated Green, G (s)	0.5	29.0	29.0	0.5	29.0		17.2	17.2			17.2	
Effective Green, g (s)	0.5	29.0	29.0	0.5	29.0		17.2	17.2			17.2	
Actuated g/C Ratio	0.01	0.49	0.49	0.01	0.49		0.29	0.29			0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	15	920	782	15	920		412	467			478	
v/s Ratio Prot	0.00	0.39		c0.01	c0.44			0.01				
v/s Ratio Perm			0.03				c0.04				0.00	
v/c Ratio	0.07	0.79	0.03	1.20	0.89		0.14	0.02			0.01	
Uniform Delay, d1	28.9	12.3	7.6	29.1	13.4		15.3	14.7			14.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	1.9	4.7	0.0	303.5	10.3		0.7	0.1			0.0	
Delay (s)	30.7	17.0	7.6	332.6	23.7		16.0	14.8			14.7	
Level of Service	C	B	A	F	C		B	B			B	
Approach Delay (s)		16.5			30.4			15.6			14.7	
Approach LOS		B			C			B			B	
Intersection Summary												
HCM Average Control Delay			23.2			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			58.7			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			52.4%			ICU Level of Service					A	
Analysis Period (min)			15									
c Critical Lane Group												



















HCM Unsignalized Intersection Capacity Analysis
6: Main Street &

Existing AM Volumes
2/4/2010

																
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations																
Sign Control	Free		Free		Stop		Stop									
Grade	0%		0%		0%		0%									
Volume (veh/h)	2	662	80	7	786	1	32	0	11	1	1	2				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92				
Hourly flow rate (vph)	2	720	87	8	854	1	35	0	12	1	1	2				
Pedestrians																
Lane Width (ft)																
Walking Speed (ft/s)																
Percent Blockage																
Right turn flare (veh)																
Median type							None			None						
Median storage (veh)																
Upstream signal (ft)	1040															
pX, platoon unblocked																
vC, conflicting volume	855		807		1640		1638		763		1605		1680		854	
vC1, stage 1 conf vol																
vC2, stage 2 conf vol																
vCu, unblocked vol	855		807		1640		1638		763		1605		1680		854	
tC, single (s)	4.1		4.1		7.1		6.5		6.2		7.1		6.5		6.2	
tC, 2 stage (s)																
tF (s)	2.2		2.2		3.5		4.0		3.3		3.5		4.0		3.3	
p0 queue free %	100		99		56		100		97		99		99		99	
cM capacity (veh/h)	785		818		78		99		404		81		93		358	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2							
Volume Total	2	807	8	854	1	35	12	2	2							
Volume Left	2	0	8	0	0	35	0	1	0							
Volume Right	0	87	0	0	1	0	12	0	2							
cSH	785	1700	818	1700	1700	78	404	87	358							
Volume to Capacity	0.00	0.47	0.01	0.50	0.00	0.44	0.03	0.02	0.01							
Queue Length (ft)	0	0	1	0	0	45	2	2	0							
Control Delay (s)	9.6	0.0	9.4	0.0	0.0	83.6	14.2	47.4	15.1							
Lane LOS	A		A			F	B	E	C							
Approach Delay (s)	0.0		0.1		65.8		31.3									
Approach LOS					F		D									
Intersection Summary																
Average Delay			1.9													
Intersection Capacity Utilization			58.0%		ICU Level of Service				B							
Analysis Period (min)			15													

















HCM Unsignalized Intersection Capacity Analysis
 7: West Cypress Road & Ohara Avenue

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	43	132	82	66	186	95	77	195	72	74	147	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	47	143	89	72	202	103	84	212	78	80	160	46
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total (vph)	279	377	296	78	240	46						
Volume Left (vph)	47	72	84	0	80	0						
Volume Right (vph)	89	103	0	78	0	46						
Hadj (s)	-0.1	-0.1	0.2	-0.7	0.2	-0.7						
Departure Headway (s)	6.8	6.8	7.4	6.5	7.5	6.7						
Degree Utilization, x	0.52	0.71	0.60	0.14	0.50	0.08						
Capacity (veh/h)	498	486	464	519	459	512						
Control Delay (s)	11.6	13.6	11.8	8.6	11.2	8.6						
Approach Delay (s)	11.6	13.6	11.1		10.8							
Approach LOS	B	B	B		B							
Intersection Summary												
Delay			11.9									
HCM Level of Service			B									
Intersection Capacity Utilization			63.3%	ICU Level of Service		B						
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 8: West Cypress Road & Rose Avenue

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	226	17	7	152	38	25	37	8	22	18	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	246	18	8	165	41	27	40	9	24	20	16
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	286	214	76	60								
Volume Left (vph)	22	8	27	24								
Volume Right (vph)	18	41	9	16								
Hadj (s)	0.0	-0.1	0.0	0.0								
Departure Headway (s)	4.5	4.9	5.1	5.1								
Degree Utilization, x	0.36	0.29	0.11	0.08								
Capacity (veh/h)	775	575	639	661								
Control Delay (s)	8.1	8.4	8.3	8.2								
Approach Delay (s)	8.1	8.4	8.3	8.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.2									
HCM Level of Service			A									
Intersection Capacity Utilization			32.7%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
9: West Cypress Road & Main Street

Existing AM Volumes
2/4/2010

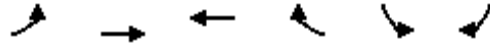
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3397		1770	1863	1583	1770	3539	1583	3433	3515	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3397		1770	1863	1583	1770	3539	1583	3433	3515	
Volume (vph)	66	196	72	305	183	390	75	278	324	249	235	11
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	213	78	332	199	424	82	302	352	271	255	12
RTOR Reduction (vph)	0	35	0	0	0	302	0	0	218	0	2	0
Lane Group Flow (vph)	72	256	0	332	199	122	82	302	134	271	265	0
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	7.1	13.0		25.8	31.7	31.7	8.6	41.8	41.8	13.4	46.6	
Effective Green, g (s)	7.1	13.0		25.8	31.7	31.7	8.6	41.8	41.8	13.4	46.6	
Actuated g/C Ratio	0.06	0.12		0.23	0.29	0.29	0.08	0.38	0.38	0.12	0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	114	401		415	537	456	138	1345	602	418	1489	
v/s Ratio Prot	0.04	c0.09		0.19	0.11		0.05	0.09		c0.08	0.08	
v/s Ratio Perm						0.27			0.22			
v/c Ratio	0.63	0.64		0.80	0.37	0.27	0.59	0.22	0.22	0.65	0.18	
Uniform Delay, d1	50.2	46.3		39.7	31.2	30.2	49.0	23.1	23.1	46.1	19.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.9	3.3		10.6	0.4	0.3	6.7	0.4	0.9	3.4	0.3	
Delay (s)	61.0	49.6		50.2	31.6	30.5	55.7	23.5	23.9	49.5	20.0	
Level of Service	E	D		D	C	C	E	C	C	D	C	
Approach Delay (s)		51.8			37.6			27.3			34.9	
Approach LOS		D			D			C			C	

Intersection Summary

HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: East Cypress Road & Picasso Drive





















Existing AM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑↑	↑↑		↘	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.87	
Flt Protected	0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	3523		1622	
Flt Permitted	0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	3523		1622	
Volume (vph)	200	588	719	22	15	222
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	639	782	24	16	241
RTOR Reduction (vph)	0	0	3	0	199	0
Lane Group Flow (vph)	217	639	803	0	58	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	9.3	30.4	17.1		8.2	
Effective Green, g (s)	9.3	30.4	17.1		8.2	
Actuated g/C Ratio	0.20	0.65	0.37		0.18	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	353	2309	1293		285	
v/s Ratio Prot	c0.12	0.18	c0.23		c0.16	
v/s Ratio Perm						
v/c Ratio	0.61	0.28	0.62		0.20	
Uniform Delay, d1	17.0	3.4	12.1		16.4	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	3.2	0.1	0.9		0.4	
Delay (s)	20.2	3.5	13.0		16.8	
Level of Service	C	A	B		B	
Approach Delay (s)		7.7	13.0		16.8	
Approach LOS		A	B		B	
Intersection Summary						
HCM Average Control Delay			11.2		HCM Level of Service	B
HCM Volume to Capacity ratio			0.69			
Actuated Cycle Length (s)			46.6		Sum of lost time (s)	12.0
Intersection Capacity Utilization			56.2%		ICU Level of Service	B
Analysis Period (min)			15			
c	Critical Lane Group					




















HCM Signalized Intersection Capacity Analysis
 11: East Cypress Road & Frank Hengel Way

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85		0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.96	1.00
Satd. Flow (prot)	1770	3482		1770	3539	1583		1780			1787	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.73			0.72	1.00
Satd. Flow (perm)	1770	3482		1770	3539	1583		1348			1337	1583
Volume (vph)	392	367	44	6	410	107	73	28	11	106	19	413
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	426	399	48	7	446	116	79	30	12	115	21	449
RTOR Reduction (vph)	0	10	0	0	0	86	0	3	0	0	0	357
Lane Group Flow (vph)	426	437	0	7	446	30	0	118	0	0	136	92
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	21.4	36.7		1.1	16.4	16.4		12.9			12.9	12.9
Effective Green, g (s)	21.4	36.7		1.1	16.4	16.4		12.9			12.9	12.9
Actuated g/C Ratio	0.34	0.59		0.02	0.26	0.26		0.21			0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	604	2038		31	926	414		277			275	326
v/s Ratio Prot	c0.24	0.13		0.00	c0.13							
v/s Ratio Perm						0.07		0.09			0.10	0.28
v/c Ratio	0.71	0.21		0.23	0.48	0.07		0.43			0.49	0.28
Uniform Delay, d1	17.9	6.2		30.4	19.6	17.4		21.7			22.0	21.0
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	3.7	0.1		3.7	0.4	0.1		1.1			1.4	0.5
Delay (s)	21.7	6.2		34.1	20.0	17.5		22.7			23.4	21.5
Level of Service	C	A		C	B	B		C			C	C
Approach Delay (s)		13.8			19.6			22.7			21.9	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM Average Control Delay			18.0				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			62.7				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			55.9%				ICU Level of Service				B	
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis
 14: East Cypress Road & Sellers Avenue

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Frt	1.00	0.95		1.00	1.00			0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			1.00	1.00
Satd. Flow (prot)	1770	1775		1770	1863			1689			1863	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.89			1.00	1.00
Satd. Flow (perm)	1770	1775		1770	1863			1530			1863	1583
Volume (vph)	3	203	94	61	307	0	67	1	79	0	4	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	221	102	66	334	0	73	1	86	0	4	3
RTOR Reduction (vph)	0	23	0	0	0	0	0	25	0	0	0	2
Lane Group Flow (vph)	3	300	0	66	334	0	0	135	0	0	4	1
Turn Type	Prot		Prot		Perm			Perm		Perm		Perm
Protected Phases	7	4		3	8			2			6	6
Permitted Phases							2			6		6
Actuated Green, G (s)	1.1	18.6		4.6	22.1			34.7			34.7	34.7
Effective Green, g (s)	1.1	18.6		4.6	22.1			34.7			34.7	34.7
Actuated g/C Ratio	0.02	0.27		0.07	0.32			0.50			0.50	0.50
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	28	472		116	589			760			925	786
v/s Ratio Prot	0.00	c0.18		c0.04	c0.18						0.00	
v/s Ratio Perm								c0.10				0.00
v/c Ratio	0.11	0.63		0.57	0.57			0.18			0.00	0.00
Uniform Delay, d1	33.9	22.6		31.7	19.9			9.7			8.9	8.9
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.7	2.8		6.3	1.3			0.5			0.0	0.0
Delay (s)	35.6	25.4		38.0	21.2			10.2			8.9	8.9
Level of Service	D	C		D	C			B			A	A
Approach Delay (s)		25.5			23.9			10.2			8.9	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM Average Control Delay			21.9	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.41									
Actuated Cycle Length (s)			69.9	Sum of lost time (s)				16.0				
Intersection Capacity Utilization			45.1%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 16: East Cypress Road & Knightsen Avenue

Existing AM Volumes
 2/4/2010

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	152	50	72	288	63	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	165	54	78	313	68	43
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	1050					
pX, platoon unblocked						
vC, conflicting volume			220		635	165
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			220		635	165
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		84	95
cM capacity (veh/h)			1350		417	879
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	165	54	78	313	68	43
Volume Left	0	0	78	0	68	0
Volume Right	0	54	0	0	0	43
cSH	1700	1700	1350	1700	417	879
Volume to Capacity	0.10	0.03	0.06	0.18	0.16	0.05
Queue Length (ft)	0	0	5	0	15	4
Control Delay (s)	0.0	0.0	7.8	0.0	15.3	9.3
Lane LOS			A		C	A
Approach Delay (s)	0.0		1.6		13.0	
Approach LOS					B	
Intersection Summary						
Average Delay			2.9			
Intersection Capacity Utilization			25.5%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 17: East Cypress Road & Jersey Island Road

Existing AM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑	↱		↰	↱
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	30	208	325	1	1	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	33	226	353	1	1	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	354				645	354
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	354				645	354
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	95
cM capacity (veh/h)	1204				425	690

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	33	226	354	1	35
Volume Left	33	0	0	1	0
Volume Right	0	0	1	0	35
cSH	1204	1700	1700	425	690
Volume to Capacity	0.03	0.13	0.21	0.00	0.05
Queue Length (ft)	2	0	0	0	4
Control Delay (s)	8.1	0.0	0.0	13.5	10.5
Lane LOS	A			B	B
Approach Delay (s)	1.0		0.0	10.6	
Approach LOS				B	

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization	33.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
 18: East Cypress Road & Bethel Island Road

Existing AM Volumes
 2/4/2010



















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑	↑	↙	↘↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	2787
Volume (vph)	186	68	117	2	3	354
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	202	74	127	2	3	385
RTOR Reduction (vph)	0	0	0	2	0	188
Lane Group Flow (vph)	202	74	127	0	3	197
Turn Type	Prot		Perm		Perm	
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	12.1	22.7	6.6	6.6	32.2	32.2
Effective Green, g (s)	12.1	22.7	6.6	6.6	32.2	32.2
Actuated g/C Ratio	0.19	0.36	0.10	0.10	0.51	0.51
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	340	1277	371	166	906	1427
v/s Ratio Prot	c0.11	0.02	c0.04		0.00	
v/s Ratio Perm				0.00		0.14
v/c Ratio	0.59	0.06	0.34	0.00	0.00	0.14
Uniform Delay, d1	23.2	13.1	26.1	25.2	7.5	8.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	0.0	0.6	0.0	0.0	0.2
Delay (s)	25.9	13.1	26.7	25.2	7.5	8.3
Level of Service	C	B	C	C	A	A
Approach Delay (s)		22.5	26.7		8.3	
Approach LOS		C	C		A	

Intersection Summary

HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	62.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			





















HCM Signalized Intersection Capacity Analysis
 19: Laurel Road & SR4 SB Ramps

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)						4.0				4.0	4.0	
Lane Util. Factor						1.00				0.95	0.95	
Frt						0.85				1.00	1.00	
Flt Protected						1.00				0.95	0.95	
Satd. Flow (prot)						1583				1681	1681	
Flt Permitted						1.00				0.95	0.95	
Satd. Flow (perm)						1583				1681	1681	
Volume (vph)	0	0	0	0	0	382	0	0	0	317	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	415	0	0	0	345	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	415	0	0	0	173	172	0
Turn Type				custom		Free				Prot		
Protected Phases										1	6	
Permitted Phases				8		Free						
Actuated Green, G (s)						120.0				120.0	120.0	
Effective Green, g (s)						120.0				120.0	120.0	
Actuated g/C Ratio						1.00				1.00	1.00	
Clearance Time (s)										4.0	4.0	
Vehicle Extension (s)										3.0	3.0	
Lane Grp Cap (vph)						1583				1681	1681	
v/s Ratio Prot										0.10	0.10	
v/s Ratio Perm						0.26						
v/c Ratio						0.26				0.10	0.10	
Uniform Delay, d1						0.0				0.0	0.0	
Progression Factor						1.00				1.00	1.00	
Incremental Delay, d2						0.4				0.0	0.0	
Delay (s)						0.4				0.0	0.0	
Level of Service						A				A	A	
Approach Delay (s)		0.0			0.4			0.0			0.0	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM Average Control Delay			0.2				HCM Level of Service			A		
HCM Volume to Capacity ratio			0.26									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			0.0		
Intersection Capacity Utilization			12.1%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
20: Laurel Road & SR4 NB Ramps

Existing AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0			4.0			
Lane Util. Factor		0.95			0.95	1.00			1.00			
Frt		1.00			1.00	0.85			0.85			
Flt Protected		1.00			1.00	1.00			1.00			
Satd. Flow (prot)		3539			3539	1583			1583			
Flt Permitted		1.00			1.00	1.00			1.00			
Satd. Flow (perm)		3539			3539	1583			1583			
Volume (vph)	0	317	0	0	382	624	0	0	216	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	345	0	0	415	678	0	0	235	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	520	0	0	79	0	0	0
Lane Group Flow (vph)	0	345	0	0	415	158	0	0	156	0	0	0
Turn Type	Prot				Perm		Perm	Perm				
Protected Phases	7	4			8			2				
Permitted Phases						8	2				2	
Actuated Green, G (s)	17.7				17.7	17.7					50.4	
Effective Green, g (s)	17.7				17.7	17.7					50.4	
Actuated g/C Ratio	0.23				0.23	0.23					0.66	
Clearance Time (s)	4.0				4.0	4.0					4.0	
Vehicle Extension (s)	3.0				3.0	3.0					3.0	
Lane Grp Cap (vph)	823				823	368					1048	
v/s Ratio Prot	0.10				0.12							
v/s Ratio Perm						0.43					0.15	
v/c Ratio	0.42				0.50	0.43					0.15	
Uniform Delay, d1	24.8				25.4	24.9					4.8	
Progression Factor	1.00				1.00	1.00					1.00	
Incremental Delay, d2	0.3				0.5	0.8					0.3	
Delay (s)	25.2				25.9	25.7					5.1	
Level of Service	C				C	C					A	
Approach Delay (s)	25.2				25.8			5.1			0.0	
Approach LOS	C				C			A			A	
Intersection Summary												
HCM Average Control Delay	22.7				HCM Level of Service						C	
HCM Volume to Capacity ratio	0.64											
Actuated Cycle Length (s)	76.1				Sum of lost time (s)						8.0	
Intersection Capacity Utilization	42.0%				ICU Level of Service						A	
Analysis Period (min)	15											
c Critical Lane Group												

























HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Existing AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1829	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.78	1.00	0.35	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1455	1583	653	1863	1583
Volume (vph)	200	299	182	58	502	89	163	279	29	46	178	141
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	325	198	63	546	97	177	303	32	50	193	153
RTOR Reduction (vph)	0	0	138	0	0	77	0	0	16	0	0	76
Lane Group Flow (vph)	217	325	60	63	546	20	0	480	16	50	193	77
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	17.2	30.8	30.8	7.6	21.2	21.2		50.5	50.5	50.5	50.5	50.5
Effective Green, g (s)	17.2	30.8	30.8	7.6	21.2	21.2		50.5	50.5	50.5	50.5	50.5
Actuated g/C Ratio	0.17	0.31	0.31	0.08	0.21	0.21		0.50	0.50	0.50	0.50	0.50
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	302	1080	483	133	744	333		728	792	327	932	792
v/s Ratio Prot	c0.12	0.09		0.04	c0.15						0.10	
v/s Ratio Perm			0.13			0.06		c0.33	0.02	0.08		0.10
v/c Ratio	0.72	0.30	0.13	0.47	0.73	0.06		0.66	0.02	0.15	0.21	0.10
Uniform Delay, d1	39.6	26.8	25.3	44.7	37.2	31.9		18.8	12.7	13.6	14.0	13.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.9	0.2	0.1	2.7	3.8	0.1		4.6	0.0	1.0	0.5	0.2
Delay (s)	47.5	27.0	25.4	47.4	41.0	32.0		23.4	12.8	14.6	14.5	13.5
Level of Service	D	C	C	D	D	C		C	B	B	B	B
Approach Delay (s)		32.6			40.3			22.8			14.1	
Approach LOS		C			D			C			B	
Intersection Summary												
HCM Average Control Delay			29.7			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			100.9			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			71.4%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 22: Laurel Road & Ohara Avenue

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 									 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3449		1770	1863	1583	1770	1863	1583	1770	1769	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.19	1.00	1.00	0.53	1.00	
Satd. Flow (perm)	1770	3449		1770	1863	1583	361	1863	1583	995	1769	
Volume (vph)	70	296	61	89	386	70	92	248	45	26	363	182
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	322	66	97	420	76	100	270	49	28	395	198
RTOR Reduction (vph)	0	26	0	0	0	52	0	0	29	0	16	0
Lane Group Flow (vph)	76	362	0	97	420	24	100	270	20	28	577	0
Turn Type	Prot			Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2				6
Permitted Phases						8	2		2		6	
Actuated Green, G (s)	4.9	18.0		6.9	20.0	20.0	25.2	25.2	25.2	25.2	25.2	
Effective Green, g (s)	4.9	18.0		6.9	20.0	20.0	25.2	25.2	25.2	25.2	25.2	
Actuated g/C Ratio	0.08	0.29		0.11	0.32	0.32	0.41	0.41	0.41	0.41	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	140	1000		197	600	510	146	756	642	404	718	
v/s Ratio Prot	0.04	0.11		c0.05	c0.23			0.14			c0.34	
v/s Ratio Perm						0.05	0.28		0.03	0.03		
v/c Ratio	0.54	0.36		0.49	0.70	0.05	0.68	0.36	0.03	0.07	0.80	
Uniform Delay, d1	27.5	17.5		26.0	18.4	14.5	15.2	12.8	11.1	11.3	16.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.2	0.2		1.9	3.6	0.0	23.1	1.3	0.1	0.3	9.3	
Delay (s)	31.8	17.7		27.9	22.0	14.5	38.2	14.1	11.2	11.6	25.5	
Level of Service	C	B		C	C	B	D	B	B	B	C	
Approach Delay (s)		20.0			22.0			19.5			24.9	
Approach LOS		C			C			B			C	
Intersection Summary												
HCM Average Control Delay			21.9			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			62.1			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			72.8%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
23: Laurel Road & Rose Avenue

Existing AM Volumes
2/4/2010


























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	102	353	0	2	470	25	0	1	2	13	1	131
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	111	384	0	2	511	27	0	1	2	14	1	142
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked												
vC, conflicting volume	538			384			1277	1148	384	1137	1134	524
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	538			384			1277	1148	384	1137	1134	524
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			100			100	99	100	91	99	74
cM capacity (veh/h)	1030			1175			97	177	664	163	180	553

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	495	540	3	158
Volume Left	111	2	0	14
Volume Right	0	27	2	142
cSH	1030	1175	346	450
Volume to Capacity	0.11	0.00	0.01	0.35
Queue Length (ft)	9	0	1	39
Control Delay (s)	3.0	0.1	15.5	17.3
Lane LOS	A	A	C	C
Approach Delay (s)	3.0	0.1	15.5	17.3
Approach LOS			C	C

Intersection Summary			
Average Delay		3.6	
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)		15	






















HCM Signalized Intersection Capacity Analysis
24: Laurel Road & Main Street

Existing AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.91		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1701		1770	3470		1770	3495	
Flt Permitted	0.35	1.00	1.00	0.71	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	644	1863	1583	1316	1701		1770	3470		1770	3495	
Volume (vph)	98	72	239	140	94	130	99	455	68	82	571	52
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	78	260	152	102	141	108	495	74	89	621	57
RTOR Reduction (vph)	0	0	213	0	58	0	0	6	0	0	4	0
Lane Group Flow (vph)	107	78	47	152	185	0	108	563	0	89	674	0
Turn Type	Perm		Perm	Perm			Prot			Prot		
Protected Phases	4				8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	14.2	14.2	14.2	14.2	14.2		8.5	45.1		7.8	44.4	
Effective Green, g (s)	14.2	14.2	14.2	14.2	14.2		8.5	45.1		7.8	44.4	
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.18		0.11	0.57		0.10	0.56	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	116	334	284	236	305		190	1978		175	1962	
v/s Ratio Prot		0.04			0.14		c0.06	0.16		0.05	c0.19	
v/s Ratio Perm	c0.17		0.16	0.12								
v/c Ratio	0.92	0.23	0.16	0.64	0.61		0.57	0.28		0.51	0.34	
Uniform Delay, d1	31.9	27.8	27.4	30.1	29.9		33.6	8.7		33.8	9.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	59.5	0.4	0.3	5.9	3.4		3.9	0.4		2.3	0.5	
Delay (s)	91.4	28.2	27.7	36.0	33.3		37.4	9.1		36.1	9.9	
Level of Service	F	C	C	D	C		D	A		D	A	
Approach Delay (s)		43.1			34.3			13.6			13.0	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			22.7		HCM Level of Service				C			
HCM Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			79.1		Sum of lost time (s)				12.0			
Intersection Capacity Utilization			54.6%		ICU Level of Service				A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 26: Malicoat Avenue & Main Street

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.90		1.00	0.93		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1681		1770	1724		1770	1857		1770	1863	1583
Flt Permitted	0.62	1.00		0.62	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1153	1681		1164	1724		1770	1857		1770	1863	1583
Volume (vph)	205	39	72	33	57	56	52	572	11	28	633	163
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	42	78	36	62	61	57	622	12	30	688	177
RTOR Reduction (vph)	0	60	0	0	33	0	0	0	0	0	0	69
Lane Group Flow (vph)	223	60	0	36	90	0	57	634	0	30	688	108
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases	4			8			5	2		1	6	
Permitted Phases	4			8								6
Actuated Green, G (s)	24.3	24.3		24.3	24.3		6.9	67.6		3.9	64.6	64.6
Effective Green, g (s)	24.3	24.3		24.3	24.3		6.9	67.6		3.9	64.6	64.6
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.06	0.63		0.04	0.60	0.60
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	260	379		262	389		113	1165		64	1116	949
v/s Ratio Prot		0.07			0.07		c0.03	c0.34		0.02	c0.37	
v/s Ratio Perm	c0.19			0.03								0.11
v/c Ratio	0.86	0.16		0.14	0.23		0.50	0.54		0.47	0.62	0.11
Uniform Delay, d1	40.1	33.5		33.4	34.1		48.8	11.4		50.9	13.7	9.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	23.3	0.2		0.2	0.3		3.5	1.8		5.3	2.6	0.2
Delay (s)	63.4	33.7		33.6	34.4		52.3	13.2		56.3	16.3	9.5
Level of Service	E	C		C	C		D	B		E	B	A
Approach Delay (s)		53.0			34.2			16.4			16.3	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			23.7			HCM Level of Service		C				
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			107.8			Sum of lost time (s)		16.0				
Intersection Capacity Utilization			64.7%			ICU Level of Service		C				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 27: Brownstone Road & Main Street

Existing AM Volumes
 2/4/2010



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	72	54	58	568	728	188
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	78	59	63	617	791	204
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1637	893	996			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1637	893	996			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	22	83	91			
cM capacity (veh/h)	101	340	695			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	137	680	996			
Volume Left	78	63	0			
Volume Right	59	0	204			
cSH	144	695	1700			
Volume to Capacity	0.95	0.09	0.59			
Queue Length (ft)	168	7	0			
Control Delay (s)	122.6	2.4	0.0			
Lane LOS	F	A				
Approach Delay (s)	122.6	2.4	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay			10.2			
Intersection Capacity Utilization		92.1%		ICU Level of Service		F
Analysis Period (min)			15			



















Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↘		↙	↘
Sign Control	Stop		Free		Free	Free
Grade	0%		0%		0%	0%
Volume (veh/h)	56	170	441	38	162	607
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	61	185	479	41	176	660
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1512	500			521	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1512	500			521	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	45	68			83	
cM capacity (veh/h)	110	571			1046	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	246	521	176	660
Volume Left	61	0	176	0
Volume Right	185	41	0	0
cSH	280	1700	1046	1700
Volume to Capacity	0.88	0.31	0.17	0.39
Queue Length (ft)	192	0	15	0
Control Delay (s)	66.7	0.0	9.1	0.0
Lane LOS	F		A	
Approach Delay (s)	66.7	0.0	1.9	
Approach LOS	F			

Intersection Summary			
Average Delay		11.2	
Intersection Capacity Utilization	58.1%	ICU Level of Service	B
Analysis Period (min)		15	























HCM Unsignalized Intersection Capacity Analysis
 29: Delta Road & Sellers Avenue

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	22	96	37	64	124	9	22	75	43	19	122	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	104	40	70	135	10	24	82	47	21	133	36
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	168	214	152	189								
Volume Left (vph)	24	70	24	21								
Volume Right (vph)	40	10	47	36								
Hadj (s)	-0.1	0.1	-0.1	-0.1								
Departure Headway (s)	4.9	5.1	5.0	5.0								
Degree Utilization, x	0.23	0.30	0.21	0.26								
Capacity (veh/h)	678	561	670	689								
Control Delay (s)	8.3	8.6	8.3	8.4								
Approach Delay (s)	8.3	8.6	8.3	8.4								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.4									
HCM Level of Service			A									
Intersection Capacity Utilization			39.0%	ICU Level of Service	A							
Analysis Period (min)			15									























HCM Signalized Intersection Capacity Analysis
 30: Lone Tree Way & Main Street

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1779	1583		1788	1583	1770	1863	1583	1770	3420	
Flt Permitted		0.71	1.00		0.73	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1320	1583		1354	1583	1770	1863	1583	1770	3420	
Volume (vph)	97	6	189	32	6	4	180	306	15	4	374	109
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	105	7	205	35	7	4	196	333	16	4	407	118
RTOR Reduction (vph)	0	0	176	0	0	3	0	0	5	0	15	0
Lane Group Flow (vph)	0	112	29	0	42	1	196	333	11	4	510	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			8		5	2			1	6
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		12.0	12.0		12.0	12.0	14.1	61.4	61.4	0.7	48.0	
Effective Green, g (s)		12.0	12.0		12.0	12.0	14.1	61.4	61.4	0.7	48.0	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.16	0.71	0.71	0.01	0.56	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		184	221		189	221	290	1329	1129	14	1907	
v/s Ratio Prot							c0.11	0.18		0.00	c0.15	
v/s Ratio Perm		0.08	0.13		0.03	0.00			0.01			
v/c Ratio		0.61	0.13		0.22	0.00	0.68	0.25	0.01	0.29	0.27	
Uniform Delay, d1		34.8	32.5		32.9	31.9	33.9	4.3	3.6	42.5	9.9	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		5.6	0.3		0.6	0.0	6.1	0.5	0.0	10.9	0.3	
Delay (s)		40.4	32.7		33.5	31.9	40.0	4.8	3.6	53.4	10.3	
Level of Service		D	C		C	C	D	A	A	D	B	
Approach Delay (s)		35.5			33.4			17.4			10.6	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			19.4				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			86.1				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			46.1%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 31: Main Street & Sellers Avenue

Existing AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1826	1583		1815	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.90	1.00		0.87	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583		1683	1583		1613	
Volume (vph)	2	360	29	20	455	28	20	29	7	52	54	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	391	32	22	495	30	22	32	8	57	59	2
RTOR Reduction (vph)	0	0	22	0	0	20	0	0	4	0	0	0
Lane Group Flow (vph)	2	391	10	22	495	10	0	54	4	0	118	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2		2	6		
Actuated Green, G (s)	0.6	25.4	25.4	1.4	26.2	26.2		43.9	43.9		43.9	
Effective Green, g (s)	0.6	25.4	25.4	1.4	26.2	26.2		43.9	43.9		43.9	
Actuated g/C Ratio	0.01	0.31	0.31	0.02	0.32	0.32		0.53	0.53		0.53	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	13	572	486	30	590	502		893	840		856	
v/s Ratio Prot	0.00	0.21		c0.01	c0.27							
v/s Ratio Perm			0.02			0.02		0.03	0.01		c0.07	
v/c Ratio	0.15	0.68	0.02	0.73	0.84	0.02		0.06	0.01		0.14	
Uniform Delay, d1	40.8	25.1	20.0	40.5	26.3	19.4		9.4	9.1		9.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	5.5	3.4	0.0	63.0	10.2	0.0		0.1	0.0		0.3	
Delay (s)	46.3	28.5	20.0	103.4	36.4	19.4		9.5	9.1		10.2	
Level of Service	D	C	B	F	D	B		A	A		B	
Approach Delay (s)		27.9			38.2			9.5			10.2	
Approach LOS		C			D			A			B	
Intersection Summary												
HCM Average Control Delay			30.0			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			82.7			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			43.1%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 1: Main Street & SR160 SB Ramps

Existing PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.86		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3472		3433	3539	1583	1770	1602		1770	1767	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3472		3433	3539	1583	1770	1602		1770	1767	
Volume (vph)	5	275	40	338	195	37	18	6	91	31	19	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	299	43	367	212	40	20	7	99	34	21	11
RTOR Reduction (vph)	0	10	0	0	0	26	0	61	0	0	7	0
Lane Group Flow (vph)	5	332	0	367	212	14	20	45	0	34	25	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	1.0	15.3		12.6	26.9	26.9	2.5	28.6		2.8	28.9	
Effective Green, g (s)	1.0	15.3		12.6	26.9	26.9	2.5	28.6		2.8	28.9	
Actuated g/C Ratio	0.01	0.20		0.17	0.36	0.36	0.03	0.38		0.04	0.38	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	24	705		574	1264	566	59	608		66	678	
v/s Ratio Prot	0.00	c0.10		c0.11	0.06		0.01	c0.07		c0.02	0.02	
v/s Ratio Perm						0.03						
v/c Ratio	0.21	0.47		0.64	0.17	0.03	0.34	0.07		0.52	0.04	
Uniform Delay, d1	36.8	26.4		29.2	16.5	15.7	35.6	14.9		35.6	14.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.3	0.5		2.3	0.1	0.0	3.4	0.2		6.6	0.1	
Delay (s)	41.0	26.9		31.6	16.6	15.7	39.0	15.1		42.2	14.6	
Level of Service	D	C		C	B	B	D	B		D	B	
Approach Delay (s)		27.1			25.4			18.9			28.8	
Approach LOS		C			C			B			C	
Intersection Summary												
HCM Average Control Delay			25.4				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.37									
Actuated Cycle Length (s)			75.3				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			36.9%				ICU Level of Service			A		
Analysis Period (min)			15									
c	Critical Lane Group											























HCM Signalized Intersection Capacity Analysis
2: Main Street & SR160 NB Ramps

Existing PM Volumes
2/4/2010

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↘	↑↑	↘	↗↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	0.88
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3517		1770	3539	1770	2787
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3517		1770	3539	1770	2787
Volume (vph)	465	20	64	573	34	540
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	505	22	70	623	37	587
RTOR Reduction (vph)	3	0	0	0	0	275
Lane Group Flow (vph)	524	0	70	623	37	312
Turn Type			Prot		custom	
Protected Phases	4		3	8		
Permitted Phases					2	2
Actuated Green, G (s)	16.8		7.0	27.8	40.7	40.7
Effective Green, g (s)	16.8		7.0	27.8	40.7	40.7
Actuated g/C Ratio	0.22		0.09	0.36	0.53	0.53
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	772		162	1286	942	1483
v/s Ratio Prot	c0.15		0.04	c0.18		
v/s Ratio Perm					0.02	0.21
v/c Ratio	0.68		0.43	0.48	0.04	0.21
Uniform Delay, d1	27.4		32.9	18.8	8.6	9.4
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4		1.8	0.3	0.1	0.3
Delay (s)	29.8		34.7	19.1	8.6	9.8
Level of Service	C		C	B	A	A
Approach Delay (s)	29.8			20.7	9.7	
Approach LOS	C			C	A	
Intersection Summary						
HCM Average Control Delay			19.6		HCM Level of Service	B
HCM Volume to Capacity ratio			0.49			
Actuated Cycle Length (s)			76.5		Sum of lost time (s)	12.0
Intersection Capacity Utilization			39.0%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
3: Main Street & Empire Avenue

Existing PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3526		3433	1863	1583		1832	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.94	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3526		3433	1863	1583		1748	1583
Volume (vph)	16	732	296	200	458	12	217	3	132	12	24	13
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	796	322	217	498	13	236	3	143	13	26	14
RTOR Reduction (vph)	0	0	219	0	2	0	0	0	90	0	0	11
Lane Group Flow (vph)	17	796	103	217	509	0	236	3	53	0	39	3
Turn Type	Prot		Perm	Prot			Prot		Perm	Perm		Perm
Protected Phases	7	4		3	8		5	2		6		6
Permitted Phases			4						2	6		6
Actuated Green, G (s)	1.5	27.1	27.1	13.9	39.5		8.7	31.4	31.4		18.7	18.7
Effective Green, g (s)	1.5	27.1	27.1	13.9	39.5		8.7	31.4	31.4		18.7	18.7
Actuated g/C Ratio	0.02	0.32	0.32	0.16	0.47		0.10	0.37	0.37		0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	31	1136	508	292	1650		354	693	589		387	351
v/s Ratio Prot	0.01	c0.22		c0.12	0.14		c0.07	0.00				
v/s Ratio Perm			0.20						0.09		0.02	0.01
v/c Ratio	0.55	0.70	0.20	0.74	0.31		0.67	0.00	0.09		0.10	0.01
Uniform Delay, d1	41.1	25.1	20.8	33.6	14.0		36.5	16.7	17.2		26.2	25.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	18.4	2.0	0.2	9.8	0.1		4.7	0.0	0.3		0.5	0.0
Delay (s)	59.5	27.1	21.0	43.4	14.1		41.1	16.7	17.5		26.7	25.7
Level of Service	E	C	C	D	B		D	B	B		C	C
Approach Delay (s)		25.8			22.8			32.1			26.4	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM Average Control Delay			25.9	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			84.4	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			54.2%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												





















HCM Signalized Intersection Capacity Analysis
4: Main Street & Vintage Parkway

Existing PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.97			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.95	1.00
Satd. Flow (prot)	1770	3534		1770	3418			1757			1775	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.82			0.71	1.00
Satd. Flow (perm)	1770	3534		1770	3418			1496			1329	1583
Volume (vph)	169	920	9	12	537	159	17	1	3	164	3	96
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	184	1000	10	13	584	173	18	1	3	178	3	104
RTOR Reduction (vph)	0	1	0	0	28	0	0	2	0	0	0	64
Lane Group Flow (vph)	184	1009	0	13	729	0	0	20	0	0	181	40
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	13.5	38.4		1.3	26.2			32.6			32.6	32.6
Effective Green, g (s)	13.5	38.4		1.3	26.2			32.6			32.6	32.6
Actuated g/C Ratio	0.16	0.46		0.02	0.31			0.39			0.39	0.39
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	283	1610		27	1062			579			514	612
v/s Ratio Prot	c0.10	0.29		0.01	c0.22							
v/s Ratio Perm								0.01			c0.14	0.07
v/c Ratio	0.65	0.63		0.48	0.69			0.03			0.35	0.07
Uniform Delay, d1	33.2	17.5		41.2	25.5			16.1			18.4	16.3
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	5.3	0.8		12.9	1.9			0.1			1.9	0.2
Delay (s)	38.4	18.3		54.1	27.3			16.2			20.2	16.5
Level of Service	D	B		D	C			B			C	B
Approach Delay (s)		21.4			27.8			16.2			18.9	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM Average Control Delay			23.2	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			84.3	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			49.8%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												






















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Existing PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1722	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.76	1.00			0.92	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1408	1595			1642	
Volume (vph)	2	930	157	29	580	1	132	2	41	2	0	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1011	171	32	630	1	143	2	45	2	0	1
RTOR Reduction (vph)	0	0	68	0	0	0	0	35	0	0	1	0
Lane Group Flow (vph)	2	1011	103	32	631	0	143	12	0	0	2	0
Turn Type	Prot		Perm	Prot			Perm				Perm	
Protected Phases	7	4		3	8			2				6
Permitted Phases			4				2				6	
Actuated Green, G (s)	0.6	48.2	48.2	2.0	49.6		18.0	18.0			18.0	
Effective Green, g (s)	0.6	48.2	48.2	2.0	49.6		18.0	18.0			18.0	
Actuated g/C Ratio	0.01	0.60	0.60	0.02	0.62		0.22	0.22			0.22	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	13	1120	951	44	1152		316	358			369	
v/s Ratio Prot	0.00	c0.54		c0.02	0.34			0.03				
v/s Ratio Perm			0.11				c0.10				0.00	
v/c Ratio	0.15	0.90	0.11	0.73	0.55		0.45	0.03			0.01	
Uniform Delay, d1	39.5	14.0	6.8	38.8	8.8		26.8	24.3			24.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	5.5	10.2	0.1	45.3	0.5		4.6	0.2			0.0	
Delay (s)	45.0	24.1	6.9	84.1	9.4		31.5	24.5			24.2	
Level of Service	D	C	A	F	A		C	C			C	
Approach Delay (s)		21.7			13.0			29.7			24.2	
Approach LOS		C			B			C			C	
Intersection Summary												
HCM Average Control Delay			19.6			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			80.2			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			65.6%			ICU Level of Service					C	
Analysis Period (min)			15									
c Critical Lane Group												



















HCM Unsignalized Intersection Capacity Analysis
6: Main Street &

Existing PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Free		Free		Stop		Stop					
Grade	0%		0%		0%		0%					
Volume (veh/h)	1	844	141	7	926	0	28	0	7	4	0	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	917	153	8	1007	0	30	0	8	4	0	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	1040											
pX, platoon unblocked												
vC, conflicting volume	1007		1071		2021		2018	994	1949	2095	1007	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1007		1071		2021		2018	994	1949	2095	1007	
tC, single (s)	4.1		4.1		7.1		6.5	6.2	7.1	6.5	6.2	
tC, 2 stage (s)												
tF (s)	2.2		2.2		3.5		4.0	3.3	3.5	4.0	3.3	
p0 queue free %	100		99		28		100	97	91	100	99	
cM capacity (veh/h)	688		651		42		58	297	47	52	293	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	1	1071	8	1007	0	30	8	4	3			
Volume Left	1	0	8	0	0	30	0	4	0			
Volume Right	0	153	0	0	0	0	8	0	3			
cSH	688	1700	651	1700	1700	42	297	47	293			
Volume to Capacity	0.00	0.63	0.01	0.59	0.00	0.72	0.03	0.09	0.01			
Queue Length (ft)	0	0	1	0	0	68	2	7	1			
Control Delay (s)	10.2	0.0	10.6	0.0	0.0	205.6	17.4	89.7	17.4			
Lane LOS	B		B			F	C	F	C			
Approach Delay (s)	0.0		0.1		167.9		58.7					
Approach LOS					F		F					
Intersection Summary												
Average Delay			3.2									
Intersection Capacity Utilization			69.6%		ICU Level of Service				C			
Analysis Period (min)			15									

















HCM Unsignalized Intersection Capacity Analysis
 7: West Cypress Road & Ohara Avenue

Existing PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	31	99	44	61	171	42	69	96	69	60	145	74
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	34	108	48	66	186	46	75	104	75	65	158	80
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total (vph)	189	298	179	75	223	80						
Volume Left (vph)	34	66	75	0	65	0						
Volume Right (vph)	48	46	0	75	0	80						
Hadj (s)	-0.1	0.0	0.2	-0.7	0.2	-0.7						
Departure Headway (s)	5.9	5.7	6.5	5.6	6.4	5.6						
Degree Utilization, x	0.31	0.47	0.33	0.12	0.40	0.12						
Capacity (veh/h)	566	533	507	590	540	619						
Control Delay (s)	9.5	10.0	9.1	7.6	9.3	7.6						
Approach Delay (s)	9.5	10.0	8.7		8.8							
Approach LOS	A	A	A		A							
Intersection Summary												
Delay			9.2									
HCM Level of Service			A									
Intersection Capacity Utilization			51.5%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 8: West Cypress Road & Rose Avenue

Existing PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	152	23	10	160	16	23	16	12	52	48	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	165	25	11	174	17	25	17	13	57	52	25
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	192	202	55	134								
Volume Left (vph)	2	11	25	57								
Volume Right (vph)	25	17	13	25								
Hadj (s)	0.0	0.0	0.0	0.0								
Departure Headway (s)	4.6	4.7	4.9	4.9								
Degree Utilization, x	0.24	0.27	0.08	0.18								
Capacity (veh/h)	749	588	669	702								
Control Delay (s)	7.9	8.1	8.1	8.1								
Approach Delay (s)	7.9	8.1	8.1	8.1								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.1									
HCM Level of Service			A									
Intersection Capacity Utilization			30.8%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
9: West Cypress Road & Main Street

Existing PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3383		1770	1863	1583	1770	3539	1583	3433	3533	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	3383		1770	1863	1583	1770	3539	1583	3433	3533	
Volume (vph)	51	128	53	162	122	205	82	284	152	301	382	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	139	58	176	133	223	89	309	165	327	415	5
RTOR Reduction (vph)	0	44	0	0	0	184	0	0	86	0	0	0
Lane Group Flow (vph)	55	153	0	176	133	39	89	309	79	327	420	0
Turn Type	Prot			Prot		Perm	Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	6.8	10.1		16.1	19.4	19.4	9.5	52.7	52.7	15.1	58.3	
Effective Green, g (s)	6.8	10.1		16.1	19.4	19.4	9.5	52.7	52.7	15.1	58.3	
Actuated g/C Ratio	0.06	0.09		0.15	0.18	0.18	0.09	0.48	0.48	0.14	0.53	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	109	311		259	329	279	153	1696	758	471	1872	
v/s Ratio Prot	0.03	c0.06		0.10	0.07		0.05	0.09		c0.10	c0.12	
v/s Ratio Perm						0.14			0.10			
v/c Ratio	0.50	0.49		0.68	0.40	0.14	0.58	0.18	0.10	0.69	0.22	
Uniform Delay, d1	50.0	47.5		44.5	40.2	38.3	48.3	16.4	15.7	45.2	13.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.6	1.2		6.9	0.8	0.2	5.5	0.2	0.3	4.4	0.3	
Delay (s)	53.6	48.7		51.4	41.0	38.5	53.9	16.6	16.0	49.7	14.1	
Level of Service	D	D		D	D	D	D	B	B	D	B	
Approach Delay (s)		49.8			43.4			22.3			29.6	
Approach LOS		D			D			C			C	

Intersection Summary

HCM Average Control Delay	33.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: East Cypress Road & Picasso Drive





















Existing PM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.87	
Flt Protected	0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	3533		1621	
Flt Permitted	0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	3533		1621	
Volume (vph)	92	497	368	5	4	63
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	100	540	400	5	4	68
RTOR Reduction (vph)	0	0	1	0	54	0
Lane Group Flow (vph)	100	540	404	0	18	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	4.2	17.9	9.7		6.6	
Effective Green, g (s)	4.2	17.9	9.7		6.6	
Actuated g/C Ratio	0.13	0.55	0.30		0.20	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	229	1949	1054		329	
v/s Ratio Prot	c0.06	0.15	c0.11		c0.04	
v/s Ratio Perm						
v/c Ratio	0.44	0.28	0.38		0.05	
Uniform Delay, d1	13.1	3.9	9.0		10.4	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	1.3	0.1	0.2		0.1	
Delay (s)	14.4	3.9	9.3		10.5	
Level of Service	B	A	A		B	
Approach Delay (s)		5.6	9.3		10.5	
Approach LOS		A	A		B	
Intersection Summary						
HCM Average Control Delay			7.2		HCM Level of Service	A
HCM Volume to Capacity ratio			0.34			
Actuated Cycle Length (s)			32.5		Sum of lost time (s)	12.0
Intersection Capacity Utilization			29.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
 11: East Cypress Road & Frank Hengel Way

Existing PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.96	1.00
Satd. Flow (prot)	1770	3488		1770	3539	1583		1768			1780	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.75			0.75	1.00
Satd. Flow (perm)	1770	3488		1770	3539	1583		1380			1396	1583
Volume (vph)	130	532	57	6	515	13	38	2	3	25	2	122
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	578	62	7	560	14	41	2	3	27	2	133
RTOR Reduction (vph)	0	12	0	0	0	9	0	2	0	0	0	107
Lane Group Flow (vph)	141	628	0	7	560	5	0	44	0	0	29	26
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	4.9	17.3		0.9	13.3	13.3		7.5			7.5	7.5
Effective Green, g (s)	4.9	17.3		0.9	13.3	13.3		7.5			7.5	7.5
Actuated g/C Ratio	0.13	0.46		0.02	0.35	0.35		0.20			0.20	0.20
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	230	1601		42	1249	558		275			278	315
v/s Ratio Prot	c0.08	c0.18		0.00	0.16							
v/s Ratio Perm						0.01		0.03			0.02	0.08
v/c Ratio	0.61	0.39		0.17	0.45	0.01		0.16			0.10	0.08
Uniform Delay, d1	15.5	6.7		18.0	9.4	7.9		12.5			12.4	12.3
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	4.8	0.2		1.9	0.3	0.0		0.3			0.2	0.1
Delay (s)	20.3	6.9		19.9	9.6	7.9		12.8			12.5	12.4
Level of Service	C	A		B	A	A		B			B	B
Approach Delay (s)		9.3			9.7			12.8			12.4	
Approach LOS		A			A			B			B	
Intersection Summary												
HCM Average Control Delay			9.9				HCM Level of Service				A	
HCM Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			37.7				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			40.5%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 14: East Cypress Road & Sellers Avenue

Existing PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0				4.0
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00				1.00
Frt	1.00	0.97		1.00	1.00			0.95				0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97				1.00
Satd. Flow (prot)	1770	1809		1770	1863			1716				1583
Flt Permitted	0.95	1.00		0.95	1.00			0.83				1.00
Satd. Flow (perm)	1770	1809		1770	1863			1464				1583
Volume (vph)	3	349	83	52	296	0	113	1	67	0	0	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	379	90	57	322	0	123	1	73	0	0	2
RTOR Reduction (vph)	0	11	0	0	0	0	0	14	0	0	0	1
Lane Group Flow (vph)	3	458	0	57	322	0	0	183	0	0	0	1
Turn Type	Prot		Prot		Perm			Perm		Perm		Perm
Protected Phases	7	4		3	8			2			6	6
Permitted Phases							2			6		6
Actuated Green, G (s)	1.0	25.6		4.5	29.1			35.0				35.0
Effective Green, g (s)	1.0	25.6		4.5	29.1			35.0				35.0
Actuated g/C Ratio	0.01	0.33		0.06	0.38			0.45				0.45
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0				4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0				3.0
Lane Grp Cap (vph)	23	601		103	703			665				719
v/s Ratio Prot	0.00	c0.26		c0.03	c0.17							
v/s Ratio Perm								c0.13				0.00
v/c Ratio	0.13	0.76		0.55	0.46			0.28				0.00
Uniform Delay, d1	37.6	23.0		35.3	18.1			13.1				11.5
Progression Factor	1.00	1.00		1.00	1.00			1.00				1.00
Incremental Delay, d2	2.6	5.7		6.3	0.5			1.0				0.0
Delay (s)	40.2	28.7		41.6	18.5			14.2				11.5
Level of Service	D	C		D	B			B				B
Approach Delay (s)		28.8			22.0			14.2			11.5	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM Average Control Delay			23.6	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			77.1	Sum of lost time (s)				16.0				
Intersection Capacity Utilization			47.2%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 16: East Cypress Road & Knightsen Avenue

Existing PM Volumes
 2/4/2010

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↙	↑	↖	↗
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	330	99	25	182	102	61
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	359	108	27	198	111	66
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	1050					
pX, platoon unblocked						
vC, conflicting volume			466		611	359
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			466		611	359
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		75	90
cM capacity (veh/h)			1095		446	686
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	359	108	27	198	111	66
Volume Left	0	0	27	0	111	0
Volume Right	0	108	0	0	0	66
cSH	1700	1700	1095	1700	446	686
Volume to Capacity	0.21	0.06	0.02	0.12	0.25	0.10
Queue Length (ft)	0	0	2	0	24	8
Control Delay (s)	0.0	0.0	8.4	0.0	15.7	10.8
Lane LOS			A		C	B
Approach Delay (s)	0.0		1.0		13.9	
Approach LOS					B	
Intersection Summary						
Average Delay			3.1			
Intersection Capacity Utilization			33.1%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 17: East Cypress Road & Jersey Island Road

Existing PM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	18	325	237	4	1	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	353	258	4	1	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	262				652	260
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	262				652	260
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	98
cM capacity (veh/h)	1302				426	779

Direction, Lane #	EB 1	EB 2	WB 1	SB 1	SB 2
Volume Total	20	353	262	1	12
Volume Left	20	0	0	1	0
Volume Right	0	0	4	0	12
cSH	1302	1700	1700	426	779
Volume to Capacity	0.02	0.21	0.15	0.00	0.02
Queue Length (ft)	1	0	0	0	1
Control Delay (s)	7.8	0.0	0.0	13.5	9.7
Lane LOS	A			B	A
Approach Delay (s)	0.4		0.0	10.0	
Approach LOS				B	

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization	27.1%		ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
 18: East Cypress Road & Bethel Island Road

Existing PM Volumes
 2/4/2010



















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↗↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	2787
Volume (vph)	313	101	52	6	5	215
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	340	110	57	7	5	234
RTOR Reduction (vph)	0	0	0	7	0	122
Lane Group Flow (vph)	340	110	57	0	5	112
Turn Type	Prot		Perm		Perm	
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	16.1	23.9	3.8	3.8	29.5	29.5
Effective Green, g (s)	16.1	23.9	3.8	3.8	29.5	29.5
Actuated g/C Ratio	0.26	0.39	0.06	0.06	0.48	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	464	1378	219	98	850	1339
v/s Ratio Prot	c0.19	0.03	c0.02		0.00	
v/s Ratio Perm				0.00		0.08
v/c Ratio	0.73	0.08	0.26	0.00	0.01	0.08
Uniform Delay, d1	20.7	11.8	27.5	27.0	8.3	8.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.9	0.0	0.6	0.0	0.0	0.1
Delay (s)	26.6	11.8	28.1	27.0	8.3	8.8
Level of Service	C	B	C	C	A	A
Approach Delay (s)		23.0	28.0		8.7	
Approach LOS		C	C		A	

Intersection Summary

HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	61.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			





















HCM Signalized Intersection Capacity Analysis
 19: Laurel Road & SR4 SB Ramps

Existing PM Volumes
 2/4/2010

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)						4.0				4.0	4.0		
Lane Util. Factor						1.00				0.95	0.95		
Frt						0.85				1.00	1.00		
Flt Protected						1.00				0.95	0.95		
Satd. Flow (prot)						1583				1681	1681		
Flt Permitted						1.00				0.95	0.95		
Satd. Flow (perm)						1583				1681	1681		
Volume (vph)	0	0	0	0	0	350	0	0	0	860	0	0	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	0	0	0	0	380	0	0	0	935	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	0	0	0	0	380	0	0	0	468	467	0	
Turn Type				custom		Free				Prot			
Protected Phases										1	6		
Permitted Phases				8		Free							
Actuated Green, G (s)						120.0				120.0	120.0		
Effective Green, g (s)						120.0				120.0	120.0		
Actuated g/C Ratio						1.00				1.00	1.00		
Clearance Time (s)										4.0	4.0		
Vehicle Extension (s)										3.0	3.0		
Lane Grp Cap (vph)						1583				1681	1681		
v/s Ratio Prot										0.28	0.28		
v/s Ratio Perm						0.24							
v/c Ratio						0.24				0.28	0.28		
Uniform Delay, d1						0.0				0.0	0.0		
Progression Factor						1.00				1.00	1.00		
Incremental Delay, d2						0.4				0.1	0.1		
Delay (s)						0.4				0.1	0.1		
Level of Service						A				A	A		
Approach Delay (s)		0.0			0.4			0.0			0.1		
Approach LOS		A			A			A			A		
Intersection Summary													
HCM Average Control Delay			0.2									HCM Level of Service	A
HCM Volume to Capacity ratio			0.28										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	0.0
Intersection Capacity Utilization			27.2%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													


























HCM Signalized Intersection Capacity Analysis
 20: Laurel Road & SR4 NB Ramps

Existing PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0			4.0			
Lane Util. Factor		0.95			0.95	1.00			1.00			
Frt		1.00			1.00	0.85			0.85			
Flt Protected		1.00			1.00	1.00			1.00			
Satd. Flow (prot)		3539			3539	1583			1583			
Flt Permitted		1.00			1.00	1.00			1.00			
Satd. Flow (perm)		3539			3539	1583			1583			
Volume (vph)	0	860	0	0	350	406	0	0	351	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	935	0	0	380	441	0	0	382	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	294	0	0	42	0	0	0
Lane Group Flow (vph)	0	935	0	0	380	147	0	0	340	0	0	0
Turn Type	Prot				Perm		Perm		Perm			
Protected Phases	7	4			8			2				
Permitted Phases						8	2		2			
Actuated Green, G (s)		29.1			29.1	29.1			50.3			
Effective Green, g (s)		29.1			29.1	29.1			50.3			
Actuated g/C Ratio		0.33			0.33	0.33			0.58			
Clearance Time (s)		4.0			4.0	4.0			4.0			
Vehicle Extension (s)		3.0			3.0	3.0			3.0			
Lane Grp Cap (vph)		1178			1178	527			911			
v/s Ratio Prot		0.26			0.11							
v/s Ratio Perm						0.28			0.24			
v/c Ratio		0.79			0.32	0.28			0.37			
Uniform Delay, d1		26.4			21.8	21.4			10.0			
Progression Factor		1.00			1.00	1.00			1.00			
Incremental Delay, d2		3.8			0.2	0.3			1.2			
Delay (s)		30.2			21.9	21.7			11.2			
Level of Service		C			C	C			B			
Approach Delay (s)		30.2			21.8			11.2			0.0	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM Average Control Delay			23.6				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			87.4				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			52.2%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												

























HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Existing PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1834	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.79	1.00	0.39	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1472	1583	724	1863	1583
Volume (vph)	344	518	219	100	306	62	122	266	26	81	223	194
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	374	563	238	109	333	67	133	289	28	88	242	211
RTOR Reduction (vph)	0	0	165	0	0	57	0	0	14	0	0	109
Lane Group Flow (vph)	374	563	73	109	333	10	0	422	14	88	242	102
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	25.9	31.9	31.9	9.8	15.8	15.8		50.5	50.5	50.5	50.5	50.5
Effective Green, g (s)	25.9	31.9	31.9	9.8	15.8	15.8		50.5	50.5	50.5	50.5	50.5
Actuated g/C Ratio	0.25	0.31	0.31	0.09	0.15	0.15		0.48	0.48	0.48	0.48	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	440	1083	485	166	537	240		713	767	351	903	767
v/s Ratio Prot	c0.21	0.16		0.06	c0.09							0.13
v/s Ratio Perm			0.15			0.04		c0.29	0.02	0.12		0.13
v/c Ratio	0.85	0.52	0.15	0.66	0.62	0.04		0.59	0.02	0.25	0.27	0.13
Uniform Delay, d1	37.3	29.8	26.3	45.6	41.4	37.7		19.4	14.0	15.8	15.9	14.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.2	0.4	0.1	9.0	2.2	0.1		3.6	0.0	1.7	0.7	0.4
Delay (s)	51.5	30.3	26.4	54.6	43.6	37.8		23.0	14.0	17.5	16.6	15.2
Level of Service	D	C	C	D	D	D		C	B	B	B	B
Approach Delay (s)		36.3			45.2			22.4			16.2	
Approach LOS		D			D			C			B	
Intersection Summary												
HCM Average Control Delay			31.6				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			104.2				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			73.3%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 22: Laurel Road & Ohara Avenue

Existing PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 									 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3456		1770	1863	1583	1770	1863	1583	1770	1791	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.41	1.00	1.00	0.60	1.00	
Satd. Flow (perm)	1770	3456		1770	1863	1583	764	1863	1583	1112	1791	
Volume (vph)	122	501	94	91	370	35	63	197	55	30	257	89
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	133	545	102	99	402	38	68	214	60	33	279	97
RTOR Reduction (vph)	0	23	0	0	0	27	0	0	36	0	11	0
Lane Group Flow (vph)	133	624	0	99	402	11	68	214	24	33	365	0
Turn Type	Prot			Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2		2		6	
Actuated Green, G (s)	7.5	18.9		6.9	18.3	18.3	25.1	25.1	25.1	25.1	25.1	
Effective Green, g (s)	7.5	18.9		6.9	18.3	18.3	25.1	25.1	25.1	25.1	25.1	
Actuated g/C Ratio	0.12	0.30		0.11	0.29	0.29	0.40	0.40	0.40	0.40	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	211	1038		194	542	461	305	743	632	444	715	
v/s Ratio Prot	c0.08	0.19		0.06	c0.22			0.11			c0.21	
v/s Ratio Perm						0.02	0.09		0.04	0.03		
v/c Ratio	0.63	0.60		0.51	0.74	0.02	0.22	0.29	0.04	0.07	0.51	
Uniform Delay, d1	26.4	18.8		26.4	20.2	15.9	12.5	12.8	11.5	11.7	14.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	6.0	1.0		2.3	5.4	0.0	1.7	1.0	0.1	0.3	2.6	
Delay (s)	32.4	19.8		28.7	25.6	15.9	14.2	13.8	11.6	12.0	16.8	
Level of Service	C	B		C	C	B	B	B	B	B	B	
Approach Delay (s)		21.9			25.5			13.5			16.5	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM Average Control Delay			20.4			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			62.9			Sum of lost time (s)				12.0		
Intersection Capacity Utilization			62.0%			ICU Level of Service				B		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Unsignalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Existing PM Volumes
 2/4/2010


























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	78	511	1	0	333	11	1	0	0	7	0	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	85	555	1	0	362	12	1	0	0	8	0	65
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked												
vC, conflicting volume	374			557			1159	1099	556	1093	1094	368
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	374			557			1159	1099	556	1093	1094	368
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			99	100	100	96	100	90
cM capacity (veh/h)	1185			1014			148	197	531	181	199	677

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	641	374	1	73
Volume Left	85	0	1	8
Volume Right	1	12	0	65
cSH	1185	1014	148	527
Volume to Capacity	0.07	0.00	0.01	0.14
Queue Length (ft)	6	0	1	12
Control Delay (s)	1.9	0.0	29.6	12.9
Lane LOS	A		D	B
Approach Delay (s)	1.9	0.0	29.6	12.9
Approach LOS			D	B

Intersection Summary			
Average Delay		2.0	
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		






















HCM Signalized Intersection Capacity Analysis
 24: Laurel Road & Main Street

Existing PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1712		1770	3450		1770	3508	
Flt Permitted	0.48	1.00	1.00	0.71	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	899	1863	1583	1319	1712		1770	3450		1770	3508	
Volume (vph)	39	69	72	62	67	79	129	468	95	122	522	32
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	42	75	78	67	73	86	140	509	103	133	567	35
RTOR Reduction (vph)	0	0	68	0	53	0	0	8	0	0	2	0
Lane Group Flow (vph)	42	75	10	67	106	0	140	604	0	133	600	0
Turn Type	Perm		Perm	Perm			Prot			Prot		
Protected Phases	4				8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	9.9	9.9	9.9	9.9	9.9		9.6	46.7		9.6	46.7	
Effective Green, g (s)	9.9	9.9	9.9	9.9	9.9		9.6	46.7		9.6	46.7	
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13		0.12	0.60		0.12	0.60	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	114	236	200	167	217		217	2060		217	2095	
v/s Ratio Prot		0.04			c0.09		c0.08	c0.18		0.08	0.17	
v/s Ratio Perm	0.05		0.05	0.05								
v/c Ratio	0.37	0.32	0.05	0.40	0.49		0.65	0.29		0.61	0.29	
Uniform Delay, d1	31.3	31.1	30.0	31.4	31.8		32.7	7.7		32.5	7.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.0	0.8	0.1	1.6	1.7		6.4	0.4		5.1	0.3	
Delay (s)	33.3	31.9	30.1	33.0	33.5		39.1	8.1		37.6	8.0	
Level of Service	C	C	C	C	C		D	A		D	A	
Approach Delay (s)		31.5			33.4			13.8			13.4	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM Average Control Delay			17.8			HCM Level of Service		B				
HCM Volume to Capacity ratio			0.41									
Actuated Cycle Length (s)			78.2			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			47.8%			ICU Level of Service		A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 26: Malicoat Avenue & Main Street

Existing PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.85		1.00	0.86		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1583		1770	1611		1770	1858		1770	1863	1583
Flt Permitted	0.80	1.00		0.80	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	1583		1490	1611		1770	1858		1770	1863	1583
Volume (vph)	16	0	11	2	1	8	10	724	12	10	694	30
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	0	12	2	1	9	11	787	13	11	754	33
RTOR Reduction (vph)	0	11	0	0	9	0	0	0	0	0	0	5
Lane Group Flow (vph)	17	1	0	2	1	0	11	800	0	11	754	28
Turn Type	Perm			Perm			Prot			Prot		Perm
Protected Phases	4			8			5		2	1		6
Permitted Phases	4			8								6
Actuated Green, G (s)	5.0	5.0		5.0	5.0		1.7	92.0		1.6	91.9	91.9
Effective Green, g (s)	5.0	5.0		5.0	5.0		1.7	92.0		1.6	91.9	91.9
Actuated g/C Ratio	0.05	0.05		0.05	0.05		0.02	0.83		0.01	0.83	0.83
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	67	72		67	73		27	1546		26	1548	1315
v/s Ratio Prot		0.01			0.01		c0.01	c0.43		0.01	0.40	
v/s Ratio Perm	c0.01			0.00								0.02
v/c Ratio	0.25	0.01		0.03	0.02		0.41	0.52		0.42	0.49	0.02
Uniform Delay, d1	51.0	50.4		50.5	50.5		54.0	2.7		54.0	2.7	1.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.0	0.0		0.2	0.1		9.7	1.2		10.7	1.1	0.0
Delay (s)	53.0	50.5		50.7	50.6		63.7	4.0		64.8	3.8	1.6
Level of Service	D	D		D	D		E	A		E	A	A
Approach Delay (s)		52.0			50.6			4.8			4.5	
Approach LOS		D			D			A			A	

Intersection Summary

HCM Average Control Delay	5.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	110.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 27: Brownstone Road & Main Street

Existing PM Volumes
 2/4/2010



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	25	35	25	751	679	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	38	27	816	738	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1624	753	768			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1624	753	768			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	75	91	97			
cM capacity (veh/h)	109	410	846			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	65	843	768			
Volume Left	27	27	0			
Volume Right	38	0	30			
cSH	191	846	1700			
Volume to Capacity	0.34	0.03	0.45			
Queue Length (ft)	36	2	0			
Control Delay (s)	33.4	0.9	0.0			
Lane LOS	D	A				
Approach Delay (s)	33.4	0.9	0.0			
Approach LOS	D					
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization		69.9%		ICU Level of Service		C
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
28: Delta Road & Main Street

Existing PM Volumes
2/4/2010



















Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	↔
Sign Control	Stop		Free		Free	Free
Grade	0%		0%		0%	0%
Volume (veh/h)	47	91	694	82	89	529
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	51	99	754	89	97	575
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1567	799			843	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1567	799			843	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	52	74			88	
cM capacity (veh/h)	107	386			793	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	150	843	97	575
Volume Left	51	0	97	0
Volume Right	99	89	0	0
cSH	205	1700	793	1700
Volume to Capacity	0.73	0.50	0.12	0.34
Queue Length (ft)	121	0	10	0
Control Delay (s)	59.5	0.0	10.2	0.0
Lane LOS	F		B	
Approach Delay (s)	59.5	0.0	1.5	
Approach LOS	F			

Intersection Summary			
Average Delay		5.9	
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		























HCM Unsignalized Intersection Capacity Analysis
 29: Delta Road & Sellers Avenue

Existing PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	66	44	40	72	9	60	210	40	7	88	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	72	48	43	78	10	65	228	43	8	96	13
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	147	132	337	116								
Volume Left (vph)	27	43	65	8								
Volume Right (vph)	48	10	43	13								
Hadj (s)	-0.1	0.1	0.0	0.0								
Departure Headway (s)	5.0	5.3	4.7	5.0								
Degree Utilization, x	0.20	0.19	0.44	0.16								
Capacity (veh/h)	656	526	729	682								
Control Delay (s)	8.3	8.6	8.7	8.2								
Approach Delay (s)	8.3	8.6	8.7	8.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			8.5									
HCM Level of Service			A									
Intersection Capacity Utilization			41.4%	ICU Level of Service	A							
Analysis Period (min)			15									























HCM Signalized Intersection Capacity Analysis
30: Lone Tree Way & Main Street

Existing PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.96	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1788	1583		1804	1583	1770	1863	1583	1770	3441	
Flt Permitted		0.74	1.00		0.80	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1377	1583		1484	1583	1770	1863	1583	1770	3441	
Volume (vph)	111	22	253	19	10	9	210	452	16	9	451	102
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	24	275	21	11	10	228	491	17	10	490	111
RTOR Reduction (vph)	0	0	231	0	0	8	0	0	5	0	11	0
Lane Group Flow (vph)	0	145	44	0	32	2	228	491	12	10	590	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		14.1	14.1		14.1	14.1	16.0	61.9	61.9	0.7	46.6	
Effective Green, g (s)		14.1	14.1		14.1	14.1	16.0	61.9	61.9	0.7	46.6	
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.18	0.70	0.70	0.01	0.53	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		219	252		236	252	319	1300	1105	14	1808	
v/s Ratio Prot							c0.13	c0.26		0.01	0.17	
v/s Ratio Perm		0.11	0.17		0.02	0.01			0.01			
v/c Ratio		0.66	0.17		0.14	0.01	0.71	0.38	0.01	0.71	0.33	
Uniform Delay, d1		35.1	32.3		32.1	31.4	34.2	5.5	4.1	43.9	12.1	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		7.3	0.3		0.3	0.0	7.4	0.8	0.0	100.1	0.5	
Delay (s)		42.4	32.6		32.3	31.4	41.6	6.3	4.1	144.0	12.5	
Level of Service		D	C		C	C	D	A	A	F	B	
Approach Delay (s)		36.0			32.1			17.2			14.7	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			21.1				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			88.7				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			51.3%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												

























HCM Signalized Intersection Capacity Analysis
31: Main Street & Sellers Avenue

Existing PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.97	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1848	1583		1805	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.94	1.00		0.72	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583		1742	1583		1330	
Volume (vph)	8	668	28	15	556	131	36	188	18	93	62	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	726	30	16	604	142	39	204	20	101	67	3
RTOR Reduction (vph)	0	0	16	0	0	81	0	0	11	0	1	0
Lane Group Flow (vph)	9	726	14	16	604	61	0	243	9	0	170	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2		2	6		
Actuated Green, G (s)	0.6	42.5	42.5	1.3	43.2	43.2		44.3	44.3		44.3	
Effective Green, g (s)	0.6	42.5	42.5	1.3	43.2	43.2		44.3	44.3		44.3	
Actuated g/C Ratio	0.01	0.42	0.42	0.01	0.43	0.43		0.44	0.44		0.44	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	11	791	672	23	804	683		771	701		589	
v/s Ratio Prot	0.01	c0.39		c0.01	0.32							
v/s Ratio Perm			0.02			0.09		c0.14	0.01		0.13	
v/c Ratio	0.82	0.92	0.02	0.70	0.75	0.09		0.32	0.01		0.29	
Uniform Delay, d1	49.7	27.2	16.7	49.2	23.9	16.8		18.1	15.6		17.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	167.9	15.4	0.0	63.9	4.0	0.1		1.1	0.0		1.2	
Delay (s)	217.6	42.5	16.7	113.1	27.9	16.9		19.1	15.7		19.1	
Level of Service	F	D	B	F	C	B		B	B		B	
Approach Delay (s)		43.6			27.6			18.9			19.1	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			31.9			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			100.1	Sum of lost time (s)			12.0					
Intersection Capacity Utilization			65.6%	ICU Level of Service			C					
Analysis Period (min)			15									
c Critical Lane Group												

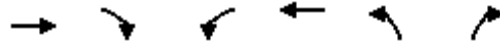
HCM Signalized Intersection Capacity Analysis
 1: Main Street & SR160 SB Ramps

Background AM Volumes
 2/4/2010

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 		 	 								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00	1.00	1.00		1.00	1.00		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	0.89		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	3510		3433	3539	1583	1770	1592		1770	1666		
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	1770	3510		3433	3539	1583	1770	1592		1770	1666		
Volume (vph)	4	191	11	386	420	33	22	3	83	11	5	11	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	4	208	12	420	457	36	24	3	90	12	5	12	
RTOR Reduction (vph)	0	5	0	0	0	22	0	54	0	0	8	0	
Lane Group Flow (vph)	4	215	0	420	457	14	24	39	0	12	9	0	
Turn Type	Prot			Prot		Perm	Prot			Prot			
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases						8							
Actuated Green, G (s)	1.3	10.5		26.4	35.6	35.6	4.0	35.6		1.5	33.1		
Effective Green, g (s)	1.3	10.5		26.4	35.6	35.6	4.0	35.6		1.5	33.1		
Actuated g/C Ratio	0.01	0.12		0.29	0.40	0.40	0.04	0.40		0.02	0.37		
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	26	410		1007	1400	626	79	630		30	613		
v/s Ratio Prot	0.00	c0.06		c0.12	0.13		c0.01	c0.06		0.01	0.01		
v/s Ratio Perm						0.02							
v/c Ratio	0.15	0.52		0.42	0.33	0.02	0.30	0.06		0.40	0.02		
Uniform Delay, d1	43.8	37.4		25.6	18.9	16.6	41.7	16.8		43.8	18.1		
Progression Factor	1.00	1.00		0.55	0.65	0.44	1.00	1.00		1.00	1.00		
Incremental Delay, d2	2.7	1.2		0.3	0.1	0.0	2.2	0.2		8.5	0.0		
Delay (s)	46.6	38.6		14.2	12.4	7.3	43.8	17.0		52.3	18.1		
Level of Service	D	D		B	B	A	D	B		D	B		
Approach Delay (s)		38.7			13.0			22.5			32.3		
Approach LOS		D			B			C			C		
Intersection Summary													
HCM Average Control Delay			18.8									HCM Level of Service	B
HCM Volume to Capacity ratio			0.29										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	12.0
Intersection Capacity Utilization			34.5%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
2: Main Street & SR160 NB Ramps

Background AM Volumes
2/4/2010





























Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↗↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	0.88
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3524		1770	3539	1770	2787
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3524		1770	3539	1770	2787
Volume (vph)	256	7	67	784	42	366
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	278	8	73	852	46	398
RTOR Reduction (vph)	2	0	0	0	0	176
Lane Group Flow (vph)	284	0	73	852	46	222
Turn Type			Prot		custom	
Protected Phases	4		3	8		
Permitted Phases					2	2
Actuated Green, G (s)	17.6		10.1	31.7	50.3	50.3
Effective Green, g (s)	17.6		10.1	31.7	50.3	50.3
Actuated g/C Ratio	0.20		0.11	0.35	0.56	0.56
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	689		199	1247	989	1558
v/s Ratio Prot	0.08		0.04	0.24		
v/s Ratio Perm					0.03	0.14
v/c Ratio	0.41		0.37	0.68	0.05	0.14
Uniform Delay, d1	31.7		37.0	24.9	9.0	9.5
Progression Factor	0.37		0.60	0.44	1.00	1.00
Incremental Delay, d2	0.4		1.0	1.4	0.1	0.2
Delay (s)	12.0		23.1	12.3	9.1	9.7
Level of Service	B		C	B	A	A
Approach Delay (s)	12.0			13.1	9.6	
Approach LOS	B			B	A	

Intersection Summary

HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			




















HCM Signalized Intersection Capacity Analysis
3: Main Street & Empire Avenue

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 				 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3529		3433	1863	1583		1819	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.88	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3529		3433	1863	1583		1631	1583
Volume (vph)	10	436	174	178	722	15	230	30	30	30	33	14
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	474	189	193	785	16	250	33	33	33	36	15
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	20	0	0	12
Lane Group Flow (vph)	11	474	189	193	799	0	250	33	13	0	69	3
Turn Type	Prot		Free	Prot			Prot		Perm	Perm		Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			Free						2	6		6
Actuated Green, G (s)	1.4	17.0	90.0	25.9	41.5		11.5	35.1	35.1		19.6	19.6
Effective Green, g (s)	1.4	17.0	90.0	25.9	41.5		11.5	35.1	35.1		19.6	19.6
Actuated g/C Ratio	0.02	0.19	1.00	0.29	0.46		0.13	0.39	0.39		0.22	0.22
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	28	668	1583	509	1627		439	727	617		355	345
v/s Ratio Prot	0.01	c0.13		0.11	c0.23		c0.07	0.02				
v/s Ratio Perm			0.12						0.02		c0.04	0.01
v/c Ratio	0.39	0.71	0.12	0.38	0.49		0.57	0.05	0.02		0.19	0.01
Uniform Delay, d1	43.9	34.2	0.0	25.6	16.9		36.9	17.0	16.9		28.8	27.6
Progression Factor	0.82	0.91	1.00	0.34	0.20		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.7	3.4	0.2	0.4	0.2		1.7	0.1	0.1		1.2	0.0
Delay (s)	44.5	34.5	0.2	9.0	3.5		38.6	17.2	16.9		30.0	27.6
Level of Service	D	C	A	A	A		D	B	B		C	C
Approach Delay (s)		25.1			4.6			34.1			29.6	
Approach LOS		C			A			C			C	
Intersection Summary												
HCM Average Control Delay			16.8			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			47.0%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												





















HCM Signalized Intersection Capacity Analysis
4: Main Street & Vintage Parkway

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.95	1.00
Satd. Flow (prot)	1770	3516		1770	3465			1760			1776	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.80			0.71	1.00
Satd. Flow (perm)	1770	3516		1770	3465			1464			1330	1583
Volume (vph)	149	664	30	17	801	131	16	2	3	233	5	185
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	162	722	33	18	871	142	17	2	3	253	5	201
RTOR Reduction (vph)	0	3	0	0	16	0	0	2	0	0	0	130
Lane Group Flow (vph)	162	752	0	18	997	0	0	20	0	0	258	71
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	15.6	44.8		1.6	30.8			31.6			31.6	31.6
Effective Green, g (s)	15.6	44.8		1.6	30.8			31.6			31.6	31.6
Actuated g/C Ratio	0.17	0.50		0.02	0.34			0.35			0.35	0.35
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	307	1750		31	1186			514			467	556
v/s Ratio Prot	c0.09	0.21		0.01	c0.29							
v/s Ratio Perm								0.02			c0.19	0.13
v/c Ratio	0.53	0.43		0.58	0.84			0.04			0.55	0.13
Uniform Delay, d1	33.8	14.4		43.9	27.3			19.2			23.5	19.8
Progression Factor	0.62	0.69		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.6	0.2		24.7	5.5			0.1			4.7	0.5
Delay (s)	22.6	10.2		68.6	32.9			19.4			28.2	20.3
Level of Service	C	B		E	C			B			C	C
Approach Delay (s)		12.4			33.5			19.4			24.7	
Approach LOS		B			C			B			C	
Intersection Summary												
HCM Average Control Delay			23.7	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			60.4%	ICU Level of Service				B				
Analysis Period (min)			15									
c Critical Lane Group												






















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1678	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.93	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1593	
Volume (vph)	1	722	47	17	874	1	53	1	21	2	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	785	51	18	950	1	58	1	23	2	0	3
RTOR Reduction (vph)	0	0	24	0	0	0	0	15	0	0	3	0
Lane Group Flow (vph)	1	785	27	18	951	0	58	9	0	0	2	0
Turn Type	Prot		Perm	Prot			Prot				Perm	
Protected Phases	7	4		3	8		5	2				6
Permitted Phases			4								6	
Actuated Green, G (s)	0.8	62.4	62.4	3.9	65.5		26.2	41.7			11.5	
Effective Green, g (s)	0.8	62.4	62.4	3.9	65.5		26.2	41.7			11.5	
Actuated g/C Ratio	0.01	0.52	0.52	0.03	0.55		0.22	0.35			0.10	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	12	969	823	58	1016		386	554			153	
v/s Ratio Prot	0.00	c0.42		0.01	c0.51		c0.03	c0.02				
v/s Ratio Perm			0.03								0.00	
v/c Ratio	0.08	0.81	0.03	0.31	0.94		0.15	0.02			0.01	
Uniform Delay, d1	59.2	23.9	14.1	56.7	25.3		37.9	25.7			49.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	3.0	5.2	0.0	3.0	15.1		0.8	0.1			0.0	
Delay (s)	62.2	29.1	14.1	59.8	40.4		38.7	25.7			49.2	
Level of Service	E	C	B	E	D		D	C			D	
Approach Delay (s)		28.2			40.8			34.9			49.2	
Approach LOS		C			D			C			D	
Intersection Summary												
HCM Average Control Delay			35.0			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			59.0%			ICU Level of Service					B	
Analysis Period (min)			15									
c Critical Lane Group												



















HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Free		Free		Stop		Stop					
Grade	0%		0%		0%		0%					
Volume (veh/h)	2	737	82	7	976	1	33	0	11	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	801	89	8	1061	1	36	0	12	1	1	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	1040											
pX, platoon unblocked												
vC, conflicting volume	1062			890			1929	1927	846	1893	1971	1061
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1062			890			1929	1927	846	1893	1971	1061
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			26	100	97	98	98	99
cM capacity (veh/h)	656			761			49	66	362	51	62	272
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	2	890	8	1061	1	36	12	2	2			
Volume Left	2	0	8	0	0	36	0	1	0			
Volume Right	0	89	0	0	1	0	12	0	2			
cSH	656	1700	761	1700	1700	49	362	56	272			
Volume to Capacity	0.00	0.52	0.01	0.62	0.00	0.74	0.03	0.04	0.01			
Queue Length (ft)	0	0	1	0	0	74	3	3	1			
Control Delay (s)	10.5	0.0	9.8	0.0	0.0	187.9	15.3	72.2	18.3			
Lane LOS	B		A			F	C	F	C			
Approach Delay (s)	0.0	0.1				144.8	45.3					
Approach LOS							F	E				
Intersection Summary												
Average Delay			3.6									
Intersection Capacity Utilization			68.0%		ICU Level of Service				C			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
7: West Cypress Road & Ohara Avenue

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	44	141	84	79	207	97	79	200	78	76	151	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	153	91	86	225	105	86	217	85	83	164	47
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total (vph)	292	416	303	85	247	47						
Volume Left (vph)	48	86	86	0	83	0						
Volume Right (vph)	91	105	0	85	0	47						
Hadj (s)	-0.1	-0.1	0.2	-0.7	0.2	-0.7						
Departure Headway (s)	7.1	7.2	7.7	6.9	7.9	7.0						
Degree Utilization, x	0.58	0.83	0.65	0.16	0.54	0.09						
Capacity (veh/h)	469	478	446	495	439	486						
Control Delay (s)	12.4	16.8	12.8	9.0	11.9	9.0						
Approach Delay (s)	12.4	16.8	11.9		11.5							
Approach LOS	B	C	B		B							
Intersection Summary												
Delay			13.4									
HCM Level of Service			B									
Intersection Capacity Utilization			67.8%	ICU Level of Service	C							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 8: West Cypress Road & Rose Avenue

Background AM Volumes
 2/4/2010


























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	242	17	79	185	39	26	38	33	23	18	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	263	18	86	201	42	28	41	36	25	20	16

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	304	329	105	61
Volume Left (vph)	23	86	28	25
Volume Right (vph)	18	42	36	16
Hadj (s)	0.0	0.0	-0.1	0.0
Departure Headway (s)	4.8	5.5	5.4	5.6
Degree Utilization, x	0.41	0.50	0.16	0.09
Capacity (veh/h)	715	555	600	599
Control Delay (s)	8.6	9.9	8.7	8.7
Approach Delay (s)	8.6	9.9	8.7	8.7
Approach LOS	A	A	A	A

Intersection Summary			
Delay		9.1	
HCM Level of Service		A	
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
9: West Cypress Road & Main Street

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.96		1.00	0.96	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3412		1770	1694	1504	1770	3539	1583	3433	3516	
Flt Permitted	0.31	1.00		0.41	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	587	3412		755	1694	1504	1770	3539	1583	3433	3516	
Volume (vph)	68	235	74	499	288	570	77	285	395	313	241	11
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	255	80	542	313	620	84	310	429	340	262	12
RTOR Reduction (vph)	0	35	0	0	18	273	0	0	57	0	4	0
Lane Group Flow (vph)	74	300	0	542	420	222	84	310	372	340	270	0
Turn Type	pm+pt			pm+pt		Perm	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	17.8	12.7		44.7	35.6	35.6	7.4	20.4	48.4	12.9	25.9	
Effective Green, g (s)	17.8	12.7		44.7	35.6	35.6	7.4	20.4	48.4	12.9	25.9	
Actuated g/C Ratio	0.20	0.14		0.50	0.40	0.40	0.08	0.23	0.54	0.14	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	183	481		691	670	595	146	802	851	492	1012	
v/s Ratio Prot	0.02	0.10		c0.24	0.26		0.05	0.09	c0.16	c0.10	0.08	
v/s Ratio Perm	0.06			0.15		0.33			0.11			
v/c Ratio	0.40	0.62		0.78	0.63	0.37	0.58	0.39	0.44	0.69	0.27	
Uniform Delay, d1	40.0	36.4		20.9	21.9	19.3	39.8	29.5	12.6	36.7	24.7	
Progression Factor	1.00	1.00		0.42	0.33	0.19	1.35	0.81	0.81	1.00	1.00	
Incremental Delay, d2	1.5	2.5		4.5	1.4	0.3	5.2	1.3	0.3	4.2	0.6	
Delay (s)	41.5	38.9		13.2	8.7	4.0	59.0	25.2	10.6	40.8	25.4	
Level of Service	D	D		B	A	A	E	C	B	D	C	
Approach Delay (s)		39.4			8.8			21.0			33.9	
Approach LOS		D			A			C			C	
Intersection Summary												
HCM Average Control Delay			20.2				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			66.6%				ICU Level of Service				C	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 10: East Cypress Road & Picasso Drive





















Background AM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷↷	↶↷		↶↷	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.87	
Flt Protected	0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	3529		1622	
Flt Permitted	0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	3529		1622	
Volume (vph)	205	756	1191	23	15	228
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	822	1295	25	16	248
RTOR Reduction (vph)	0	0	1	0	220	0
Lane Group Flow (vph)	223	822	1319	0	44	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	16.9	71.9	51.0		10.1	
Effective Green, g (s)	16.9	71.9	51.0		10.1	
Actuated g/C Ratio	0.19	0.80	0.57		0.11	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	332	2827	2000		182	
v/s Ratio Prot	c0.13	0.23	c0.37		c0.16	
v/s Ratio Perm						
v/c Ratio	0.67	0.29	0.66		0.24	
Uniform Delay, d1	34.0	2.4	13.5		36.5	
Progression Factor	0.95	0.66	0.28		1.00	
Incremental Delay, d2	4.6	0.0	0.6		3.1	
Delay (s)	36.9	1.6	4.4		39.6	
Level of Service	D	A	A		D	
Approach Delay (s)		9.1	4.4		39.6	
Approach LOS		A	A		D	
Intersection Summary						
HCM Average Control Delay			9.8		HCM Level of Service	A
HCM Volume to Capacity ratio			0.76			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			69.9%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						
























HCM Signalized Intersection Capacity Analysis
 11: East Cypress Road & Frank Hengel Way

Background AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.96	1.00
Satd. Flow (prot)	1770	3497		1770	3539	1583		1781			1787	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.71			0.69	1.00
Satd. Flow (perm)	1770	3497		1770	3539	1583		1302			1282	1583
Volume (vph)	402	527	45	6	862	110	75	29	11	109	19	423
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	437	573	49	7	937	120	82	32	12	118	21	460
RTOR Reduction (vph)	0	7	0	0	0	83	0	4	0	0	0	359
Lane Group Flow (vph)	437	615	0	7	937	37	0	122	0	0	139	101
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	30.3	57.5		0.8	28.0	28.0		19.7			19.7	19.7
Effective Green, g (s)	30.3	57.5		0.8	28.0	28.0		19.7			19.7	19.7
Actuated g/C Ratio	0.34	0.64		0.01	0.31	0.31		0.22			0.22	0.22
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	596	2234		16	1101	492		285			281	347
v/s Ratio Prot	c0.25	0.18		0.00	c0.26							
v/s Ratio Perm						0.08		0.10			0.11	0.29
v/c Ratio	0.73	0.28		0.44	0.85	0.08		0.43			0.49	0.29
Uniform Delay, d1	26.3	7.1		44.4	29.0	21.9		30.3			30.8	29.3
Progression Factor	1.06	0.88		0.89	1.21	2.96		1.00			1.00	1.00
Incremental Delay, d2	4.6	0.1		17.9	6.4	0.1		4.6			6.1	2.1
Delay (s)	32.3	6.3		57.4	41.7	64.7		34.9			36.9	31.4
Level of Service	C	A		E	D	E		C			D	C
Approach Delay (s)		17.1			44.4			34.9			32.7	
Approach LOS		B			D			C			C	
Intersection Summary												
HCM Average Control Delay			31.3				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			69.1%				ICU Level of Service			C		
Analysis Period (min)			15									
c	Critical Lane Group											





















HCM Signalized Intersection Capacity Analysis
 12: East Cypress Road & Machado Lane

Background AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3539			3539							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3539			3539							
Volume (vph)	0	151	0	0	442	0	0	0	0	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	164	0	0	480	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	164	0	0	480	0	0	0	0	0	0	0
Turn Type	Prot			Perm		Perm	Perm				Perm	
Protected Phases	7	4			8			2				6
Permitted Phases				8		8	2			6		
Actuated Green, G (s)		31.0			31.0							
Effective Green, g (s)		31.0			31.0							
Actuated g/C Ratio		0.34			0.34							
Clearance Time (s)		4.0			4.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		1219			1219							
v/s Ratio Prot		0.05			0.14							
v/s Ratio Perm												
v/c Ratio		0.13			0.39							
Uniform Delay, d1		20.3			22.4							
Progression Factor		0.73			0.03							
Incremental Delay, d2		0.0			0.2							
Delay (s)		14.9			1.0							
Level of Service		B			A							
Approach Delay (s)		14.9			1.0			0.0			0.0	
Approach LOS		B			A			A			A	
Intersection Summary												
HCM Average Control Delay			4.5			HCM Level of Service				A		
HCM Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			59.0			
Intersection Capacity Utilization			15.6%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												























HCM Signalized Intersection Capacity Analysis
 13: East Cypress Road & Project Driveway

Background AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3539			3539							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3539			3539							
Volume (vph)	0	151	0	0	442	0	0	0	0	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	164	0	0	480	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	164	0	0	480	0	0	0	0	0	0	0
Turn Type	Prot				Perm				custom		custom	
Protected Phases	7	4			8							
Permitted Phases						8				6		6
Actuated Green, G (s)		25.4			25.4							
Effective Green, g (s)		25.4			25.4							
Actuated g/C Ratio		0.28			0.28							
Clearance Time (s)		4.0			4.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		999			999							
v/s Ratio Prot		0.05			0.14							
v/s Ratio Perm												
v/c Ratio		0.16			0.48							
Uniform Delay, d1		24.3			26.8							
Progression Factor		1.05			0.81							
Incremental Delay, d2		0.1			0.3							
Delay (s)		25.7			22.1							
Level of Service		C			C							
Approach Delay (s)		25.7			22.1			0.0			0.0	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM Average Control Delay			23.0			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			64.6			
Intersection Capacity Utilization			15.6%			ICU Level of Service			A			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis
 14: East Cypress Road & Sellers Avenue

Background AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.97		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3419		1770	3538		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.74	1.00	1.00	0.75	1.00	1.00
Satd. Flow (perm)	1770	3419		1770	3538		1383	1863	1583	1402	1863	1583
Volume (vph)	30	331	97	109	676	2	69	7	96	7	21	83
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	360	105	118	735	2	75	8	104	8	23	90
RTOR Reduction (vph)	0	35	0	0	0	0	0	0	55	0	0	48
Lane Group Flow (vph)	33	430	0	118	737	0	75	8	49	8	23	42
Turn Type	Prot		Prot		Perm		Perm	Perm	Perm	Perm		Perm
Protected Phases	7	4		3	8			2				6
Permitted Phases							2		2	6		6
Actuated Green, G (s)	3.3	26.2		9.6	32.5		42.2	42.2	42.2	42.2	42.2	42.2
Effective Green, g (s)	3.3	26.2		9.6	32.5		42.2	42.2	42.2	42.2	42.2	42.2
Actuated g/C Ratio	0.04	0.29		0.11	0.36		0.47	0.47	0.47	0.47	0.47	0.47
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	65	995		189	1278		648	874	742	657	874	742
v/s Ratio Prot	0.02	0.14		c0.07	c0.21			0.00			0.01	
v/s Ratio Perm							0.05		0.07	0.01		0.06
v/c Ratio	0.51	0.43		0.62	0.58		0.12	0.01	0.07	0.01	0.03	0.06
Uniform Delay, d1	42.6	25.9		38.5	23.2		13.4	12.7	13.1	12.8	12.9	13.0
Progression Factor	1.28	0.83		1.15	1.06		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.1	0.3		6.3	0.6		0.4	0.0	0.2	0.0	0.1	0.1
Delay (s)	60.5	21.7		50.5	25.3		13.8	12.8	13.3	12.8	12.9	13.2
Level of Service	E	C		D	C		B	B	B	B	B	B
Approach Delay (s)		24.3			28.7			13.5			13.1	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM Average Control Delay			24.5	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.35									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				8.0				
Intersection Capacity Utilization			42.6%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 15: East Cypress Road &

Background AM Volumes
 2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.95	1.00
Satd. Flow (prot)	1770	3514		1770	3533			1759			1770	1583
Flt Permitted	0.49	1.00		0.69	1.00			0.84			0.73	1.00
Satd. Flow (perm)	904	3514		1277	3533			1541			1360	1583
Volume (vph)	54	92	5	4	250	3	34	0	4	10	0	158
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	100	5	4	272	3	37	0	4	11	0	172
RTOR Reduction (vph)	0	4	0	0	2	0	0	1	0	0	0	44
Lane Group Flow (vph)	59	101	0	4	273	0	0	40	0	0	11	128
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	15.2	15.2		15.2	15.2			66.8			66.8	66.8
Effective Green, g (s)	15.2	15.2		15.2	15.2			66.8			66.8	66.8
Actuated g/C Ratio	0.17	0.17		0.17	0.17			0.74			0.74	0.74
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	153	593		216	597			1144			1009	1175
v/s Ratio Prot		0.03			c0.08							
v/s Ratio Perm	0.07			0.00				0.03			0.01	0.11
v/c Ratio	0.39	0.17		0.02	0.46			0.03			0.01	0.11
Uniform Delay, d1	33.2	32.0		31.2	33.7			3.1			3.0	3.3
Progression Factor	1.53	1.53		0.61	0.67			1.00			1.00	1.00
Incremental Delay, d2	1.6	0.1		0.0	0.5			0.1			0.0	0.2
Delay (s)	52.3	49.0		19.2	23.2			3.1			3.0	3.4
Level of Service	D	D		B	C			A			A	A
Approach Delay (s)		50.2			23.1			3.1			3.4	
Approach LOS		D			C			A			A	

Intersection Summary

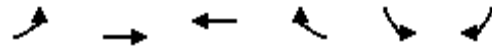
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 16: East Cypress Road & Knightsen Avenue

	→	↘	↙	←	↖	↗			
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑			
Sign Control	Free			Free	Stop				
Grade	0%			0%	0%				
Volume (veh/h)	255	54	94	548	66	48			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Hourly flow rate (vph)	277	59	102	596	72	52			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type								None	
Median storage (veh)									
Upstream signal (ft)	1050								
pX, platoon unblocked									
vC, conflicting volume			336			779	139		
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol			336			779	139		
tC, single (s)			4.1			6.8	6.9		
tC, 2 stage (s)									
tF (s)			2.2			3.5	3.3		
p0 queue free %			92			76	94		
cM capacity (veh/h)			1220			305	884		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	
Volume Total	139	139	59	102	298	298	72	52	
Volume Left	0	0	0	102	0	0	72	0	
Volume Right	0	0	59	0	0	0	0	52	
cSH	1700	1700	1700	1220	1700	1700	305	884	
Volume to Capacity	0.08	0.08	0.03	0.08	0.18	0.18	0.24	0.06	
Queue Length (ft)	0	0	0	7	0	0	22	5	
Control Delay (s)	0.0	0.0	0.0	8.2	0.0	0.0	20.4	9.3	
Lane LOS				A				C	A
Approach Delay (s)	0.0			1.2			15.8		
Approach LOS							C		
Intersection Summary									
Average Delay			2.4						
Intersection Capacity Utilization			25.9%	ICU Level of Service		A			
Analysis Period (min)			15						

HCM Unsignalized Intersection Capacity Analysis
 17: East Cypress Road & Jersey Island Road

Background AM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↷		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	31	319	607	1	1	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	34	347	660	1	1	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	661				901	330
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	661				901	330
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	95
cM capacity (veh/h)	923				268	665

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	34	173	173	440	221	1	36
Volume Left	34	0	0	0	0	1	0
Volume Right	0	0	0	0	1	0	36
cSH	923	1700	1700	1700	1700	268	665
Volume to Capacity	0.04	0.10	0.10	0.26	0.13	0.00	0.05
Queue Length (ft)	3	0	0	0	0	0	4
Control Delay (s)	9.0	0.0	0.0	0.0	0.0	18.5	10.7
Lane LOS	A					C	B
Approach Delay (s)	0.8			0.0		10.9	
Approach LOS						B	

Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization	33.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
 18: East Cypress Road & Bethel Island Road

Background AM Volumes
 2/4/2010


















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑	↑	↙	↘↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	2787
Volume (vph)	206	161	389	16	8	368
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	224	175	423	17	9	400
RTOR Reduction (vph)	0	0	0	14	0	190
Lane Group Flow (vph)	224	175	423	3	9	210
Turn Type	Prot		Perm		Perm	
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	15.3	34.8	15.5	15.5	47.2	47.2
Effective Green, g (s)	15.3	34.8	15.5	15.5	47.2	47.2
Actuated g/C Ratio	0.17	0.39	0.17	0.17	0.52	0.52
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	301	1368	609	273	928	1462
v/s Ratio Prot	c0.13	0.05	c0.12		0.01	
v/s Ratio Perm				0.01		0.14
v/c Ratio	0.74	0.13	0.69	0.01	0.01	0.14
Uniform Delay, d1	35.5	17.8	35.0	30.9	10.2	11.0
Progression Factor	0.91	0.82	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.6	0.0	3.4	0.0	0.0	0.2
Delay (s)	41.9	14.6	38.5	30.9	10.2	11.2
Level of Service	D	B	D	C	B	B
Approach Delay (s)		29.9	38.2		11.2	
Approach LOS		C	D		B	

Intersection Summary

HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	35.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			





















HCM Signalized Intersection Capacity Analysis
 19: Laurel Road & SR4 SB Ramps

Background AM Volumes
 2/4/2010

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)						4.0				4.0	4.0		
Lane Util. Factor						1.00				0.95	0.95		
Frt						0.86				1.00	1.00		
Flt Protected						1.00				0.95	0.95		
Satd. Flow (prot)						1611				1681	1681		
Flt Permitted						1.00				0.95	0.95		
Satd. Flow (perm)						1611				1681	1681		
Volume (vph)	0	0	0	0	0	439	0	0	0	372	0	0	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	0	0	0	0	477	0	0	0	404	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	0	0	0	0	477	0	0	0	202	202	0	
Turn Type						Free				Prot			
Protected Phases										1	6		
Permitted Phases						Free							
Actuated Green, G (s)						90.0				90.0	90.0		
Effective Green, g (s)						90.0				90.0	90.0		
Actuated g/C Ratio						1.00				1.00	1.00		
Clearance Time (s)										4.0	4.0		
Vehicle Extension (s)										3.0	3.0		
Lane Grp Cap (vph)						1611				1681	1681		
v/s Ratio Prot										0.12	0.12		
v/s Ratio Perm						0.30							
v/c Ratio						0.30				0.12	0.12		
Uniform Delay, d1						0.0				0.0	0.0		
Progression Factor						1.00				1.00	1.00		
Incremental Delay, d2						0.4				0.0	0.0		
Delay (s)						0.4				0.0	0.0		
Level of Service						A				A	A		
Approach Delay (s)		0.0			0.4			0.0			0.0		
Approach LOS		A			A			A			A		
Intersection Summary													
HCM Average Control Delay			0.3									HCM Level of Service	A
HCM Volume to Capacity ratio			0.30										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	0.0
Intersection Capacity Utilization			13.6%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													



























HCM Signalized Intersection Capacity Analysis
20: Laurel Road & SR4 NB Ramps

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0			4.0			
Lane Util. Factor		0.95			0.95	1.00			1.00			
Frt		1.00			1.00	0.85			0.85			
Flt Protected		1.00			1.00	1.00			1.00			
Satd. Flow (prot)		3539			3539	1583			1583			
Flt Permitted		1.00			1.00	1.00			1.00			
Satd. Flow (perm)		3539			3539	1583			1583			
Volume (vph)	0	372	0	0	439	780	0	0	237	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	404	0	0	477	848	0	0	258	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	91	0	0	0
Lane Group Flow (vph)	0	404	0	0	477	848	0	0	167	0	0	0
Turn Type	Prot						Free	Perm	Perm			
Protected Phases	7	4					8		2			
Permitted Phases							Free	2	2			
Actuated Green, G (s)	23.9						23.9	90.0	58.1			
Effective Green, g (s)	23.9						23.9	90.0	58.1			
Actuated g/C Ratio	0.27						0.27	1.00	0.65			
Clearance Time (s)	4.0						4.0		4.0			
Vehicle Extension (s)	3.0						3.0		3.0			
Lane Grp Cap (vph)	940						940	1583	1022			
v/s Ratio Prot	0.11						0.13					
v/s Ratio Perm								0.54	0.16			
v/c Ratio	0.43						0.51	0.54	0.16			
Uniform Delay, d1	27.4						28.1	0.0	6.3			
Progression Factor	1.00						0.67	1.00	1.00			
Incremental Delay, d2	0.3						0.4	1.2	0.3			
Delay (s)	27.7						19.1	1.2	6.7			
Level of Service	C						B	A	A			
Approach Delay (s)	27.7						7.6		6.7	0.0		
Approach LOS	C						A		A	A		
Intersection Summary												
HCM Average Control Delay	11.6		HCM Level of Service				B					
HCM Volume to Capacity ratio	0.54											
Actuated Cycle Length (s)	90.0		Sum of lost time (s)				0.0					
Intersection Capacity Utilization	31.6%		ICU Level of Service				A					
Analysis Period (min)	15											
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3475		1770	3304	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.51	1.00		0.51	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	942	3475		945	3304	
Volume (vph)	205	371	187	88	702	91	167	286	40	47	182	145
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	403	203	96	763	99	182	311	43	51	198	158
RTOR Reduction (vph)	0	0	127	0	0	72	0	11	0	0	94	0
Lane Group Flow (vph)	223	403	76	96	763	27	182	343	0	51	262	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	17.0	33.7	33.7	8.0	24.7	24.7	36.3	36.3		36.3	36.3	
Effective Green, g (s)	17.0	33.7	33.7	8.0	24.7	24.7	36.3	36.3		36.3	36.3	
Actuated g/C Ratio	0.19	0.37	0.37	0.09	0.27	0.27	0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	334	1325	593	157	971	434	380	1402		381	1333	
v/s Ratio Prot	c0.13	0.11		0.05	c0.22			0.10			0.11	
v/s Ratio Perm			0.13			0.06	c0.19			0.05		
v/c Ratio	0.67	0.30	0.13	0.61	0.79	0.06	0.48	0.24		0.13	0.20	
Uniform Delay, d1	33.9	19.9	18.5	39.5	30.2	24.1	19.9	17.8		16.9	17.4	
Progression Factor	0.80	0.91	0.53	0.95	0.46	0.32	1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.0	0.1	0.1	6.2	3.8	0.1	4.3	0.4		0.7	0.3	
Delay (s)	32.0	18.1	9.8	43.8	17.6	7.7	24.1	18.2		17.7	17.7	
Level of Service	C	B	A	D	B	A	C	B		B	B	
Approach Delay (s)		19.8			19.2			20.2			17.7	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay			19.4			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			63.0%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
22: Laurel Road & Ohara Avenue

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3459		1770	3365	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.37	1.00		0.55	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	694	3459		1020	3365	
Volume (vph)	72	377	63	91	612	72	94	258	46	27	383	187
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	78	410	68	99	665	78	102	280	50	29	416	203
RTOR Reduction (vph)	0	0	52	0	0	59	0	12	0	0	50	0
Lane Group Flow (vph)	78	410	16	99	665	19	102	318	0	29	569	0
Turn Type	Prot		Perm	Prot		Perm	Perm				Perm	
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2				6	
Actuated Green, G (s)	8.1	20.7	20.7	8.8	21.4	21.4	48.5	48.5		48.5	48.5	
Effective Green, g (s)	8.1	20.7	20.7	8.8	21.4	21.4	48.5	48.5		48.5	48.5	
Actuated g/C Ratio	0.09	0.23	0.23	0.10	0.24	0.24	0.54	0.54		0.54	0.54	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	159	814	364	173	841	376	374	1864		550	1813	
v/s Ratio Prot	0.04	c0.12		0.06	c0.19			0.10			c0.18	
v/s Ratio Perm			0.04			0.05	0.15			0.03		
v/c Ratio	0.49	0.50	0.04	0.57	0.79	0.05	0.27	0.17		0.05	0.31	
Uniform Delay, d1	39.0	30.2	26.9	38.8	32.2	26.5	11.2	10.5		9.8	11.5	
Progression Factor	0.69	0.61	0.78	0.96	0.94	0.90	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	0.5	0.0	4.4	5.0	0.1	1.8	0.2		0.2	0.5	
Delay (s)	29.0	18.8	20.9	41.6	35.4	23.9	13.0	10.7		10.0	12.0	
Level of Service	C	B	C	D	D	C	B	B		B	B	
Approach Delay (s)		20.5			35.1			11.3			11.9	
Approach LOS		C			D			B			B	
Intersection Summary												
HCM Average Control Delay			21.6	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				8.0				
Intersection Capacity Utilization			56.0%	ICU Level of Service				B				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
23: Laurel Road & Rose Avenue

Background AM Volumes
2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	130	411	0	2	626	26	0	1	2	13	1	206
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	141	447	0	2	680	28	0	1	2	14	1	224
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked	0.98			0.82			0.83	0.83	0.82	0.83	0.83	0.98
vC, conflicting volume	709			447			1653	1442	447	1431	1428	695
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	703			324			1751	1497	324	1483	1480	688
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	84			100			100	99	100	81	99	49
cM capacity (veh/h)	877			1012			23	85	587	74	87	437

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	588	711	3	239
Volume Left	141	2	0	14
Volume Right	0	28	2	224
cSH	877	1012	198	334
Volume to Capacity	0.16	0.00	0.02	0.72
Queue Length (ft)	14	0	1	131
Control Delay (s)	4.0	0.1	23.5	38.8
Lane LOS	A	A	C	E
Approach Delay (s)	4.0	0.1	23.5	38.8
Approach LOS			C	E

Intersection Summary			
Average Delay		7.6	
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
 24: Laurel Road & Main Street

Background AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1808	1583	1770	3472		1770	3412	
Flt Permitted	0.44	1.00	1.00		0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	811	1863	1583		1433	1583	1770	3472		1770	3412	
Volume (vph)	149	74	245	144	96	133	101	480	70	84	626	197
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	162	80	266	157	104	145	110	522	76	91	680	214
RTOR Reduction (vph)	0	0	191	0	0	104	0	11	0	0	28	0
Lane Group Flow (vph)	162	80	75	0	261	41	110	587	0	91	866	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	25.5	25.5	25.5		25.5	25.5	8.1	44.1		8.4	44.4	
Effective Green, g (s)	25.5	25.5	25.5		25.5	25.5	8.1	44.1		8.4	44.4	
Actuated g/C Ratio	0.28	0.28	0.28		0.28	0.28	0.09	0.49		0.09	0.49	
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	230	528	449		406	449	159	1701		165	1683	
v/s Ratio Prot		0.04					c0.06	0.17		0.05	c0.26	
v/s Ratio Perm	c0.20		0.17		0.18	0.09						
v/c Ratio	0.70	0.15	0.17		0.64	0.09	0.69	0.35		0.55	0.51	
Uniform Delay, d1	28.9	24.1	24.3		28.3	23.7	39.7	14.1		39.0	15.5	
Progression Factor	0.49	0.52	0.21		1.00	1.00	0.78	0.58		0.96	1.18	
Incremental Delay, d2	9.3	0.1	0.2		3.5	0.1	11.7	0.5		3.4	1.0	
Delay (s)	23.3	12.7	5.2		31.7	23.8	42.9	8.7		40.8	19.2	
Level of Service	C	B	A		C	C	D	A		D	B	
Approach Delay (s)		12.2			28.9			14.0			21.2	
Approach LOS		B			C			B			C	
Intersection Summary												
HCM Average Control Delay			18.7				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			61.8%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

























Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷	↶	↶	↶	↷
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	21	63	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	23	68	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	91	68	68			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	91	68	68			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	909	995	1533			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	0	0	0	23	68	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.01	0.04	0.00
Queue Length (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	0.0		0.0		0.0	
Approach LOS	A					

Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis
26: Malicoat Avenue & Main Street

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	0.93		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1681		1770	1724		1770	3530		1770	3436	
Flt Permitted	0.63	1.00		0.64	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1182	1681		1190	1724		1770	3530		1770	3436	
Volume (vph)	210	40	74	34	58	57	53	600	11	29	690	167
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	43	80	37	63	62	58	652	12	32	750	182
RTOR Reduction (vph)	0	62	0	0	47	0	0	1	0	0	17	0
Lane Group Flow (vph)	228	61	0	37	78	0	58	663	0	32	915	0
Turn Type	Perm		Perm			Prot			Prot			
Protected Phases	4		8			5			2			1 6
Permitted Phases	4		8									
Actuated Green, G (s)	19.8	19.8		19.8	19.8		7.2	53.4		4.8	51.0	
Effective Green, g (s)	19.8	19.8		19.8	19.8		7.2	53.4		4.8	51.0	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.08	0.59		0.05	0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	260	370		262	379		142	2094		94	1947	
v/s Ratio Prot		0.07			0.07		c0.03	0.19		0.02	c0.27	
v/s Ratio Perm	c0.19		0.03									
v/c Ratio	0.88	0.16		0.14	0.21		0.41	0.32		0.34	0.47	
Uniform Delay, d1	33.9	28.4		28.3	28.7		39.4	9.2		41.1	11.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.77	0.55	
Incremental Delay, d2	26.4	0.2		0.2	0.3		1.9	0.4		1.9	0.7	
Delay (s)	60.4	28.6		28.5	29.0		41.3	9.6		33.6	7.0	
Level of Service	E	C		C	C		D	A		C	A	
Approach Delay (s)		49.2			28.8			12.1			7.9	
Approach LOS		D			C			B			A	
Intersection Summary												
HCM Average Control Delay			17.4	HCM Level of Service						B		
HCM Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)						12.0		
Intersection Capacity Utilization			56.0%	ICU Level of Service						B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 27: Brownstone Road & Main Street

Background AM Volumes
 2/4/2010



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T	T	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	78	55	59	592	776	204
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	85	60	64	643	843	222
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1726	954	1065			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1726	954	1065			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	4	81	90			
cM capacity (veh/h)	88	314	654			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	145	708	1065			
Volume Left	85	64	0			
Volume Right	60	0	222			
cSH	125	654	1700			
Volume to Capacity	1.15	0.10	0.63			
Queue Length (ft)	217	8	0			
Control Delay (s)	195.5	2.6	0.0			
Lane LOS	F	A				
Approach Delay (s)	195.5	2.6	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay			15.7			
Intersection Capacity Utilization			94.6%	ICU Level of Service	F	
Analysis Period (min)			15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↘		↙	↘
Sign Control	Stop		Free		Free	Free
Grade	0%		0%		0%	0%
Volume (veh/h)	92	174	462	50	166	652
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	100	189	502	54	180	709
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1599	529			557	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1599	529			557	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	66			82	
cM capacity (veh/h)	96	549			1014	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	289	557	180	709
Volume Left	100	0	180	0
Volume Right	189	54	0	0
cSH	209	1700	1014	1700
Volume to Capacity	1.39	0.33	0.18	0.42
Queue Length (ft)	415	0	16	0
Control Delay (s)	244.1	0.0	9.3	0.0
Lane LOS	F		A	
Approach Delay (s)	244.1	0.0	1.9	
Approach LOS	F			

Intersection Summary			
Average Delay		41.7	
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 29: Delta Road & Sellers Avenue

Background AM Volumes
 2/4/2010

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	32	100	38	66	133	13	23	85	44	31	148	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	109	41	72	145	14	25	92	48	34	161	67

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	185	230	165	262
Volume Left (vph)	35	72	25	34
Volume Right (vph)	41	14	48	67
Hadj (s)	-0.1	0.1	-0.1	-0.1
Departure Headway (s)	5.2	5.2	5.2	5.1
Degree Utilization, x	0.27	0.34	0.24	0.37
Capacity (veh/h)	633	551	634	676
Control Delay (s)	8.7	8.9	8.6	8.8
Approach Delay (s)	8.7	8.9	8.6	8.8
Approach LOS	A	A	A	A

Intersection Summary			
Delay		8.8	
HCM Level of Service		A	
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
30: Lone Tree Way & Main Street

Background AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1779	1583		1788	1583	1770	3539	1583	1770	3410	
Flt Permitted		0.71	1.00		0.72	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1316	1583		1348	1583	1770	3539	1583	1770	3410	
Volume (vph)	107	6	194	33	6	4	185	328	15	4	424	137
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	116	7	211	36	7	4	201	357	16	4	461	149
RTOR Reduction (vph)	0	0	180	0	0	3	0	0	5	0	24	0
Lane Group Flow (vph)	0	123	31	0	43	1	201	357	11	4	586	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4		8		8	5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		13.1	13.1		13.1	13.1	16.4	62.9	62.9	2.0	48.5	
Effective Green, g (s)		13.1	13.1		13.1	13.1	16.4	62.9	62.9	2.0	48.5	
Actuated g/C Ratio		0.15	0.15		0.15	0.15	0.18	0.70	0.70	0.02	0.54	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		192	230		196	230	323	2473	1106	39	1838	
v/s Ratio Prot							c0.11	0.10		0.00	c0.18	
v/s Ratio Perm		0.09	0.13		0.03	0.00			0.01			
v/c Ratio		0.64	0.13		0.22	0.00	0.62	0.14	0.01	0.10	0.32	
Uniform Delay, d1		36.2	33.5		33.9	32.9	33.9	4.5	4.1	43.1	11.6	
Progression Factor		1.00	1.00		1.00	1.00	1.08	0.29	0.17	1.00	1.00	
Incremental Delay, d2		7.1	0.3		0.6	0.0	3.3	0.1	0.0	1.2	0.5	
Delay (s)		43.3	33.8		34.5	32.9	39.8	1.4	0.7	44.3	12.0	
Level of Service		D	C		C	C	D	A	A	D	B	
Approach Delay (s)		37.3			34.4			14.8			12.2	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay		19.2										B
HCM Volume to Capacity ratio		0.49										
Actuated Cycle Length (s)		90.0								12.0		
Intersection Capacity Utilization		49.3%										A
Analysis Period (min)		15										
c Critical Lane Group												






















HCM Signalized Intersection Capacity Analysis
31: Main Street & Sellers Avenue

Background AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1830	1583		1823	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.90	1.00		0.88	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583		1680	1583		1635	
Volume (vph)	2	369	30	21	466	29	21	38	7	53	78	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	401	33	23	507	32	23	41	8	58	85	2
RTOR Reduction (vph)	0	0	21	0	0	19	0	0	0	0	1	0
Lane Group Flow (vph)	2	401	12	23	507	13	0	64	8	0	144	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Free		Perm	
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2		Free		6	
Actuated Green, G (s)	1.2	33.4	33.4	3.1	35.3	35.3		41.5	90.0		41.5	
Effective Green, g (s)	1.2	33.4	33.4	3.1	35.3	35.3		41.5	90.0		41.5	
Actuated g/C Ratio	0.01	0.37	0.37	0.03	0.39	0.39		0.46	1.00		0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	24	691	587	61	731	621		775	1583		754	
v/s Ratio Prot	0.00	0.22		c0.01	c0.27							
v/s Ratio Perm			0.02			0.02		0.04	0.01		c0.09	
v/c Ratio	0.08	0.58	0.02	0.38	0.69	0.02		0.08	0.01		0.19	
Uniform Delay, d1	43.9	22.7	17.9	42.5	22.8	16.8		13.6	0.0		14.3	
Progression Factor	1.12	0.79	0.64	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	1.4	1.2	0.0	3.9	2.9	0.0		0.2	0.0		0.6	
Delay (s)	50.4	19.2	11.6	46.4	25.7	16.8		13.8	0.0		14.9	
Level of Service	D	B	B	D	C	B		B	A		B	
Approach Delay (s)		18.7			26.0			12.3			14.9	
Approach LOS		B			C			B			B	
Intersection Summary												
HCM Average Control Delay			21.3				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.41									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			45.0%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												







HCM Signalized Intersection Capacity Analysis
 1: Main Street & SR160 SB Ramps

Background PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.86		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3475		3433	3539	1583	1770	1599		1770	1767	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3475		3433	3539	1583	1770	1599		1770	1767	
Volume (vph)	5	300	41	361	210	38	18	6	111	32	19	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	326	45	392	228	41	20	7	121	35	21	11
RTOR Reduction (vph)	0	13	0	0	0	24	0	84	0	0	7	0
Lane Group Flow (vph)	5	358	0	392	228	17	20	44	0	35	25	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8											
Actuated Green, G (s)	1.3	17.2		21.7	37.6	37.6	3.0	27.7		7.4	32.1	
Effective Green, g (s)	1.3	17.2		21.7	37.6	37.6	3.0	27.7		7.4	32.1	
Actuated g/C Ratio	0.01	0.19		0.24	0.42	0.42	0.03	0.31		0.08	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	26	664		828	1479	661	59	492		146	630	
v/s Ratio Prot	0.00	c0.11		c0.11	0.06		0.01	c0.08		c0.02	0.02	
v/s Ratio Perm	0.03											
v/c Ratio	0.19	0.54		0.47	0.15	0.03	0.34	0.09		0.24	0.04	
Uniform Delay, d1	43.8	32.8		29.3	16.3	15.4	42.5	22.2		38.7	18.9	
Progression Factor	1.00	1.00		0.59	0.15	0.10	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.6	0.8		0.4	0.0	0.0	3.4	0.4		0.9	0.1	
Delay (s)	47.4	33.7		17.8	2.4	1.5	45.9	22.5		39.5	19.0	
Level of Service	D			B		A	A	D		D		B
Approach Delay (s)	33.9			11.5			25.7			29.7		
Approach LOS	C			B			C			C		
Intersection Summary												
HCM Average Control Delay			20.9	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				16.0				
Intersection Capacity Utilization			38.3%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
2: Main Street & SR160 NB Ramps

Background PM Volumes
2/4/2010

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↙	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	0.88
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3518		1770	3539	1770	2787
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3518		1770	3539	1770	2787
Volume (vph)	512	21	76	612	35	580
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	557	23	83	665	38	630
RTOR Reduction (vph)	4	0	0	0	0	316
Lane Group Flow (vph)	576	0	83	665	38	314
Turn Type			Prot		custom	
Protected Phases	4		3	8		
Permitted Phases					2	2
Actuated Green, G (s)	25.6		7.5	37.1	44.9	44.9
Effective Green, g (s)	25.6		7.5	37.1	44.9	44.9
Actuated g/C Ratio	0.28		0.08	0.41	0.50	0.50
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1001		148	1459	883	1390
v/s Ratio Prot	c0.16		c0.05	0.19		
v/s Ratio Perm					0.02	0.23
v/c Ratio	0.58		0.56	0.46	0.04	0.23
Uniform Delay, d1	27.6		39.7	19.1	11.5	12.7
Progression Factor	1.16		0.92	0.36	1.00	1.00
Incremental Delay, d2	0.8		4.4	0.2	0.1	0.4
Delay (s)	32.9		40.8	7.2	11.6	13.1
Level of Service	C		D	A	B	B
Approach Delay (s)	32.9			10.9	13.0	
Approach LOS	C			B	B	
Intersection Summary						
HCM Average Control Delay			18.0		HCM Level of Service	B
HCM Volume to Capacity ratio			0.51			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			41.8%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						




















HCM Signalized Intersection Capacity Analysis
3: Main Street & Empire Avenue

Background PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3527		3433	1863	1583		1833	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.94	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3527		3433	1863	1583		1752	1583
Volume (vph)	16	812	303	205	503	12	222	3	135	12	25	13
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	883	329	223	547	13	241	3	147	13	27	14
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	91	0	0	11
Lane Group Flow (vph)	17	883	329	223	558	0	241	3	56	0	40	3
Turn Type	Prot		Free	Prot			Prot		Perm	Perm		Perm
Protected Phases	7	4		3	8		5	2				6
Permitted Phases			Free						2	6		6
Actuated Green, G (s)	1.6	26.4	90.0	17.3	42.1		9.8	34.3	34.3		20.5	20.5
Effective Green, g (s)	1.6	26.4	90.0	17.3	42.1		9.8	34.3	34.3		20.5	20.5
Actuated g/C Ratio	0.02	0.29	1.00	0.19	0.47		0.11	0.38	0.38		0.23	0.23
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	31	1038	1583	340	1650		374	710	603		399	361
v/s Ratio Prot	0.01	c0.25		c0.13	0.16		c0.07	0.00				
v/s Ratio Perm			0.21						0.09		0.02	0.01
v/c Ratio	0.55	0.85	0.21	0.66	0.34		0.64	0.00	0.09		0.10	0.01
Uniform Delay, d1	43.8	29.9	0.0	33.6	15.1		38.4	17.3	17.9		27.5	26.9
Progression Factor	0.99	0.74	1.00	0.45	0.21		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	17.3	6.4	0.3	4.1	0.1		3.8	0.0	0.3		0.5	0.0
Delay (s)	60.9	28.6	0.3	19.1	3.3		42.2	17.3	18.2		28.0	26.9
Level of Service	E	C	A	B	A		D	B	B		C	C
Approach Delay (s)		21.4			7.8			33.0			27.7	
Approach LOS		C			A			C			C	
Intersection Summary												
HCM Average Control Delay			19.1	HCM Level of Service				B				
HCM Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			56.8%	ICU Level of Service				B				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
4: Main Street & Vintage Parkway

Background PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.97			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.95	1.00
Satd. Flow (prot)	1770	3534		1770	3423			1757			1775	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.81			0.71	1.00
Satd. Flow (perm)	1770	3534		1770	3423			1479			1329	1583
Volume (vph)	173	1005	9	12	584	163	17	1	3	168	3	98
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	188	1092	10	13	635	177	18	1	3	183	3	107
RTOR Reduction (vph)	0	0	0	0	35	0	0	2	0	0	0	71
Lane Group Flow (vph)	188	1102	0	13	777	0	0	20	0	0	186	36
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	22.7	46.3		1.5	25.1			30.2			30.2	30.2
Effective Green, g (s)	22.7	46.3		1.5	25.1			30.2			30.2	30.2
Actuated g/C Ratio	0.25	0.51		0.02	0.28			0.34			0.34	0.34
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	446	1818		30	955			496			446	531
v/s Ratio Prot	0.11	c0.31		0.01	c0.24							
v/s Ratio Perm								0.01			c0.14	0.07
v/c Ratio	0.42	0.61		0.43	0.81			0.04			0.42	0.07
Uniform Delay, d1	28.2	15.4		43.8	30.3			20.1			23.1	20.3
Progression Factor	0.63	0.91		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.6	0.5		9.7	5.4			0.2			2.9	0.2
Delay (s)	18.4	14.5		53.6	35.6			20.3			26.0	20.6
Level of Service	B	B		D	D			C			C	C
Approach Delay (s)		15.0			35.9			20.3			24.0	
Approach LOS		B			D			C			C	
Intersection Summary												
HCM Average Control Delay			23.3	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				8.0				
Intersection Capacity Utilization			52.1%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1722	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1779	
Volume (vph)	2	1075	161	30	662	1	135	2	42	2	0	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1168	175	33	720	1	147	2	46	2	0	1
RTOR Reduction (vph)	0	0	37	0	0	0	0	36	0	0	1	0
Lane Group Flow (vph)	2	1168	138	33	721	0	147	12	0	0	2	0
Turn Type	Prot		Perm	Prot			Prot				Perm	
Protected Phases	7	4		3	8		5	2				6
Permitted Phases			4								6	
Actuated Green, G (s)	5.2	101.6	101.6	3.2	99.6		26.2	33.2			3.0	
Effective Green, g (s)	5.2	101.6	101.6	3.2	99.6		26.2	33.2			3.0	
Actuated g/C Ratio	0.03	0.68	0.68	0.02	0.66		0.17	0.22			0.02	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	61	1262	1072	38	1236		309	353			36	
v/s Ratio Prot	0.00	c0.63		c0.02	0.39		c0.08	c0.03				
v/s Ratio Perm			0.11								0.00	
v/c Ratio	0.03	0.93	0.13	0.87	0.58		0.48	0.03			0.06	
Uniform Delay, d1	70.0	20.9	8.6	73.2	13.8		55.7	45.8			72.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2	11.5	0.1	93.8	0.7		5.2	0.2			0.7	
Delay (s)	70.2	32.4	8.6	167.0	14.5		60.9	46.0			72.8	
Level of Service	E	C	A	F	B		E	D			E	
Approach Delay (s)		29.4			21.2			57.2			72.8	
Approach LOS		C			C			E			E	
Intersection Summary												
HCM Average Control Delay			29.1			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			73.4%			ICU Level of Service					D	
Analysis Period (min)			15									
c Critical Lane Group												



















HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Sign Control	Free			Free			Stop			Stop			
Grade	0%			0%			0%			0%			
Volume (veh/h)	1	1061	145	7	1057	0	29	0	7	4	0	3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	1	1153	158	8	1149	0	32	0	8	4	0	3	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type							None			None			
Median storage (veh)													
Upstream signal (ft)	1040												
pX, platoon unblocked													
vC, conflicting volume	1149			1311			2402	2398	1232	2327	2477	1149	
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1149			1311			2402	2398	1232	2327	2477	1149	
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2	
tC, 2 stage (s)													
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3	
p0 queue free %	100			99			0	100	96	82	100	99	
cM capacity (veh/h)	608			528			22	33	216	25	29	242	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2				
Volume Total	1	1311	8	1149	0	32	8	4	3				
Volume Left	1	0	8	0	0	32	0	4	0				
Volume Right	0	158	0	0	0	0	8	0	3				
cSH	608	1700	528	1700	1700	22	216	25	242				
Volume to Capacity	0.00	0.77	0.01	0.68	0.00	1.41	0.04	0.18	0.01				
Queue Length (ft)	0	0	1	0	0	101	3	13	1				
Control Delay (s)	10.9	0.0	11.9	0.0	0.0	589.7	22.3	179.0	20.1				
Lane LOS	B		B			F	C	F	C				
Approach Delay (s)	0.0	0.1		479.4			110.9						
Approach LOS				F			F						
Intersection Summary													
Average Delay			7.8										
Intersection Capacity Utilization			81.3%			ICU Level of Service				D			
Analysis Period (min)			15										

















HCM Unsignalized Intersection Capacity Analysis
7: West Cypress Road & Ohara Avenue

Background PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	32	122	45	70	185	43	71	98	84	62	149	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	133	49	76	201	47	77	107	91	67	162	83
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total (vph)	216	324	184	91	229	83						
Volume Left (vph)	35	76	77	0	67	0						
Volume Right (vph)	49	47	0	91	0	83						
Hadj (s)	-0.1	0.0	0.2	-0.7	0.2	-0.7						
Departure Headway (s)	6.1	6.0	6.8	5.9	6.7	5.8						
Degree Utilization, x	0.36	0.54	0.35	0.15	0.42	0.13						
Capacity (veh/h)	548	521	488	564	519	590						
Control Delay (s)	9.9	10.7	9.5	7.9	9.7	7.8						
Approach Delay (s)	9.9	10.7	9.0		9.2							
Approach LOS	A	B	A		A							
Intersection Summary												
Delay			9.7									
HCM Level of Service			A									
Intersection Capacity Utilization			55.4%	ICU Level of Service	B							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 8: West Cypress Road & Rose Avenue

Background PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	190	24	55	184	16	24	123	94	53	49	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	207	26	60	200	17	26	134	102	58	53	26
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	235	277	262	137								
Volume Left (vph)	2	60	26	58								
Volume Right (vph)	26	17	102	26								
Hadj (s)	0.0	0.0	-0.2	0.0								
Departure Headway (s)	5.4	5.7	5.3	5.7								
Degree Utilization, x	0.35	0.44	0.39	0.22								
Capacity (veh/h)	621	523	623	591								
Control Delay (s)	9.1	9.9	9.1	9.1								
Approach Delay (s)	9.1	9.9	9.1	9.1								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			9.3									
HCM Level of Service			A									
Intersection Capacity Utilization			54.9%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
9: West Cypress Road & Main Street

Background PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.97		1.00	0.98	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3443		1770	1742	1504	1770	3539	1583	3433	3533	
Flt Permitted	0.31	1.00		0.42	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	582	3443		777	1742	1504	1770	3539	1583	3433	3533	
Volume (vph)	52	247	54	284	190	318	84	291	370	505	392	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	268	59	309	207	346	91	316	402	549	426	5
RTOR Reduction (vph)	0	21	0	0	5	247	0	0	53	0	1	0
Lane Group Flow (vph)	57	306	0	309	226	75	91	316	349	549	430	0
Turn Type	pm+pt			pm+pt		Perm	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	18.8	12.8		31.0	21.0	21.0	8.3	27.9	42.1	19.1	38.7	
Effective Green, g (s)	18.8	12.8		31.0	21.0	21.0	8.3	27.9	42.1	19.1	38.7	
Actuated g/C Ratio	0.21	0.14		0.34	0.23	0.23	0.09	0.31	0.47	0.21	0.43	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	201	490		424	406	351	163	1097	740	729	1519	
v/s Ratio Prot	0.02	0.09		c0.11	0.13		0.05	0.09	c0.09	c0.16	0.12	
v/s Ratio Perm	0.04			0.14		0.21			0.17			
v/c Ratio	0.28	0.62		0.73	0.56	0.21	0.56	0.29	0.47	0.75	0.28	
Uniform Delay, d1	35.4	36.3		28.0	30.4	27.8	39.1	23.5	16.4	33.2	16.6	
Progression Factor	1.00	1.00		0.78	0.71	2.63	1.25	0.74	0.59	1.00	1.00	
Incremental Delay, d2	0.8	2.5		5.9	1.6	0.3	3.8	0.6	0.4	4.4	0.5	
Delay (s)	36.2	38.8		27.7	23.1	73.5	52.8	17.9	10.2	37.7	17.1	
Level of Service	D	D		C	C	E	D	B	B	D	B	
Approach Delay (s)		38.4			43.6			18.0			28.6	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM Average Control Delay			31.3				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			60.1%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 10: East Cypress Road & Picasso Drive

Background PM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶		↶	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.87	
Flt Protected	0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	3536		1620	
Flt Permitted	0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	3536		1620	
Volume (vph)	94	1037	669	5	4	65
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	1127	727	5	4	71
RTOR Reduction (vph)	0	0	1	0	49	0
Lane Group Flow (vph)	102	1127	731	0	26	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	8.8	54.0	41.2		28.0	
Effective Green, g (s)	8.8	54.0	41.2		28.0	
Actuated g/C Ratio	0.10	0.60	0.46		0.31	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	173	2123	1619		504	
v/s Ratio Prot	0.06	c0.32	0.21		c0.05	
v/s Ratio Perm						
v/c Ratio	0.59	0.53	0.45		0.05	
Uniform Delay, d1	38.9	10.6	16.7		21.7	
Progression Factor	1.08	0.80	0.76		1.00	
Incremental Delay, d2	4.3	0.2	0.2		0.2	
Delay (s)	46.4	8.7	12.9		21.9	
Level of Service	D	A	B		C	
Approach Delay (s)		11.8	12.9		21.9	
Approach LOS		B	B		C	
Intersection Summary						
HCM Average Control Delay			12.6		HCM Level of Service	B
HCM Volume to Capacity ratio			0.40			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			39.6%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
 11: East Cypress Road & Frank Hengel Way

Background PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.96	1.00
Satd. Flow (prot)	1770	3512		1770	3539	1583		1768			1780	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.77			0.78	1.00
Satd. Flow (perm)	1770	3512		1770	3539	1583		1419			1447	1583
Volume (vph)	133	1058	58	6	814	13	39	2	3	26	2	125
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	145	1150	63	7	885	14	42	2	3	28	2	136
RTOR Reduction (vph)	0	4	0	0	0	6	0	2	0	0	0	113
Lane Group Flow (vph)	145	1209	0	7	885	8	0	45	0	0	30	23
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	12.4	61.3		1.4	50.3	50.3		15.3			15.3	15.3
Effective Green, g (s)	12.4	61.3		1.4	50.3	50.3		15.3			15.3	15.3
Actuated g/C Ratio	0.14	0.68		0.02	0.56	0.56		0.17			0.17	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	244	2392		28	1978	885		241			246	269
v/s Ratio Prot	c0.08	c0.35		0.00	0.25							
v/s Ratio Perm						0.01		0.03			0.02	0.09
v/c Ratio	0.59	0.51		0.25	0.45	0.01		0.18			0.12	0.09
Uniform Delay, d1	36.4	7.0		43.8	11.7	8.8		32.0			31.7	31.5
Progression Factor	1.32	0.26		0.86	1.42	2.07		1.00			1.00	1.00
Incremental Delay, d2	3.7	0.2		4.6	0.2	0.0		1.7			1.0	0.6
Delay (s)	51.6	2.0		42.2	16.8	18.2		33.7			32.7	32.1
Level of Service	D	A		D	B	B		C			C	C
Approach Delay (s)		7.3			17.0			33.7			32.2	
Approach LOS		A			B			C			C	
Intersection Summary												
HCM Average Control Delay			13.0				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			53.5%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												





















HCM Signalized Intersection Capacity Analysis
 12: East Cypress Road & Machado Lane

Background PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3539			3539							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3539			3539							
Volume (vph)	0	513	0	0	286	0	0	0	0	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	558	0	0	311	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	558	0	0	311	0	0	0	0	0	0	0
Turn Type	Prot			Perm		Perm	Perm				Perm	
Protected Phases	7	4			8			2				6
Permitted Phases				8		8	2			6		
Actuated Green, G (s)		27.5			27.5							
Effective Green, g (s)		27.5			27.5							
Actuated g/C Ratio		0.31			0.31							
Clearance Time (s)		4.0			4.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		1081			1081							
v/s Ratio Prot		c0.16			0.09							
v/s Ratio Perm												
v/c Ratio		0.52			0.29							
Uniform Delay, d1		25.8			23.8							
Progression Factor		0.97			1.01							
Incremental Delay, d2		0.4			0.1							
Delay (s)		25.3			24.1							
Level of Service		C			C							
Approach Delay (s)		25.3			24.1			0.0			0.0	
Approach LOS		C			C			A			A	
Intersection Summary												
HCM Average Control Delay			24.9			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			62.5			
Intersection Capacity Utilization			17.5%			ICU Level of Service				A		
Analysis Period (min)			15									
c	Critical Lane Group											























HCM Signalized Intersection Capacity Analysis
 13: East Cypress Road & Project Driveway

Background PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3539			3539							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3539			3539							
Volume (vph)	0	513	0	0	286	0	0	0	0	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	558	0	0	311	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	558	0	0	311	0	0	0	0	0	0	0
Turn Type	Prot				Perm				custom		custom	
Protected Phases	7	4			8							
Permitted Phases						8				6		6
Actuated Green, G (s)		19.6			19.6							
Effective Green, g (s)		19.6			19.6							
Actuated g/C Ratio		0.22			0.22							
Clearance Time (s)		4.0			4.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		771			771							
v/s Ratio Prot		c0.16			0.09							
v/s Ratio Perm												
v/c Ratio		0.72			0.40							
Uniform Delay, d1		32.7			30.2							
Progression Factor		0.36			1.30							
Incremental Delay, d2		3.3			0.3							
Delay (s)		15.0			39.6							
Level of Service		B			D							
Approach Delay (s)		15.0			39.6			0.0			0.0	
Approach LOS		B			D			A			A	
Intersection Summary												
HCM Average Control Delay			23.8			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			70.4			
Intersection Capacity Utilization			17.5%			ICU Level of Service				A		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis
 14: East Cypress Road & Sellers Avenue

Background PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3487		1770	3531		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.75	1.00	1.00	0.74	1.00	1.00
Satd. Flow (perm)	1770	3487		1770	3531		1397	1863	1583	1384	1863	1583
Volume (vph)	96	778	86	82	537	8	117	20	122	4	11	54
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	104	846	93	89	584	9	127	22	133	4	12	59
RTOR Reduction (vph)	0	11	0	0	1	0	0	0	75	0	0	33
Lane Group Flow (vph)	104	928	0	89	592	0	127	22	58	4	12	26
Turn Type	Prot			Prot			Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2				6
Permitted Phases							2		2	6		6
Actuated Green, G (s)	8.5	30.3		8.3	30.1		39.4	39.4	39.4	39.4	39.4	39.4
Effective Green, g (s)	8.5	30.3		8.3	30.1		39.4	39.4	39.4	39.4	39.4	39.4
Actuated g/C Ratio	0.09	0.34		0.09	0.33		0.44	0.44	0.44	0.44	0.44	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	167	1174		163	1181		612	816	693	606	816	693
v/s Ratio Prot	c0.06	c0.27		0.05	0.17			0.01			0.01	
v/s Ratio Perm							c0.09		0.08	0.00		0.04
v/c Ratio	0.62	0.79		0.55	0.50		0.21	0.03	0.08	0.01	0.01	0.04
Uniform Delay, d1	39.2	27.0		39.0	23.9		15.6	14.4	14.8	14.3	14.3	14.5
Progression Factor	1.46	0.55		1.06	0.96		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.0	3.7		3.7	0.3		0.8	0.1	0.2	0.0	0.0	0.1
Delay (s)	64.1	18.4		44.9	23.4		16.4	14.5	15.0	14.3	14.3	14.6
Level of Service	E	B		D	C		B	B	B	B	B	B
Approach Delay (s)		23.0			26.2			15.6			14.5	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM Average Control Delay			22.7			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			51.9%			ICU Level of Service			A			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis
15: East Cypress Road &

Background PM Volumes
2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕			↕			↕	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99			0.94			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.95	1.00
Satd. Flow (prot)	1770	3512		1770	3504			1708			1770	1583
Flt Permitted	0.63	1.00		0.52	1.00			0.91			0.74	1.00
Satd. Flow (perm)	1170	3512		960	3504			1600			1373	1583
Volume (vph)	184	293	16	10	169	12	17	0	12	7	0	102
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	200	318	17	11	184	13	18	0	13	8	0	111
RTOR Reduction (vph)	0	6	0	0	8	0	0	6	0	0	0	51
Lane Group Flow (vph)	200	329	0	11	189	0	0	25	0	0	8	60
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		8		8		2		2		6	
Permitted Phases	4		8		8		2		2		6	
Actuated Green, G (s)	33.6	33.6		33.6	33.6			48.4			48.4	48.4
Effective Green, g (s)	33.6	33.6		33.6	33.6			48.4			48.4	48.4
Actuated g/C Ratio	0.37	0.37		0.37	0.37			0.54			0.54	0.54
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	437	1311		358	1308			860			738	851
v/s Ratio Prot		0.10			0.06							
v/s Ratio Perm	c0.17			0.01				0.02			0.01	0.07
v/c Ratio	0.46	0.25		0.03	0.14			0.03			0.01	0.07
Uniform Delay, d1	21.3	19.5		17.9	18.7			9.8			9.7	10.0
Progression Factor	0.42	0.49		0.77	0.66			1.00			1.00	1.00
Incremental Delay, d2	0.6	0.1		0.0	0.1			0.1			0.0	0.2
Delay (s)	9.7	9.6		13.8	12.5			9.8			9.7	10.2
Level of Service	A	A		B	B			A			A	B
Approach Delay (s)		9.6			12.5			9.8			10.1	
Approach LOS		A			B			A			B	

Intersection Summary

HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 16: East Cypress Road & Knightsen Avenue

Background PM Volumes
 2/4/2010

	→	↘	↙	←	↖	↗			
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑			
Sign Control	Free			Free		Stop			
Grade	0%			0%		0%			
Volume (veh/h)	635	103	39	364	108	87			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Hourly flow rate (vph)	690	112	42	396	117	95			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type								None	
Median storage (veh)									
Upstream signal (ft)	1050								
pX, platoon unblocked									
vC, conflicting volume			802			973	345		
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol			802			973	345		
tC, single (s)			4.1			6.8	6.9		
tC, 2 stage (s)									
tF (s)			2.2			3.5	3.3		
p0 queue free %			95			50	85		
cM capacity (veh/h)			817			237	651		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	
Volume Total	345	345	112	42	198	198	117	95	
Volume Left	0	0	0	42	0	0	117	0	
Volume Right	0	0	112	0	0	0	0	95	
cSH	1700	1700	1700	817	1700	1700	237	651	
Volume to Capacity	0.20	0.20	0.07	0.05	0.12	0.12	0.50	0.15	
Queue Length (ft)	0	0	0	4	0	0	63	13	
Control Delay (s)	0.0	0.0	0.0	9.6	0.0	0.0	34.3	11.5	
Lane LOS				A				D	B
Approach Delay (s)	0.0		0.9				24.1		
Approach LOS							C		
Intersection Summary									
Average Delay			3.8						
Intersection Capacity Utilization			36.9%		ICU Level of Service		A		
Analysis Period (min)			15						

HCM Unsignalized Intersection Capacity Analysis
 17: East Cypress Road & Jersey Island Road

Background PM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑	↑↑↵		↵	↵
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	18	654	433	4	1	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	711	471	4	1	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	475				867	238
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	475				867	238
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	98
cM capacity (veh/h)	1083				287	764

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	20	355	355	314	161	1	12
Volume Left	20	0	0	0	0	1	0
Volume Right	0	0	0	0	4	0	12
cSH	1083	1700	1700	1700	1700	287	764
Volume to Capacity	0.02	0.21	0.21	0.18	0.09	0.00	0.02
Queue Length (ft)	1	0	0	0	0	0	1
Control Delay (s)	8.4	0.0	0.0	0.0	0.0	17.6	9.8
Lane LOS	A					C	A
Approach Delay (s)	0.2			0.0		10.4	
Approach LOS						B	

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
 18: East Cypress Road & Bethel Island Road

Background PM Volumes
 2/4/2010


















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↗↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	2787
Volume (vph)	330	416	226	15	21	237
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	359	452	246	16	23	258
RTOR Reduction (vph)	0	0	0	14	0	128
Lane Group Flow (vph)	359	452	246	2	23	130
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	21.4	36.6	11.2	11.2	45.4	45.4
Effective Green, g (s)	21.4	36.6	11.2	11.2	45.4	45.4
Actuated g/C Ratio	0.24	0.41	0.12	0.12	0.50	0.50
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	421	1439	440	197	893	1406
v/s Ratio Prot	c0.20	0.13	c0.07		0.01	
v/s Ratio Perm				0.01		0.09
v/c Ratio	0.85	0.31	0.56	0.01	0.03	0.09
Uniform Delay, d1	32.8	18.2	37.1	34.5	11.2	11.6
Progression Factor	0.81	0.81	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.3	0.1	1.5	0.0	0.1	0.1
Delay (s)	41.9	14.8	38.6	34.6	11.2	11.7
Level of Service	D	B	D	C	B	B
Approach Delay (s)		26.8	38.4		11.7	
Approach LOS		C	D		B	

Intersection Summary

HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 19: Laurel Road & SR4 SB Ramps

Background PM Volumes
 2/4/2010

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)						4.0				4.0	4.0		
Lane Util. Factor						1.00				0.95	0.95		
Frt						0.86				1.00	1.00		
Flt Protected						1.00				0.95	0.95		
Satd. Flow (prot)						1611				1681	1681		
Flt Permitted						1.00				0.95	0.95		
Satd. Flow (perm)						1611				1681	1681		
Volume (vph)	0	0	0	0	0	390	0	0	0	1044	0	0	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	0	0	0	0	424	0	0	0	1135	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	0	0	0	0	424	0	0	0	568	567	0	
Turn Type						Free				Prot			
Protected Phases										1	6		
Permitted Phases						Free							
Actuated Green, G (s)						90.0				90.0	90.0		
Effective Green, g (s)						90.0				90.0	90.0		
Actuated g/C Ratio						1.00				1.00	1.00		
Clearance Time (s)										4.0	4.0		
Vehicle Extension (s)										3.0	3.0		
Lane Grp Cap (vph)						1611				1681	1681		
v/s Ratio Prot										0.34	0.34		
v/s Ratio Perm						0.26							
v/c Ratio						0.26				0.34	0.34		
Uniform Delay, d1						0.0				0.0	0.0		
Progression Factor						1.00				1.00	1.00		
Incremental Delay, d2						0.4				0.1	0.1		
Delay (s)						0.4				0.1	0.1		
Level of Service						A				A	A		
Approach Delay (s)		0.0			0.4			0.0			0.1		
Approach LOS		A			A			A			A		
Intersection Summary													
HCM Average Control Delay			0.2									HCM Level of Service	A
HCM Volume to Capacity ratio			0.34										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	0.0
Intersection Capacity Utilization			32.3%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													



























HCM Signalized Intersection Capacity Analysis
20: Laurel Road & SR4 NB Ramps

Background PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0			4.0			
Lane Util. Factor		0.95			0.95	1.00			1.00			
Frt		1.00			1.00	0.85			0.85			
Flt Protected		1.00			1.00	1.00			1.00			
Satd. Flow (prot)		3539			3539	1583			1583			
Flt Permitted		1.00			1.00	1.00			1.00			
Satd. Flow (perm)		3539			3539	1583			1583			
Volume (vph)	0	1044	0	0	390	506	0	0	413	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1135	0	0	424	550	0	0	449	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	21	0	0	0
Lane Group Flow (vph)	0	1135	0	0	424	550	0	0	428	0	0	0
Turn Type	Prot						Free	Perm	Perm			
Protected Phases	7	4					8		2			
Permitted Phases							Free	2	2			
Actuated Green, G (s)	34.7						34.7	90.0	47.3			
Effective Green, g (s)	34.7						34.7	90.0	47.3			
Actuated g/C Ratio	0.39						0.39	1.00	0.53			
Clearance Time (s)	4.0						4.0		4.0			
Vehicle Extension (s)	3.0						3.0		3.0			
Lane Grp Cap (vph)	1364						1364	1583	832			
v/s Ratio Prot	c0.32						0.12					
v/s Ratio Perm								0.35	0.28			
v/c Ratio	0.83						0.31	0.35	0.51			
Uniform Delay, d1	25.0						19.3	0.0	13.9			
Progression Factor	1.00						0.54	1.00	1.00			
Incremental Delay, d2	4.3						0.1	0.6	2.3			
Delay (s)	29.3						10.6	0.6	16.1			
Level of Service	C						B	A	B			
Approach Delay (s)	29.3						4.9		16.1	0.0		
Approach LOS	C						A		B	A		
Intersection Summary												
HCM Average Control Delay			17.7		HCM Level of Service				B			
HCM Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			90.0		Sum of lost time (s)				8.0			
Intersection Capacity Utilization			61.1%		ICU Level of Service				B			
Analysis Period (min)			15									
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Background PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3444		1770	3293	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.41	1.00		0.49	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	756	3444		907	3293	
Volume (vph)	353	746	225	121	433	64	125	273	60	83	229	199
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	384	811	245	132	471	70	136	297	65	90	249	216
RTOR Reduction (vph)	0	0	146	0	0	57	0	19	0	0	140	0
Lane Group Flow (vph)	384	811	99	132	471	13	136	343	0	90	325	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	29.2	36.3	36.3	10.0	17.1	17.1	31.7	31.7		31.7	31.7	
Effective Green, g (s)	29.2	36.3	36.3	10.0	17.1	17.1	31.7	31.7		31.7	31.7	
Actuated g/C Ratio	0.32	0.40	0.40	0.11	0.19	0.19	0.35	0.35		0.35	0.35	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	574	1427	638	197	672	301	266	1213		319	1160	
v/s Ratio Prot	c0.22	0.23		0.07	c0.13			0.11			0.14	
v/s Ratio Perm			0.15			0.04	c0.18			0.10		
v/c Ratio	0.67	0.57	0.15	0.67	0.70	0.04	0.51	0.28		0.28	0.28	
Uniform Delay, d1	26.2	20.8	17.1	38.4	34.1	29.8	23.0	21.0		21.0	21.0	
Progression Factor	0.60	0.58	0.06	0.35	0.38	0.26	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	0.4	0.1	8.3	3.2	0.1	6.9	0.6		2.2	0.6	
Delay (s)	17.9	12.5	1.2	21.9	16.2	7.7	29.9	21.6		23.2	21.6	
Level of Service	B	B	A	C	B	A	C	C		C	C	
Approach Delay (s)		12.0			16.5			23.8			21.8	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM Average Control Delay			16.5				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			64.5%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
22: Laurel Road & Ohara Avenue

Background PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3429		1770	3405	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.49	1.00		0.56	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	920	3429		1052	3405	
Volume (vph)	125	763	96	93	516	36	65	215	56	31	270	91
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	829	104	101	561	39	71	234	61	34	293	99
RTOR Reduction (vph)	0	0	73	0	0	31	0	18	0	0	26	0
Lane Group Flow (vph)	136	829	31	101	561	8	71	277	0	34	366	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	16.4	27.0	27.0	8.5	19.1	19.1	42.5	42.5		42.5	42.5	
Effective Green, g (s)	16.4	27.0	27.0	8.5	19.1	19.1	42.5	42.5		42.5	42.5	
Actuated g/C Ratio	0.18	0.30	0.30	0.09	0.21	0.21	0.47	0.47		0.47	0.47	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	323	1062	475	167	751	336	434	1619		497	1608	
v/s Ratio Prot	0.08	c0.23		0.06	c0.16			0.09			c0.12	
v/s Ratio Perm			0.07			0.02	0.08			0.03		
v/c Ratio	0.42	0.78	0.07	0.60	0.75	0.02	0.16	0.17		0.07	0.23	
Uniform Delay, d1	32.6	28.8	22.5	39.1	33.2	28.1	13.6	13.6		13.0	14.0	
Progression Factor	0.64	0.60	0.54	0.84	0.87	0.59	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	3.4	0.1	5.9	4.0	0.0	0.8	0.2		0.3	0.3	
Delay (s)	21.6	20.7	12.2	39.0	33.0	16.6	14.4	13.9		13.2	14.4	
Level of Service	C	C	B	D	C	B	B	B		B	B	
Approach Delay (s)		20.0			33.0			14.0			14.3	
Approach LOS		B			C			B			B	
Intersection Summary												
HCM Average Control Delay			21.7			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			53.5%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Background PM Volumes
 2/4/2010


























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	162	691	1	0	433	11	1	0	0	7	0	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	176	751	1	0	471	12	1	0	0	8	0	116
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked				0.68			0.68	0.68	0.68	0.68	0.68	
vC, conflicting volume	483			752			1697	1586	752	1580	1581	477
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	483			633			2032	1869	632	1860	1861	477
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	84			100			95	100	100	77	100	80
cM capacity (veh/h)	1080			641			20	41	324	33	41	588

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	928	483	1	124
Volume Left	176	0	1	8
Volume Right	1	12	0	116
cSH	1080	641	20	290
Volume to Capacity	0.16	0.00	0.05	0.43
Queue Length (ft)	15	0	4	51
Control Delay (s)	3.8	0.0	194.5	26.4
Lane LOS	A		F	D
Approach Delay (s)	3.8	0.0	194.5	26.4
Approach LOS			F	D

Intersection Summary			
Average Delay		4.6	
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
24: Laurel Road & Main Street

Background PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1819	1583	1770	3457		1770	3442	
Flt Permitted	0.63	1.00	1.00		0.84	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1181	1863	1583		1561	1583	1770	3457		1770	3442	
Volume (vph)	207	71	74	64	69	81	132	528	97	125	561	125
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	225	77	80	70	75	88	143	574	105	136	610	136
RTOR Reduction (vph)	0	0	54	0	0	60	0	15	0	0	19	0
Lane Group Flow (vph)	225	77	26	0	145	28	143	664	0	136	727	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	29.1	29.1	29.1		29.1	29.1	11.0	38.4		10.5	37.9	
Effective Green, g (s)	29.1	29.1	29.1		29.1	29.1	11.0	38.4		10.5	37.9	
Actuated g/C Ratio	0.32	0.32	0.32		0.32	0.32	0.12	0.43		0.12	0.42	
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	382	602	512		505	512	216	1475		207	1449	
v/s Ratio Prot		0.04					c0.08	0.20		c0.08	c0.22	
v/s Ratio Perm	c0.19		0.05		0.09	0.06						
v/c Ratio	0.59	0.13	0.05		0.29	0.06	0.66	0.45		0.66	0.50	
Uniform Delay, d1	25.5	21.5	20.9		22.7	21.0	37.7	18.3		38.0	19.1	
Progression Factor	0.21	0.23	0.03		1.00	1.00	0.93	0.88		0.88	1.15	
Incremental Delay, d2	2.1	0.1	0.0		0.3	0.0	7.2	1.0		7.0	1.2	
Delay (s)	7.3	5.0	0.6		23.0	21.0	42.3	17.1		40.3	23.1	
Level of Service	A	A	A		C	C	D	B		D	C	
Approach Delay (s)		5.5			22.3			21.5			25.8	
Approach LOS		A			C			C			C	
Intersection Summary												
HCM Average Control Delay			20.6				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			54.9%				ICU Level of Service			A		
Analysis Period (min)			15									
c	Critical Lane Group											



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷	↶	↶	↶	↷
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	73	41	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	79	45	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	124	45	45			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	124	45	45			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	871	1025	1564			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	0	0	0	79	45	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.05	0.03	0.00
Queue Length (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	0.0		0.0		0.0	
Approach LOS	A					

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		7.2%	ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
 26: Malicoat Avenue & Main Street

Background PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.85		1.00	0.86		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583		1770	1611		1770	3531		1770	3518	
Flt Permitted	1.00	1.00		1.00	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1863	1583		1863	1611		1770	3531		1770	3518	
Volume (vph)	16	0	11	2	1	8	10	790	12	10	738	31
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	0	12	2	1	9	11	859	13	11	802	34
RTOR Reduction (vph)	0	12	0	0	9	0	0	0	0	0	1	0
Lane Group Flow (vph)	17	0	0	2	1	0	11	872	0	11	835	0
Turn Type	Perm		Perm		Prot		Prot					
Protected Phases	4		8		5		2		1		6	
Permitted Phases	4		8									
Actuated Green, G (s)	3.0	3.0		3.0	3.0		1.5	72.6		2.4	73.5	
Effective Green, g (s)	3.0	3.0		3.0	3.0		1.5	72.6		2.4	73.5	
Actuated g/C Ratio	0.03	0.03		0.03	0.03		0.02	0.81		0.03	0.82	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	62	53		62	54		30	2848		47	2873	
v/s Ratio Prot		0.01			0.01		0.01	c0.25		0.01	c0.24	
v/s Ratio Perm	c0.01			0.00								
v/c Ratio	0.27	0.01		0.03	0.02		0.37	0.31		0.23	0.29	
Uniform Delay, d1	42.4	42.1		42.1	42.1		43.8	2.2		42.9	2.0	
Progression Factor	1.02	1.00		1.00	1.00		1.00	1.00		0.56	0.15	
Incremental Delay, d2	2.4	0.1		0.2	0.2		7.4	0.3		2.4	0.2	
Delay (s)	45.6	42.1		42.3	42.3		51.2	2.5		26.3	0.5	
Level of Service	D	D		D	D		D	A		C	A	
Approach Delay (s)		44.2			42.3			3.1			0.9	
Approach LOS		D			D			A			A	
Intersection Summary												
HCM Average Control Delay			3.0	HCM Level of Service				A				
HCM Volume to Capacity ratio			0.30									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				8.0				
Intersection Capacity Utilization			36.4%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
27: Brownstone Road & Main Street

Background PM Volumes
2/4/2010



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑	↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	39	36	26	804	715	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	39	28	874	777	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1727	797	816			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1727	797	816			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	55	90	97			
cM capacity (veh/h)	94	387	811			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	82	902	816			
Volume Left	42	28	0			
Volume Right	39	0	39			
cSH	148	811	1700			
Volume to Capacity	0.55	0.03	0.48			
Queue Length (ft)	69	3	0			
Control Delay (s)	56.0	1.0	0.0			
Lane LOS	F	A				
Approach Delay (s)	56.0	1.0	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay			3.0			
Intersection Capacity Utilization			74.3%	ICU Level of Service	D	
Analysis Period (min)			15			



















Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free		Free	Free
Grade	0%		0%			0%
Volume (veh/h)	70	93	746	124	91	561
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	76	101	811	135	99	610
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1686	878			946	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1686	878			946	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	15	71			86	
cM capacity (veh/h)	89	347			726	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	177	946	99	610
Volume Left	76	0	99	0
Volume Right	101	135	0	0
cSH	155	1700	726	1700
Volume to Capacity	1.14	0.56	0.14	0.36
Queue Length (ft)	242	0	12	0
Control Delay (s)	174.8	0.0	10.7	0.0
Lane LOS	F		B	
Approach Delay (s)	174.8	0.0	1.5	
Approach LOS	F			

Intersection Summary			
Average Delay		17.5	
Intersection Capacity Utilization	71.4%		ICU Level of Service C
Analysis Period (min)		15	























HCM Unsignalized Intersection Capacity Analysis
 29: Delta Road & Sellers Avenue

Background PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	59	75	45	41	78	23	62	242	41	14	104	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	64	82	49	45	85	25	67	263	45	15	113	33
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	195	154	375	161								
Volume Left (vph)	64	45	67	15								
Volume Right (vph)	49	25	45	33								
Hadj (s)	-0.1	0.0	0.0	-0.1								
Departure Headway (s)	5.4	5.5	5.1	5.3								
Degree Utilization, x	0.29	0.24	0.53	0.24								
Capacity (veh/h)	609	507	675	642								
Control Delay (s)	9.0	9.0	9.4	8.7								
Approach Delay (s)	9.0	9.0	9.4	8.7								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			9.1									
HCM Level of Service			A									
Intersection Capacity Utilization			50.6%	ICU Level of Service	A							
Analysis Period (min)			15									























HCM Signalized Intersection Capacity Analysis
30: Lone Tree Way & Main Street

Background PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.96	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1786	1583		1804	1583	1770	3539	1583	1770	3436	
Flt Permitted		0.73	1.00		0.79	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1366	1583		1480	1583	1770	3539	1583	1770	3436	
Volume (vph)	141	23	259	19	10	9	215	510	16	9	489	119
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	153	25	282	21	11	10	234	554	17	10	532	129
RTOR Reduction (vph)	0	0	231	0	0	8	0	0	6	0	17	0
Lane Group Flow (vph)	0	178	51	0	32	2	234	554	11	10	644	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			8		5	2			1	6
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		16.4	16.4		16.4	16.4	16.3	60.6	60.6	1.0	45.3	
Effective Green, g (s)		16.4	16.4		16.4	16.4	16.3	60.6	60.6	1.0	45.3	
Actuated g/C Ratio		0.18	0.18		0.18	0.18	0.18	0.67	0.67	0.01	0.50	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		249	288		270	288	321	2383	1066	20	1729	
v/s Ratio Prot							c0.13	0.16		0.01	c0.19	
v/s Ratio Perm		0.13	0.18		0.02	0.01			0.01			
v/c Ratio		0.71	0.18		0.12	0.01	0.73	0.23	0.01	0.50	0.37	
Uniform Delay, d1		34.6	31.1		30.8	30.1	34.8	5.7	4.8	44.3	13.7	
Progression Factor		1.00	1.00		1.00	1.00	1.32	0.24	0.02	1.00	1.00	
Incremental Delay, d2		9.4	0.3		0.2	0.0	7.0	0.2	0.0	18.3	0.6	
Delay (s)		44.0	31.4		31.0	30.1	53.0	1.6	0.1	62.6	14.3	
Level of Service		D	C		C	C	D	A	A	E	B	
Approach Delay (s)		36.3			30.8			16.5			15.0	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			20.9				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			54.9%				ICU Level of Service		A			
Analysis Period (min)			15									
c Critical Lane Group												




























HCM Signalized Intersection Capacity Analysis
31: Main Street & Sellers Avenue

Background PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.97	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1849	1583		1810	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.94	1.00		0.67	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583		1748	1583		1246	
Volume (vph)	8	685	29	15	570	134	37	220	18	95	78	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	745	32	16	620	146	40	239	20	103	85	3
RTOR Reduction (vph)	0	0	17	0	0	79	0	0	0	0	1	0
Lane Group Flow (vph)	9	745	15	16	620	67	0	279	20	0	190	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Free		Perm	
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2		Free		6	
Actuated Green, G (s)	0.8	40.8	40.8	1.6	41.6	41.6		35.6	90.0		35.6	
Effective Green, g (s)	0.8	40.8	40.8	1.6	41.6	41.6		35.6	90.0		35.6	
Actuated g/C Ratio	0.01	0.45	0.45	0.02	0.46	0.46		0.40	1.00		0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	16	845	718	31	861	732		691	1583		493	
v/s Ratio Prot	0.01	c0.40		0.01	c0.33							
v/s Ratio Perm			0.02			0.09		c0.16	0.01		0.15	
v/c Ratio	0.56	0.88	0.02	0.52	0.72	0.09		0.40	0.01		0.39	
Uniform Delay, d1	44.4	22.4	13.6	43.8	19.5	13.6		19.6	0.0		19.4	
Progression Factor	0.76	0.72	0.40	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	36.3	10.1	0.0	13.7	3.0	0.1		1.8	0.0		2.3	
Delay (s)	70.0	26.2	5.4	57.6	22.5	13.6		21.3	0.0		21.7	
Level of Service	E	C	A	E	C	B		C	A		C	
Approach Delay (s)		25.8			21.6			19.9			21.7	
Approach LOS		C			C			B			C	
Intersection Summary												
HCM Average Control Delay			23.0				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			69.2%				ICU Level of Service		C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 1: Main Street & SR160 SB Ramps

Background +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 				 		 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3511		3433	3539	1583	1770	1592		1770	1666	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3511		3433	3539	1583	1770	1592		1770	1666	
Volume (vph)	4	199	11	402	431	33	22	3	91	11	5	11
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	216	12	437	468	36	24	3	99	12	5	12
RTOR Reduction (vph)	0	5	0	0	0	21	0	61	0	0	8	0
Lane Group Flow (vph)	4	223	0	437	468	15	24	41	0	12	9	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8											
Actuated Green, G (s)	1.3	10.7		27.2	36.6	36.6	4.0	34.6		1.5	32.1	
Effective Green, g (s)	1.3	10.7		27.2	36.6	36.6	4.0	34.6		1.5	32.1	
Actuated g/C Ratio	0.01	0.12		0.30	0.41	0.41	0.04	0.38		0.02	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	26	417		1038	1439	644	79	612		30	594	
v/s Ratio Prot	0.00	c0.06		c0.13	0.13		c0.01	c0.06		0.01	0.01	
v/s Ratio Perm	0.02											
v/c Ratio	0.15	0.53		0.42	0.33	0.02	0.30	0.07		0.40	0.02	
Uniform Delay, d1	43.8	37.3		25.1	18.3	16.0	41.7	17.5		43.8	18.7	
Progression Factor	1.00	1.00		0.51	0.60	0.42	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.7	1.3		0.3	0.1	0.0	2.2	0.2		8.5	0.0	
Delay (s)	46.6	38.6		13.0	11.0	6.7	43.8	17.7		52.3	18.8	
Level of Service	D	D		B	B	A	D	B		D	B	
Approach Delay (s)	38.8			11.8			22.7			32.7		
Approach LOS	D			B			C			C		
Intersection Summary												
HCM Average Control Delay			18.0			HCM Level of Service		B				
HCM Volume to Capacity ratio			0.31									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			35.2%			ICU Level of Service		A				
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↵↵
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	0.88
Frt	1.00		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3525		1770	3539	1770	2787
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3525		1770	3539	1770	2787
Volume (vph)	271	7	78	810	42	377
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	295	8	85	880	46	410
RTOR Reduction (vph)	2	0	0	0	0	189
Lane Group Flow (vph)	301	0	85	880	46	221
Turn Type			Prot		custom	
Protected Phases	4		3	8		
Permitted Phases					2	2
Actuated Green, G (s)	18.0		11.5	33.5	48.5	48.5
Effective Green, g (s)	18.0		11.5	33.5	48.5	48.5
Actuated g/C Ratio	0.20		0.13	0.37	0.54	0.54
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	705		226	1317	954	1502
v/s Ratio Prot	0.09		0.05	c0.25		
v/s Ratio Perm					0.03	0.15
v/c Ratio	0.43		0.38	0.67	0.05	0.15
Uniform Delay, d1	31.5		36.0	23.6	9.8	10.4
Progression Factor	0.38		0.62	0.46	1.00	1.00
Incremental Delay, d2	0.4		0.9	1.1	0.1	0.2
Delay (s)	12.3		23.3	12.1	9.9	10.6
Level of Service	B		C	B	A	B
Approach Delay (s)	12.3			13.1	10.5	
Approach LOS	B			B	B	

Intersection Summary

HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: Main Street & Empire Avenue

Background +Project AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3529		3433	1863	1583		1819	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.87	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3529		3433	1863	1583		1629	1583
Volume (vph)	10	462	174	178	759	15	230	30	30	30	33	14
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	502	189	193	825	16	250	33	33	33	36	15
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	20	0	0	12
Lane Group Flow (vph)	11	502	189	193	840	0	250	33	13	0	69	3
Turn Type	Prot		Free	Prot			Prot		Perm	Perm		Perm
Protected Phases	7	4		3	8		5	2				6
Permitted Phases			Free						2	6		6
Actuated Green, G (s)	1.4	17.6	90.0	25.9	42.1		11.5	34.5	34.5		19.0	19.0
Effective Green, g (s)	1.4	17.6	90.0	25.9	42.1		11.5	34.5	34.5		19.0	19.0
Actuated g/C Ratio	0.02	0.20	1.00	0.29	0.47		0.13	0.38	0.38		0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	28	692	1583	509	1651		439	714	607		344	334
v/s Ratio Prot	0.01	c0.14		0.11	c0.24		c0.07	0.02				
v/s Ratio Perm			0.12						0.02		c0.04	0.01
v/c Ratio	0.39	0.73	0.12	0.38	0.51		0.57	0.05	0.02		0.20	0.01
Uniform Delay, d1	43.9	33.9	0.0	25.6	16.7		36.9	17.4	17.3		29.2	28.1
Progression Factor	0.80	0.93	1.00	0.33	0.19		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.7	3.7	0.2	0.3	0.2		1.7	0.1	0.1		1.3	0.1
Delay (s)	43.7	35.3	0.2	8.7	3.3		38.6	17.5	17.3		30.6	28.1
Level of Service	D	D	A	A	A		D	B	B		C	C
Approach Delay (s)		25.9			4.3			34.2			30.1	
Approach LOS		C			A			C			C	
Intersection Summary												
HCM Average Control Delay			16.9			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			48.0%	ICU Level of Service			A					
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
4: Main Street & Vintage Parkway

Background +Project AM Volumes
2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.95	1.00
Satd. Flow (prot)	1770	3517		1770	3468			1760			1776	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.80			0.71	1.00
Satd. Flow (perm)	1770	3517		1770	3468			1461			1330	1583
Volume (vph)	149	690	30	17	838	131	16	2	3	233	5	185
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	162	750	33	18	911	142	17	2	3	253	5	201
RTOR Reduction (vph)	0	3	0	0	15	0	0	2	0	0	0	132
Lane Group Flow (vph)	162	780	0	18	1038	0	0	20	0	0	258	69
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	15.8	45.7		1.6	31.5			30.7			30.7	30.7
Effective Green, g (s)	15.8	45.7		1.6	31.5			30.7			30.7	30.7
Actuated g/C Ratio	0.18	0.51		0.02	0.35			0.34			0.34	0.34
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	311	1786		31	1214			498			454	540
v/s Ratio Prot	c0.09	0.22		0.01	c0.30							
v/s Ratio Perm								0.02			c0.19	0.13
v/c Ratio	0.52	0.44		0.58	0.86			0.04			0.57	0.13
Uniform Delay, d1	33.7	14.0		43.9	27.1			19.8			24.2	20.4
Progression Factor	0.58	0.61		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.5	0.2		24.7	6.1			0.2			5.1	0.5
Delay (s)	20.9	8.8		68.6	33.2			20.0			29.3	20.9
Level of Service	C	A		E	C			B			C	C
Approach Delay (s)		10.9			33.8			20.0			25.6	
Approach LOS		B			C			B			C	

Intersection Summary

HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background +Project AM Volumes
2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1678	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1712	
Volume (vph)	1	803	47	17	987	1	53	1	21	2	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	873	51	18	1073	1	58	1	23	2	0	3
RTOR Reduction (vph)	0	0	17	0	0	0	0	17	0	0	3	0
Lane Group Flow (vph)	1	873	34	18	1074	0	58	7	0	0	2	0
Turn Type	Prot		Perm		Prot		Prot		Perm			
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4							6		
Actuated Green, G (s)	0.8	72.6	72.6	2.6	74.4		26.1	32.8			2.7	
Effective Green, g (s)	0.8	72.6	72.6	2.6	74.4		26.1	32.8			2.7	
Actuated g/C Ratio	0.01	0.60	0.60	0.02	0.62		0.22	0.27			0.02	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	12	1127	958	38	1154		385	436			39	
v/s Ratio Prot	0.00	c0.47		0.01	c0.58		c0.03	0.02				
v/s Ratio Perm			0.03								c0.00	
v/c Ratio	0.08	0.77	0.04	0.47	0.93		0.15	0.02			0.05	
Uniform Delay, d1	59.2	17.6	9.6	58.0	20.5		38.0	31.8			57.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	3.0	3.4	0.0	9.0	13.1		0.8	0.1			0.6	
Delay (s)	62.2	21.0	9.6	67.1	33.6		38.8	31.9			58.0	
Level of Service	E	C	A	E	C		D	C			E	
Approach Delay (s)		20.4			34.1			36.8			58.0	
Approach LOS		C			C			D			E	

Intersection Summary

HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background +Project AM Volumes
2/4/2010





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖		↖	↗		↖	↗
Sign Control	Free		Free		Stop		Stop					
Grade	0%		0%		0%		0%					
Volume (veh/h)	2	873	82	7	1166	1	33	0	11	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	949	89	8	1267	1	36	0	12	1	1	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	1040											
pX, platoon unblocked												
vC, conflicting volume	1268			1038			2283	2282	993	2248	2325	1267
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1268			1038			2283	2282	993	2248	2325	1267
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			0	100	96	96	97	99
cM capacity (veh/h)	548			670			27	39	298	28	37	206

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2
Volume Total	2	1038	8	1267	1	36	12	2	2
Volume Left	2	0	8	0	0	36	0	1	0
Volume Right	0	89	0	0	1	0	12	0	2
cSH	548	1700	670	1700	1700	27	298	32	206
Volume to Capacity	0.00	0.61	0.01	0.75	0.00	1.34	0.04	0.07	0.01
Queue Length (ft)	0	0	1	0	0	107	3	5	1
Control Delay (s)	11.6	0.0	10.4	0.0	0.0	511.7	17.6	126.1	22.7
Lane LOS	B		B			F	C	F	C
Approach Delay (s)	0.0	0.1		388.1			74.4		
Approach LOS				F			F		

Intersection Summary			
Average Delay	8.0		
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
 7: West Cypress Road & Ohara Avenue

Background +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	44	160	84	85	233	97	79	200	83	76	151	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	174	91	92	253	105	86	217	90	83	164	47
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total (vph)	313	451	303	90	247	47						
Volume Left (vph)	48	92	86	0	83	0						
Volume Right (vph)	91	105	0	90	0	47						
Hadj (s)	-0.1	-0.1	0.2	-0.7	0.2	-0.7						
Departure Headway (s)	7.4	7.6	8.0	7.2	8.2	7.4						
Degree Utilization, x	0.64	0.95	0.68	0.18	0.56	0.10						
Capacity (veh/h)	455	471	429	475	411	463						
Control Delay (s)	13.4	22.2	13.6	9.4	12.6	9.4						
Approach Delay (s)	13.4	22.2	12.6		12.1							
Approach LOS	B	C	B		B							
Intersection Summary												
Delay			15.7									
HCM Level of Service			C									
Intersection Capacity Utilization			71.0%	ICU Level of Service	C							
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 8: West Cypress Road & Rose Avenue

Background +Project AM Volumes
 2/4/2010
































Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	21	265	17	116	218	39	26	38	59	23	18	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	288	18	126	237	42	28	41	64	25	20	16

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	329	405	134	61
Volume Left (vph)	23	126	28	25
Volume Right (vph)	18	42	64	16
Hadj (s)	0.0	0.0	-0.2	0.0
Departure Headway (s)	5.1	6.0	5.7	6.0
Degree Utilization, x	0.46	0.68	0.21	0.10
Capacity (veh/h)	674	542	561	551
Control Delay (s)	9.2	11.9	9.1	9.2
Approach Delay (s)	9.2	11.9	9.1	9.2
Approach LOS	A	B	A	A

Intersection Summary			
Delay		10.3	
HCM Level of Service		B	
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
 9: West Cypress Road & Main Street

Background +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 	 	 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.97		1.00	0.95	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3430		1770	1685	1504	1770	3539	1583	3433	3516	
Flt Permitted	0.29	1.00		0.35	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	536	3430		657	1685	1504	1770	3539	1583	3433	3516	
Volume (vph)	68	285	74	658	357	760	77	285	509	449	241	11
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	310	80	715	388	826	84	310	553	488	262	12
RTOR Reduction (vph)	0	26	0	0	18	243	0	0	35	0	4	0
Lane Group Flow (vph)	74	364	0	715	552	401	84	310	518	488	270	0
Turn Type	pm+pt			pm+pt		Perm	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	18.0	13.9		49.6	41.5	41.5	6.9	15.2	46.9	13.2	21.5	
Effective Green, g (s)	18.0	13.9		49.6	41.5	41.5	6.9	15.2	46.9	13.2	21.5	
Actuated g/C Ratio	0.20	0.15		0.55	0.46	0.46	0.08	0.17	0.52	0.15	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	163	530		754	777	694	136	598	825	504	840	
v/s Ratio Prot	0.02	0.11		c0.33	0.34		0.05	0.09	c0.24	c0.14	0.08	
v/s Ratio Perm	0.07			c0.19		0.43			0.11			
v/c Ratio	0.45	0.69		0.95	0.71	0.58	0.62	0.52	0.63	0.97	0.32	
Uniform Delay, d1	42.8	36.0		21.6	19.4	17.8	40.3	34.1	15.3	38.2	28.2	
Progression Factor	1.00	1.00		0.34	0.46	0.26	1.23	0.86	1.06	1.00	1.00	
Incremental Delay, d2	2.0	3.7		13.8	1.7	0.7	7.5	3.0	1.4	31.7	1.0	
Delay (s)	44.8	39.7		21.3	10.6	5.4	57.2	32.3	17.7	69.9	29.3	
Level of Service	D	D		C	B	A	E	C	B	E	C	
Approach Delay (s)		40.5			12.8			26.0			55.3	
Approach LOS		D			B			C			E	
Intersection Summary												
HCM Average Control Delay			26.9				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			80.7%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗↘		↙↘	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.87	
Flt Protected	0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	3532		1622	
Flt Permitted	0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	3532		1622	
Volume (vph)	205	1056	1609	23	15	228
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	1148	1749	25	16	248
RTOR Reduction (vph)	0	0	1	0	219	0
Lane Group Flow (vph)	223	1148	1773	0	45	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	16.4	73.4	53.0		8.6	
Effective Green, g (s)	16.4	73.4	53.0		8.6	
Actuated g/C Ratio	0.18	0.82	0.59		0.10	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	323	2886	2080		155	
v/s Ratio Prot	c0.13	0.32	c0.50		c0.16	
v/s Ratio Perm						
v/c Ratio	0.69	0.40	0.85		0.29	
Uniform Delay, d1	34.4	2.3	15.3		37.9	
Progression Factor	1.11	0.66	0.21		1.00	
Incremental Delay, d2	4.1	0.1	1.9		4.7	
Delay (s)	42.2	1.6	5.1		42.6	
Level of Service	D	A	A		D	
Approach Delay (s)		8.2	5.1		42.6	
Approach LOS		A	A		D	

Intersection Summary

HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 11: East Cypress Road & Frank Hengel Way

Background +Project AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.96	1.00
Satd. Flow (prot)	1770	3512		1770	3539	1583		1781			1787	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.59			0.69	1.00
Satd. Flow (perm)	1770	3512		1770	3539	1583		1077			1289	1583
Volume (vph)	402	827	45	6	1280	110	75	29	11	109	19	423
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	437	899	49	7	1391	120	82	32	12	118	21	460
RTOR Reduction (vph)	0	3	0	0	0	69	0	4	0	0	0	394
Lane Group Flow (vph)	437	945	0	7	1391	51	0	122	0	0	139	66
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	26.9	64.2		0.8	38.1	38.1		13.0			13.0	13.0
Effective Green, g (s)	26.9	64.2		0.8	38.1	38.1		13.0			13.0	13.0
Actuated g/C Ratio	0.30	0.71		0.01	0.42	0.42		0.14			0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	529	2505		16	1498	670		156			186	229
v/s Ratio Prot	c0.25	0.27		0.00	c0.39							
v/s Ratio Perm						0.08		0.12			0.11	0.29
v/c Ratio	0.83	0.38		0.44	0.93	0.08		0.78			0.75	0.29
Uniform Delay, d1	29.4	5.1		44.4	24.7	15.5		37.1			36.9	34.4
Progression Factor	1.15	1.08		0.73	1.28	1.91		1.00			1.00	1.00
Incremental Delay, d2	9.8	0.1		17.7	10.2	0.0		31.2			23.7	3.2
Delay (s)	43.6	5.6		50.1	41.7	29.6		68.3			60.6	37.6
Level of Service	D	A		D	D	C		E			E	D
Approach Delay (s)		17.6			40.8			68.3			42.9	
Approach LOS		B			D			E			D	
Intersection Summary												
HCM Average Control Delay			33.2				HCM Level of Service				C	
HCM Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			80.7%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 12: East Cypress Road & Machado Lane

Background +Project AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00	1.00	
Frt	1.00	1.00			1.00	0.85				1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3539			3539	1583				1770	1583	
Flt Permitted	0.95	1.00			1.00	1.00				0.76	1.00	
Satd. Flow (perm)	1770	3539			3539	1583				1410	1583	
Volume (vph)	124	327	0	0	687	27	0	0	0	38	0	173
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	135	355	0	0	747	29	0	0	0	41	0	188
RTOR Reduction (vph)	0	0	0	0	0	16	0	0	0	0	135	0
Lane Group Flow (vph)	135	355	0	0	747	13	0	0	0	41	53	0
Turn Type	Prot			Perm		Perm	Perm			Perm		
Protected Phases	7	4			8			2				6
Permitted Phases				8		8	2					6
Actuated Green, G (s)	11.8	56.5			40.7	40.7				25.5	25.5	
Effective Green, g (s)	11.8	56.5			40.7	40.7				25.5	25.5	
Actuated g/C Ratio	0.13	0.63			0.45	0.45				0.28	0.28	
Clearance Time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	232	2222			1600	716				400	449	
v/s Ratio Prot	c0.08	0.10			c0.21							c0.12
v/s Ratio Perm						0.02				0.03		
v/c Ratio	0.58	0.16			0.47	0.02				0.10	0.12	
Uniform Delay, d1	36.8	6.9			17.1	13.6				23.8	23.9	
Progression Factor	0.87	0.61			0.35	0.18				1.00	1.00	
Incremental Delay, d2	3.4	0.0			0.2	0.0				0.5	0.5	
Delay (s)	35.4	4.3			6.2	2.5				24.3	24.5	
Level of Service	D	A			A	A				C	C	
Approach Delay (s)		12.8			6.1			0.0			24.4	
Approach LOS		B			A			A			C	
Intersection Summary												
HCM Average Control Delay			11.1				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			46.6%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 13: East Cypress Road & Project Driveway

Background +Project AM Volumes
 2/4/2010

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗				↘		↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1770	3539			3539	1583				1770		1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1770	3539			3539	1583				1770		1583
Volume (vph)	99	266	0	0	576	22	0	0	0	30	0	138
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	289	0	0	626	24	0	0	0	33	0	150
RTOR Reduction (vph)	0	0	0	0	0	16	0	0	0	0	0	81
Lane Group Flow (vph)	108	289	0	0	626	8	0	0	0	33	0	69
Turn Type	Prot			Perm			custom			custom		
Protected Phases	7	4			8							
Permitted Phases						8				6		6
Actuated Green, G (s)	8.4	40.7			28.3	28.3				41.3		41.3
Effective Green, g (s)	8.4	40.7			28.3	28.3				41.3		41.3
Actuated g/C Ratio	0.09	0.45			0.31	0.31				0.46		0.46
Clearance Time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0		3.0
Lane Grp Cap (vph)	165	1600			1113	498				812		726
v/s Ratio Prot	c0.06	0.08			c0.18							
v/s Ratio Perm						0.02				0.02		0.09
v/c Ratio	0.65	0.18			0.56	0.02				0.04		0.09
Uniform Delay, d1	39.4	14.7			25.7	21.3				13.4		13.8
Progression Factor	1.30	0.92			0.65	0.75				1.00		1.00
Incremental Delay, d2	9.0	0.1			0.6	0.0				0.1		0.3
Delay (s)	60.3	13.6			17.2	16.0				13.5		14.0
Level of Service	E	B			B	B				B		B
Approach Delay (s)		26.3			17.2		0.0				13.9	
Approach LOS		C			B		A				B	

Intersection Summary

HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 14: East Cypress Road & Sellers Avenue

Background +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3388		1770	3532		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.72	1.00	1.00	0.74	1.00	1.00
Satd. Flow (perm)	1770	3388		1770	3532		1340	1863	1583	1370	1863	1583
Volume (vph)	107	355	142	109	693	9	101	30	96	16	53	190
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	116	386	154	118	753	10	110	33	104	17	58	207
RTOR Reduction (vph)	0	51	0	0	1	0	0	0	61	0	0	121
Lane Group Flow (vph)	116	489	0	118	762	0	110	33	43	17	58	86
Turn Type	Prot		Prot		Perm		Perm	Perm	Perm	Perm		Perm
Protected Phases	7	4		3	8			2				6
Permitted Phases							2		2	6		6
Actuated Green, G (s)	8.8	30.9		9.6	31.7		37.5	37.5	37.5	37.5	37.5	37.5
Effective Green, g (s)	8.8	30.9		9.6	31.7		37.5	37.5	37.5	37.5	37.5	37.5
Actuated g/C Ratio	0.10	0.34		0.11	0.35		0.42	0.42	0.42	0.42	0.42	0.42
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	173	1163		189	1244		558	776	660	571	776	660
v/s Ratio Prot	0.07	0.16		c0.07	c0.22			0.02				0.03
v/s Ratio Perm							0.08		0.07	0.01		0.13
v/c Ratio	0.67	0.42		0.62	0.61		0.20	0.04	0.07	0.03	0.07	0.13
Uniform Delay, d1	39.2	22.7		38.5	24.1		16.7	15.6	15.7	15.5	15.8	16.2
Progression Factor	1.21	0.83		1.15	0.89		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.8	0.2		6.3	0.9		0.8	0.1	0.2	0.1	0.2	0.4
Delay (s)	57.3	19.1		50.7	22.2		17.5	15.7	15.9	15.6	16.0	16.6
Level of Service	E	B		D	C		B	B	B	B	B	B
Approach Delay (s)		25.9			26.0			16.6			16.4	
Approach LOS		C			C			B			B	
Intersection Summary												
HCM Average Control Delay			23.5	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				8.0				
Intersection Capacity Utilization			47.6%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 15: East Cypress Road &

Background +Project AM Volumes
 2/4/2010



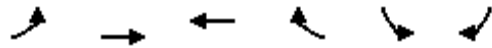
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.95	1.00
Satd. Flow (prot)	1770	3520		1770	3534			1759			1770	1583
Flt Permitted	0.47	1.00		0.66	1.00			0.84			0.73	1.00
Satd. Flow (perm)	873	3520		1234	3534			1540			1360	1583
Volume (vph)	54	125	5	4	273	3	34	0	4	10	0	158
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	136	5	4	297	3	37	0	4	11	0	172
RTOR Reduction (vph)	0	4	0	0	1	0	0	1	0	0	0	48
Lane Group Flow (vph)	59	137	0	4	299	0	0	40	0	0	11	124
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		8		8		2		6		6	
Permitted Phases	4		8		8		2		6		6	
Actuated Green, G (s)	17.1	17.1		17.1	17.1			64.9			64.9	64.9
Effective Green, g (s)	17.1	17.1		17.1	17.1			64.9			64.9	64.9
Actuated g/C Ratio	0.19	0.19		0.19	0.19			0.72			0.72	0.72
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	166	669		234	671			1111			981	1142
v/s Ratio Prot	0.04		c0.08		c0.08		0.03		0.01		0.11	
v/s Ratio Perm	0.07		0.00		0.00		0.03		0.01		0.11	
v/c Ratio	0.36	0.20		0.02	0.45			0.04			0.01	0.11
Uniform Delay, d1	31.7	30.7		29.6	32.3			3.6			3.5	3.8
Progression Factor	1.25	1.22		0.59	0.65			1.00			1.00	1.00
Incremental Delay, d2	1.3	0.1		0.0	0.5			0.1			0.0	0.2
Delay (s)	40.9	37.8		17.4	21.5			3.7			3.5	4.0
Level of Service	D	D		B	C			A			A	A
Approach Delay (s)	38.7		21.4		21.4		3.7		3.7		4.0	
Approach LOS	D		C		C		A		A		A	

Intersection Summary

HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

	→	↘	↙	←	↖	↗		
Movement	EBT	EBR	WBL	WBT	NBL	NBR		
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑		
Sign Control	Free			Free		Stop		
Grade	0%			0%		0%		
Volume (veh/h)	281	60	94	567	71	48		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	305	65	102	616	77	52		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type								None
Median storage (veh)								
Upstream signal (ft)	1050							
pX, platoon unblocked								
vC, conflicting volume			371		818		153	
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol			371		818		153	
tC, single (s)			4.1		6.8		6.9	
tC, 2 stage (s)								
tF (s)			2.2		3.5		3.3	
p0 queue free %			91		73		94	
cM capacity (veh/h)			1184		287		866	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	153	153	65	102	308	308	77	52
Volume Left	0	0	0	102	0	0	77	0
Volume Right	0	0	65	0	0	0	0	52
cSH	1700	1700	1700	1184	1700	1700	287	866
Volume to Capacity	0.09	0.09	0.04	0.09	0.18	0.18	0.27	0.06
Queue Length (ft)	0	0	0	7	0	0	27	5
Control Delay (s)	0.0	0.0	0.0	8.3	0.0	0.0	22.1	9.4
Lane LOS				A			C	
Approach Delay (s)	0.0			1.2			17.0	
Approach LOS							C	
Intersection Summary								
Average Delay			2.5					
Intersection Capacity Utilization			26.9%		ICU Level of Service		A	
Analysis Period (min)			15					

HCM Unsignalized Intersection Capacity Analysis
 17: East Cypress Road & Jersey Island Road



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑	↑↑		↵	↵
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	31	345	626	1	1	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	34	375	680	1	1	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	682				936	341
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	682				936	341
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	95
cM capacity (veh/h)	907				254	655

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	34	188	188	454	228	1	36
Volume Left	34	0	0	0	0	1	0
Volume Right	0	0	0	0	1	0	36
cSH	907	1700	1700	1700	1700	254	655
Volume to Capacity	0.04	0.11	0.11	0.27	0.13	0.00	0.05
Queue Length (ft)	3	0	0	0	0	0	4
Control Delay (s)	9.1	0.0	0.0	0.0	0.0	19.2	10.8
Lane LOS	A					C	B
Approach Delay (s)	0.8			0.0		11.1	
Approach LOS						B	

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization	34.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
 18: East Cypress Road & Bethel Island Road


















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗↗	↑	↙	↘↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	2787
Volume (vph)	232	161	389	16	8	387
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	252	175	423	17	9	421
RTOR Reduction (vph)	0	0	0	14	0	207
Lane Group Flow (vph)	252	175	423	3	9	214
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	16.8	36.3	15.5	15.5	45.7	45.7
Effective Green, g (s)	16.8	36.3	15.5	15.5	45.7	45.7
Actuated g/C Ratio	0.19	0.40	0.17	0.17	0.51	0.51
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	330	1427	609	273	899	1415
v/s Ratio Prot	c0.14	0.05	c0.12		0.01	
v/s Ratio Perm				0.01		0.15
v/c Ratio	0.76	0.12	0.69	0.01	0.01	0.15
Uniform Delay, d1	34.7	16.9	35.0	30.9	11.0	11.8
Progression Factor	0.88	0.76	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.0	0.0	3.4	0.0	0.0	0.2
Delay (s)	40.5	12.8	38.5	30.9	11.0	12.0
Level of Service	D	B	D	C	B	B
Approach Delay (s)		29.1	38.2		12.0	
Approach LOS		C	D		B	

Intersection Summary

HCM Average Control Delay	26.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 19: Laurel Road & SR4 SB Ramps

Background +Project AM Volumes
 2/4/2010



























													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)						4.0				4.0	4.0		
Lane Util. Factor						1.00				0.95	0.95		
Frt						0.86				1.00	1.00		
Flt Protected						1.00				0.95	0.95		
Satd. Flow (prot)						1611				1681	1681		
Flt Permitted						1.00				0.95	0.95		
Satd. Flow (perm)						1611				1681	1681		
Volume (vph)	0	0	0	0	0	460	0	0	0	417	0	0	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	0	0	0	0	500	0	0	0	453	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	0	0	0	0	500	0	0	0	227	226	0	
Turn Type						Free				Prot			
Protected Phases										1	6		
Permitted Phases						Free							
Actuated Green, G (s)						90.0				90.0	90.0		
Effective Green, g (s)						90.0				90.0	90.0		
Actuated g/C Ratio						1.00				1.00	1.00		
Clearance Time (s)										4.0	4.0		
Vehicle Extension (s)										3.0	3.0		
Lane Grp Cap (vph)						1611				1681	1681		
v/s Ratio Prot										0.14	0.13		
v/s Ratio Perm						0.31							
v/c Ratio						0.31				0.14	0.13		
Uniform Delay, d1						0.0				0.0	0.0		
Progression Factor						1.00				1.00	1.00		
Incremental Delay, d2						0.5				0.0	0.0		
Delay (s)						0.5				0.0	0.0		
Level of Service						A				A	A		
Approach Delay (s)		0.0			0.5			0.0			0.0		
Approach LOS		A			A			A			A		
Intersection Summary													
HCM Average Control Delay			0.3									HCM Level of Service	A
HCM Volume to Capacity ratio			0.31										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	0.0
Intersection Capacity Utilization			14.9%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 20: Laurel Road & SR4 NB Ramps

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0			4.0			
Lane Util. Factor		0.95			0.95	1.00			1.00			
Frt		1.00			1.00	0.85			0.85			
Flt Protected		1.00			1.00	1.00			1.00			
Satd. Flow (prot)		3539			3539	1583			1583			
Flt Permitted		1.00			1.00	1.00			1.00			
Satd. Flow (perm)		3539			3539	1583			1583			
Volume (vph)	0	417	0	0	460	843	0	0	252	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	453	0	0	500	916	0	0	274	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	99	0	0	0
Lane Group Flow (vph)	0	453	0	0	500	916	0	0	175	0	0	0
Turn Type	Prot				Free		Perm		Perm			
Protected Phases	7	4			8				2			
Permitted Phases					Free		2		2			
Actuated Green, G (s)		24.5			24.5	90.0			57.5			
Effective Green, g (s)		24.5			24.5	90.0			57.5			
Actuated g/C Ratio		0.27			0.27	1.00			0.64			
Clearance Time (s)		4.0			4.0				4.0			
Vehicle Extension (s)		3.0			3.0				3.0			
Lane Grp Cap (vph)		963			963	1583			1011			
v/s Ratio Prot		0.13			0.14							
v/s Ratio Perm						0.58			0.17			
v/c Ratio		0.47			0.52	0.58			0.17			
Uniform Delay, d1		27.3			27.8	0.0			6.6			
Progression Factor		1.00			0.74	1.00			1.00			
Incremental Delay, d2		0.4			0.4	1.3			0.4			
Delay (s)		27.7			21.0	1.3			7.0			
Level of Service		C			C	A			A			
Approach Delay (s)		27.7			8.2			7.0			0.0	
Approach LOS		C			A			A			A	
Intersection Summary												
HCM Average Control Delay			12.2				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				0.0	
Intersection Capacity Utilization			33.8%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												



























HCM Signalized Intersection Capacity Analysis
 21: Laurel Road & Empire Avenue

Background +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3449		1770	3304	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.50	1.00		0.49	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	939	3449		911	3304	
Volume (vph)	205	431	187	114	786	91	167	286	59	47	182	145
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	468	203	124	854	99	182	311	64	51	198	158
RTOR Reduction (vph)	0	0	127	0	0	70	0	18	0	0	95	0
Lane Group Flow (vph)	223	468	76	124	854	29	182	357	0	51	261	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	15.8	33.6	33.6	8.7	26.5	26.5	35.7	35.7		35.7	35.7	
Effective Green, g (s)	15.8	33.6	33.6	8.7	26.5	26.5	35.7	35.7		35.7	35.7	
Actuated g/C Ratio	0.18	0.37	0.37	0.10	0.29	0.29	0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	311	1321	591	171	1042	466	372	1368		361	1311	
v/s Ratio Prot	c0.13	0.13		0.07	c0.24			0.11			0.11	
v/s Ratio Perm			0.13			0.06	c0.19			0.06		
v/c Ratio	0.72	0.35	0.13	0.73	0.82	0.06	0.49	0.26		0.14	0.20	
Uniform Delay, d1	35.0	20.4	18.6	39.5	29.5	22.8	20.3	18.3		17.4	17.8	
Progression Factor	0.76	0.86	0.49	0.99	0.42	0.24	1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.6	0.2	0.1	12.0	4.3	0.0	4.5	0.5		0.8	0.3	
Delay (s)	34.3	17.6	9.2	51.2	16.6	5.4	24.9	18.7		18.2	18.1	
Level of Service	C	B	A	D	B	A	C	B		B	B	
Approach Delay (s)		19.9			19.6			20.7			18.1	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay			19.7			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)			12.0					
Intersection Capacity Utilization			65.4%	ICU Level of Service			C					
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
22: Laurel Road & Ohara Avenue

Background +Project AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3460		1770	3367	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.36	1.00		0.54	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	671	3460		1004	3367	
Volume (vph)	72	456	63	91	723	72	94	263	46	27	389	187
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	78	496	68	99	786	78	102	286	50	29	423	203
RTOR Reduction (vph)	0	0	50	0	0	57	0	13	0	0	52	0
Lane Group Flow (vph)	78	496	18	99	786	21	102	323	0	29	574	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	7.9	23.7	23.7	8.8	24.6	24.6	45.5	45.5		45.5	45.5	
Effective Green, g (s)	7.9	23.7	23.7	8.8	24.6	24.6	45.5	45.5		45.5	45.5	
Actuated g/C Ratio	0.09	0.26	0.26	0.10	0.27	0.27	0.51	0.51		0.51	0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	155	932	417	173	967	433	339	1749		508	1702	
v/s Ratio Prot	0.04	c0.14		0.06	c0.22			0.10			c0.19	
v/s Ratio Perm			0.04			0.05	0.15			0.03		
v/c Ratio	0.50	0.53	0.04	0.57	0.81	0.05	0.30	0.18		0.06	0.34	
Uniform Delay, d1	39.2	28.4	24.7	38.8	30.5	24.1	13.0	12.1		11.3	13.3	
Progression Factor	0.66	0.55	0.77	0.95	0.96	0.97	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.5	0.6	0.0	4.4	5.2	0.0	2.3	0.2		0.2	0.5	
Delay (s)	28.5	16.2	19.0	41.4	34.6	23.3	15.2	12.4		11.5	13.8	
Level of Service	C	B	B	D	C	C	B	B		B	B	
Approach Delay (s)		18.0			34.4			13.0			13.7	
Approach LOS		B			C			B			B	
Intersection Summary												
HCM Average Control Delay			22.0			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			59.3%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
23: Laurel Road & Rose Avenue

Background +Project AM Volumes
2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	156	464	0	2	700	26	0	1	2	13	1	243
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	170	504	0	2	761	28	0	1	2	14	1	264
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked	0.92			0.78			0.82	0.82	0.78	0.82	0.82	0.92
vC, conflicting volume	789			504			1888	1637	504	1626	1623	775
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	771			362			1942	1635	362	1621	1618	756
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	78			100			100	98	100	74	98	30
cM capacity (veh/h)	777			930			10	64	530	55	66	376

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	674	791	3	279
Volume Left	170	2	0	14
Volume Right	0	28	2	264
cSH	777	930	155	286
Volume to Capacity	0.22	0.00	0.02	0.98
Queue Length (ft)	21	0	2	245
Control Delay (s)	5.3	0.1	28.7	86.6
Lane LOS	A	A	D	F
Approach Delay (s)	5.3	0.1	28.7	86.6
Approach LOS			D	F

Intersection Summary			
Average Delay		16.0	
Intersection Capacity Utilization	104.0%	ICU Level of Service	G
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
 24: Laurel Road & Main Street

Background +Project AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1808	1583	1770	3478		1770	3393	
Flt Permitted	0.42	1.00	1.00		0.77	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	789	1863	1583		1433	1583	1770	3478		1770	3393	
Volume (vph)	202	74	245	144	96	133	101	541	70	84	711	271
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	220	80	266	157	104	145	110	588	76	91	773	295
RTOR Reduction (vph)	0	0	194	0	0	106	0	9	0	0	36	0
Lane Group Flow (vph)	220	80	72	0	261	39	110	655	0	91	1032	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	24.4	24.4	24.4		24.4	24.4	8.0	45.6		8.0	45.6	
Effective Green, g (s)	24.4	24.4	24.4		24.4	24.4	8.0	45.6		8.0	45.6	
Actuated g/C Ratio	0.27	0.27	0.27		0.27	0.27	0.09	0.51		0.09	0.51	
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	214	505	429		389	429	157	1762		157	1719	
v/s Ratio Prot		0.04					c0.06	0.19		0.05	c0.31	
v/s Ratio Perm	c0.28		0.17		0.18	0.09						
v/c Ratio	1.03	0.16	0.17		0.67	0.09	0.70	0.37		0.58	0.60	
Uniform Delay, d1	32.8	25.0	25.0		29.2	24.5	39.8	13.5		39.4	15.7	
Progression Factor	0.49	0.49	0.18		1.00	1.00	0.77	0.56		0.97	1.26	
Incremental Delay, d2	68.1	0.1	0.2		4.5	0.1	12.5	0.6		3.6	1.1	
Delay (s)	84.1	12.4	4.8		33.7	24.6	43.2	8.2		41.8	20.9	
Level of Service	F	B	A		C	C	D	A		D	C	
Approach Delay (s)		36.7			30.5			13.2			22.6	
Approach LOS		D			C			B			C	
Intersection Summary												
HCM Average Control Delay			23.9				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			66.5%				ICU Level of Service			C		
Analysis Period (min)			15									
c	Critical Lane Group											



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷	↶	↶	↶	↷
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	76	139	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	83	151	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	234	151	151			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	234	151	151			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	754	895	1430			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	0	0	0	83	151	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.05	0.09	0.00
Queue Length (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	0.0		0.0		0.0	
Approach LOS	A					

Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			10.6%		ICU Level of Service	A
Analysis Period (min)			15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	0.93		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1681		1770	1724		1770	3530		1770	3445	
Flt Permitted	0.63	1.00		0.64	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1182	1681		1190	1724		1770	3530		1770	3445	
Volume (vph)	210	40	74	34	58	57	53	661	11	29	775	167
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	43	80	37	63	62	58	718	12	32	842	182
RTOR Reduction (vph)	0	62	0	0	47	0	0	1	0	0	15	0
Lane Group Flow (vph)	228	61	0	37	78	0	58	729	0	32	1009	0
Turn Type	Perm		Perm		Prot		Prot					
Protected Phases	4		8		5		2		1		6	
Permitted Phases	4		8									
Actuated Green, G (s)	19.8	19.8		19.8	19.8		7.2	53.4		4.8	51.0	
Effective Green, g (s)	19.8	19.8		19.8	19.8		7.2	53.4		4.8	51.0	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.08	0.59		0.05	0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	260	370		262	379		142	2094		94	1952	
v/s Ratio Prot		0.07			0.07		0.03	c0.21		0.02	c0.30	
v/s Ratio Perm	c0.19		0.03									
v/c Ratio	0.88	0.16		0.14	0.21		0.41	0.35		0.34	0.52	
Uniform Delay, d1	33.9	28.4		28.3	28.7		39.4	9.4		41.1	11.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.73	0.45	
Incremental Delay, d2	26.4	0.2		0.2	0.3		1.9	0.5		1.9	0.8	
Delay (s)	60.4	28.6		28.5	29.0		41.3	9.8		32.0	6.3	
Level of Service	E	C		C	C		D	A		C	A	
Approach Delay (s)		49.2			28.8			12.2			7.1	
Approach LOS		D			C			B			A	

Intersection Summary

HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	89	55	59	642	846	219
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	97	60	64	698	920	238
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1865	1039	1158			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1865	1039	1158			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	79	89			
cM capacity (veh/h)	71	280	604			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	157	762	1158			
Volume Left	97	64	0			
Volume Right	60	0	238			
cSH	100	604	1700			
Volume to Capacity	1.57	0.11	0.68			
Queue Length (ft)	299	9	0			
Control Delay (s)	372.6	2.9	0.0			
Lane LOS	F	A				
Approach Delay (s)	372.6	2.9	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay		29.2				
Intersection Capacity Utilization		97.7%		ICU Level of Service		F
Analysis Period (min)		15				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free		Free	Free
Grade	0%		0%		0%	0%
Volume (veh/h)	106	174	512	60	166	722
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	115	189	557	65	180	785
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1735	589			622	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1735	589			622	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	63			81	
cM capacity (veh/h)	78	508			959	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	304	622	180	785
Volume Left	115	0	180	0
Volume Right	189	65	0	0
cSH	165	1700	959	1700
Volume to Capacity	1.85	0.37	0.19	0.46
Queue Length (ft)	563	0	17	0
Control Delay (s)	450.2	0.0	9.6	0.0
Lane LOS	F		A	
Approach Delay (s)	450.2	0.0	1.8	
Approach LOS	F			

Intersection Summary			
Average Delay		73.4	
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)		15	

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	42	100	38	66	133	31	23	111	44	56	185	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	46	109	41	72	145	34	25	121	48	61	201	83

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	196	250	193	345
Volume Left (vph)	46	72	25	61
Volume Right (vph)	41	34	48	83
Hadj (s)	0.0	0.0	-0.1	-0.1
Departure Headway (s)	5.7	5.4	5.5	5.3
Degree Utilization, x	0.31	0.37	0.30	0.51
Capacity (veh/h)	583	542	589	654
Control Delay (s)	9.3	9.2	9.1	9.7
Approach Delay (s)	9.3	9.2	9.1	9.7
Approach LOS	A	A	A	A

Intersection Summary			
Delay		9.4	
HCM Level of Service		A	
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
30: Lone Tree Way & Main Street

Background +Project AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1778	1583		1788	1583	1770	3539	1583	1770	3400	
Flt Permitted		0.70	1.00		0.71	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1313	1583		1329	1583	1770	3539	1583	1770	3400	
Volume (vph)	130	6	194	33	6	4	185	366	15	4	477	169
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	7	211	36	7	4	201	398	16	4	518	184
RTOR Reduction (vph)	0	0	177	0	0	3	0	0	5	0	28	0
Lane Group Flow (vph)	0	148	34	0	43	1	201	398	11	4	674	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		14.7	14.7		14.7	14.7	16.3	61.3	61.3	2.0	47.0	
Effective Green, g (s)		14.7	14.7		14.7	14.7	16.3	61.3	61.3	2.0	47.0	
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.18	0.68	0.68	0.02	0.52	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		214	259		217	259	321	2410	1078	39	1776	
v/s Ratio Prot							c0.11	0.11		0.00	c0.21	
v/s Ratio Perm		0.11	0.13		0.03	0.00			0.01			
v/c Ratio		0.69	0.13		0.20	0.00	0.63	0.17	0.01	0.10	0.38	
Uniform Delay, d1		35.5	32.2		32.6	31.5	34.0	5.2	4.6	43.1	12.8	
Progression Factor		1.00	1.00		1.00	1.00	0.99	0.32	0.17	1.00	1.00	
Incremental Delay, d2		9.3	0.2		0.5	0.0	3.5	0.1	0.0	1.2	0.6	
Delay (s)		44.8	32.4		33.0	31.5	37.2	1.8	0.8	44.3	13.4	
Level of Service		D	C		C	C	D	A	A	D	B	
Approach Delay (s)		37.5			32.9			13.3			13.6	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			19.0				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			53.0%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												























HCM Signalized Intersection Capacity Analysis
31: Main Street & Sellers Avenue

Background +Project AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1840	1583		1831	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.92	1.00		0.89	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583		1716	1583		1662	
Volume (vph)	2	369	30	21	466	29	21	64	7	53	115	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	401	33	23	507	32	23	70	8	58	125	2
RTOR Reduction (vph)	0	0	20	0	0	19	0	0	0	0	1	0
Lane Group Flow (vph)	2	401	13	23	507	13	0	93	8	0	184	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Free		Perm	
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2		Free		6	
Actuated Green, G (s)	1.2	34.6	34.6	3.1	36.5	36.5		40.3	90.0		40.3	
Effective Green, g (s)	1.2	34.6	34.6	3.1	36.5	36.5		40.3	90.0		40.3	
Actuated g/C Ratio	0.01	0.38	0.38	0.03	0.41	0.41		0.45	1.00		0.45	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	24	716	609	61	756	642		768	1583		744	
v/s Ratio Prot	0.00	0.22		c0.01	c0.27							
v/s Ratio Perm			0.02			0.02		0.05	0.01		c0.11	
v/c Ratio	0.08	0.56	0.02	0.38	0.67	0.02		0.12	0.01		0.25	
Uniform Delay, d1	43.9	21.7	17.2	42.5	21.8	16.0		14.5	0.0		15.4	
Progression Factor	1.12	0.77	0.57	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	1.4	1.0	0.0	3.9	2.3	0.0		0.3	0.0		0.8	
Delay (s)	50.5	17.7	9.9	46.4	24.2	16.0		14.8	0.0		16.2	
Level of Service	D	B	A	D	C	B		B	A		B	
Approach Delay (s)		17.3			24.6			13.7			16.2	
Approach LOS		B			C			B			B	
Intersection Summary												
HCM Average Control Delay			20.1				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			47.0%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
1: Main Street & SR160 SB Ramps

Background +Project PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.86		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3478		3433	3539	1583	1770	1597		1770	1767	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3478		3433	3539	1583	1770	1597		1770	1767	
Volume (vph)	5	317	41	383	225	38	18	6	128	32	19	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	345	45	416	245	41	20	7	139	35	21	11
RTOR Reduction (vph)	0	12	0	0	0	24	0	97	0	0	7	0
Lane Group Flow (vph)	5	378	0	416	245	17	20	49	0	35	25	0
Turn Type	Prot			Prot			Perm	Prot		Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	8											
Actuated Green, G (s)	1.3	17.7		21.9	38.3	38.3	3.0	27.1		7.3	31.4	
Effective Green, g (s)	1.3	17.7		21.9	38.3	38.3	3.0	27.1		7.3	31.4	
Actuated g/C Ratio	0.01	0.20		0.24	0.43	0.43	0.03	0.30		0.08	0.35	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	26	684		835	1506	674	59	481		144	616	
v/s Ratio Prot	0.00	c0.11		c0.12	0.07		0.01	c0.09		c0.02	0.02	
v/s Ratio Perm	0.03											
v/c Ratio	0.19	0.55		0.50	0.16	0.03	0.34	0.10		0.24	0.04	
Uniform Delay, d1	43.8	32.6		29.3	16.0	15.0	42.5	22.7		38.8	19.3	
Progression Factor	1.00	1.00		0.58	0.15	0.09	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.6	1.0		0.5	0.0	0.0	3.4	0.4		0.9	0.1	
Delay (s)	47.4	33.6		17.3	2.5	1.4	45.9	23.1		39.6	19.5	
Level of Service	D	C		B	A	A	D	C		D	B	
Approach Delay (s)	33.7			11.2			25.8			30.0		
Approach LOS	C			B			C			C		
Intersection Summary												
HCM Average Control Delay			20.7			HCM Level of Service		C				
HCM Volume to Capacity ratio			0.42									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		16.0				
Intersection Capacity Utilization			45.9%			ICU Level of Service		A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
2: Main Street & SR160 NB Ramps





























Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	↵↵
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	0.88
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3519		1770	3539	1770	2787
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3519		1770	3539	1770	2787
Volume (vph)	546	21	91	649	35	605
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	593	23	99	705	38	658
RTOR Reduction (vph)	3	0	0	0	0	355
Lane Group Flow (vph)	613	0	99	705	38	303
Turn Type			Prot			custom
Protected Phases	4		3	8		
Permitted Phases					2	2
Actuated Green, G (s)	28.5		8.1	40.6	41.4	41.4
Effective Green, g (s)	28.5		8.1	40.6	41.4	41.4
Actuated g/C Ratio	0.32		0.09	0.45	0.46	0.46
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1114		159	1596	814	1282
v/s Ratio Prot	c0.18		c0.06	0.20		
v/s Ratio Perm					0.02	0.24
v/c Ratio	0.55		0.62	0.44	0.05	0.24
Uniform Delay, d1	25.4		39.5	16.9	13.4	14.7
Progression Factor	0.92		0.91	0.43	1.00	1.00
Incremental Delay, d2	0.5		6.8	0.2	0.1	0.4
Delay (s)	24.1		42.7	7.5	13.5	15.2
Level of Service	C		D	A	B	B
Approach Delay (s)	24.1			11.9	15.1	
Approach LOS	C			B	B	

Intersection Summary

HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: Main Street & Empire Avenue

Background +Project PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 		 				 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3528		3433	1863	1583		1833	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.94	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3528		3433	1863	1583		1751	1583
Volume (vph)	16	871	303	205	554	12	222	3	135	12	25	13
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	947	329	223	602	13	241	3	147	13	27	14
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	93	0	0	11
Lane Group Flow (vph)	17	947	329	223	613	0	241	3	54	0	40	3
Turn Type	Prot		Free	Prot			Prot		Perm	Perm		Perm
Protected Phases	7	4		3	8		5	2				6
Permitted Phases			Free						2	6		6
Actuated Green, G (s)	1.6	27.5	90.0	17.3	43.2		9.4	33.2	33.2		19.8	19.8
Effective Green, g (s)	1.6	27.5	90.0	17.3	43.2		9.4	33.2	33.2		19.8	19.8
Actuated g/C Ratio	0.02	0.31	1.00	0.19	0.48		0.10	0.37	0.37		0.22	0.22
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	31	1081	1583	340	1693		359	687	584		385	348
v/s Ratio Prot	0.01	c0.27		c0.13	0.17		c0.07	0.00				
v/s Ratio Perm			0.21						0.09		0.02	0.01
v/c Ratio	0.55	0.88	0.21	0.66	0.36		0.67	0.00	0.09		0.10	0.01
Uniform Delay, d1	43.8	29.6	0.0	33.6	14.7		38.8	18.0	18.6		28.0	27.4
Progression Factor	1.05	0.71	1.00	0.44	0.20		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	17.1	7.6	0.3	4.0	0.1		4.9	0.0	0.3		0.5	0.0
Delay (s)	62.9	28.6	0.3	18.8	3.1		43.7	18.0	18.9		28.6	27.5
Level of Service	E	C	A	B	A		D	B	B		C	C
Approach Delay (s)		21.8			7.3			34.2			28.3	
Approach LOS		C			A			C			C	
Intersection Summary												
HCM Average Control Delay			19.1			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			58.4%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
4: Main Street & Vintage Parkway

Background +Project PM Volumes
2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.97			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.95	1.00
Satd. Flow (prot)	1770	3535		1770	3431			1757			1775	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.81			0.71	1.00
Satd. Flow (perm)	1770	3535		1770	3431			1477			1329	1583
Volume (vph)	173	1064	9	12	635	163	17	1	3	168	3	98
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	188	1157	10	13	690	177	18	1	3	183	3	107
RTOR Reduction (vph)	0	0	0	0	31	0	0	2	0	0	0	72
Lane Group Flow (vph)	188	1167	0	13	836	0	0	20	0	0	186	35
Turn Type	Prot		Prot		Perm			Perm		Perm		Perm
Protected Phases	7	4		3	8			2			6	6
Permitted Phases							2			6		6
Actuated Green, G (s)	21.6	47.0		1.5	26.9			29.5			29.5	29.5
Effective Green, g (s)	21.6	47.0		1.5	26.9			29.5			29.5	29.5
Actuated g/C Ratio	0.24	0.52		0.02	0.30			0.33			0.33	0.33
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	425	1846		30	1025			484			436	519
v/s Ratio Prot	0.11	c0.33		0.01	c0.25							
v/s Ratio Perm								0.01			c0.14	0.07
v/c Ratio	0.44	0.63		0.43	0.82			0.04			0.43	0.07
Uniform Delay, d1	29.1	15.3		43.8	29.3			20.6			23.6	20.8
Progression Factor	0.60	0.83		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.6	0.6		9.7	5.1			0.2			3.0	0.3
Delay (s)	18.0	13.3		53.6	34.4			20.8			26.7	21.0
Level of Service	B	B		D	C			C			C	C
Approach Delay (s)		13.9			34.6			20.8			24.6	
Approach LOS		B			C			C			C	

Intersection Summary

HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background +Project PM Volumes
2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1722	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1779	
Volume (vph)	2	1257	161	30	820	1	135	2	42	2	0	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1366	175	33	891	1	147	2	46	2	0	1
RTOR Reduction (vph)	0	0	31	0	0	0	0	36	0	0	1	0
Lane Group Flow (vph)	2	1366	144	33	892	0	147	12	0	0	2	0
Turn Type	Prot		Perm		Prot		Prot		Perm			
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4							6		
Actuated Green, G (s)	0.8	101.8	101.8	3.2	104.2		26.2	33.0			2.8	
Effective Green, g (s)	0.8	101.8	101.8	3.2	104.2		26.2	33.0			2.8	
Actuated g/C Ratio	0.01	0.68	0.68	0.02	0.69		0.17	0.22			0.02	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	9	1264	1074	38	1293		309	351			33	
v/s Ratio Prot	0.00	c0.73		0.02	c0.48		c0.08	c0.03				
v/s Ratio Perm			0.11								0.00	
v/c Ratio	0.22	1.08	0.13	0.87	0.69		0.48	0.03			0.06	
Uniform Delay, d1	74.3	24.1	8.5	73.2	13.4		55.7	46.0			72.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	12.1	50.1	0.1	93.8	1.6		5.2	0.2			0.8	
Delay (s)	86.4	74.2	8.6	167.0	15.0		60.9	46.2			73.1	
Level of Service	F	E	A	F	B		E	D			E	
Approach Delay (s)		66.8			20.4			57.3			73.1	
Approach LOS		E			C			E			E	

Intersection Summary			
HCM Average Control Delay	50.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background +Project PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	1	1366	145	7	1322	0	29	0	7	4	0	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1485	158	8	1437	0	32	0	8	4	0	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage veh)												
Upstream signal (ft)	1040											
pX, platoon unblocked												
vC, conflicting volume	1437			1642			3021			3018		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1437			1642			3021			3018		
tC, single (s)	4.1			4.1			7.1			6.5		
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5			4.0		
p0 queue free %	100			98			0			100		
cM capacity (veh/h)	472			394			8			13		
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	1	1642	8	1437	0	32	8	4	3			
Volume Left	1	0	8	0	0	32	0	4	0			
Volume Right	0	158	0	0	0	0	8	0	3			
cSH	472	1700	394	1700	1700	8	137	9	163			
Volume to Capacity	0.00	0.97	0.02	0.85	0.00	4.04	0.06	0.51	0.02			
Queue Length (ft)	0	0	1	0	0	Err	4	26	2			
Control Delay (s)	12.6	0.0	14.3	0.0	0.0	Err	32.7	646.0	27.5			
Lane LOS	B		B			F	D	F	D			
Approach Delay (s)	0.0		0.1			8061.1		380.9				
Approach LOS						F		F				
Intersection Summary												
Average Delay			101.6									
Intersection Capacity Utilization			97.4%			ICU Level of Service				F		
Analysis Period (min)	15											

HCM Unsignalized Intersection Capacity Analysis
7: West Cypress Road & Ohara Avenue

Background +Project PM Volumes
2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	32	164	45	79	222	43	71	98	94	62	149	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	178	49	86	241	47	77	107	102	67	162	83

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total (vph)	262	374	184	102	229	83
Volume Left (vph)	35	86	77	0	67	0
Volume Right (vph)	49	47	0	102	0	83
Hadj (s)	-0.1	0.0	0.2	-0.7	0.2	-0.7
Departure Headway (s)	6.4	6.4	7.3	6.3	7.1	6.3
Degree Utilization, x	0.47	0.67	0.37	0.18	0.45	0.14
Capacity (veh/h)	526	507	458	524	486	547
Control Delay (s)	10.8	12.4	10.1	8.5	10.4	8.3
Approach Delay (s)	10.8	12.4	9.5		9.8	
Approach LOS	B	B	A		A	

Intersection Summary	
Delay	10.8
HCM Level of Service	B
Intersection Capacity Utilization	61.2%
ICU Level of Service	B
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
 8: West Cypress Road & Rose Avenue

Background +Project PM Volumes
 2/4/2010






























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	243	24	106	230	16	24	123	153	53	49	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	264	26	115	250	17	26	134	166	58	53	26

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	292	383	326	137
Volume Left (vph)	2	115	26	58
Volume Right (vph)	26	17	166	26
Hadj (s)	0.0	0.1	-0.3	0.0
Departure Headway (s)	6.0	6.7	6.0	6.6
Degree Utilization, x	0.49	0.71	0.54	0.25
Capacity (veh/h)	555	493	563	500
Control Delay (s)	10.5	13.5	10.7	10.2
Approach Delay (s)	10.5	13.5	10.7	10.2
Approach LOS	B	B	B	B

Intersection Summary			
Delay		11.5	
HCM Level of Service		B	
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
 9: West Cypress Road & Main Street

Background +Project PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 	 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.98		1.00	0.97	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3469		1770	1713	1504	1770	3539	1583	3433	3533	
Flt Permitted	0.27	1.00		0.30	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	500	3469		563	1713	1504	1770	3539	1583	3433	3533	
Volume (vph)	52	358	54	506	287	583	84	291	626	810	392	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	389	59	550	312	634	91	316	680	880	426	5
RTOR Reduction (vph)	0	13	0	0	11	359	0	0	19	0	1	0
Lane Group Flow (vph)	57	435	0	550	385	191	91	316	661	880	430	0
Turn Type	pm+pt			pm+pt		Perm	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	20.4	14.9		40.8	31.3	31.3	7.7	15.2	37.1	22.0	29.5	
Effective Green, g (s)	20.4	14.9		40.8	31.3	31.3	7.7	15.2	37.1	22.0	29.5	
Actuated g/C Ratio	0.23	0.17		0.45	0.35	0.35	0.09	0.17	0.41	0.24	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	191	574		549	596	523	151	598	653	839	1158	
v/s Ratio Prot	0.02	0.13		0.24	0.23		0.05	0.09	c0.25	c0.26	0.12	
v/s Ratio Perm	0.05			0.21		0.37			0.18			
v/c Ratio	0.30	0.76		1.00	0.65	0.37	0.60	0.53	1.01	1.05	0.37	
Uniform Delay, d1	38.9	35.8		27.4	24.7	21.9	39.7	34.1	26.4	34.0	23.2	
Progression Factor	1.00	1.00		0.62	0.51	0.89	1.30	0.79	1.11	1.00	1.00	
Incremental Delay, d2	0.9	5.7		36.3	2.1	0.4	5.4	2.7	34.9	44.7	0.9	
Delay (s)	39.8	41.5		53.2	14.8	19.9	56.8	29.6	64.2	78.7	24.1	
Level of Service	D	D		D	B	B	E	C	E	E	C	
Approach Delay (s)		41.3			30.8			53.5			60.7	
Approach LOS		D			C			D			E	
Intersection Summary												
HCM Average Control Delay			46.5				HCM Level of Service				D	
HCM Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			84.1%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑↗		↘↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.87	
Flt Protected	0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	3537		1620	
Flt Permitted	0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	3537		1620	
Volume (vph)	94	1710	1252	5	4	65
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	1859	1361	5	4	71
RTOR Reduction (vph)	0	0	0	0	66	0
Lane Group Flow (vph)	102	1859	1366	0	9	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	9.3	76.2	62.9		5.8	
Effective Green, g (s)	9.3	76.2	62.9		5.8	
Actuated g/C Ratio	0.10	0.85	0.70		0.06	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	183	2996	2472		104	
v/s Ratio Prot	0.06	c0.53	0.39		c0.05	
v/s Ratio Perm						
v/c Ratio	0.56	0.62	0.55		0.08	
Uniform Delay, d1	38.4	2.2	6.6		39.6	
Progression Factor	1.19	0.57	0.32		1.00	
Incremental Delay, d2	1.1	0.1	0.2		1.5	
Delay (s)	46.7	1.4	2.3		41.1	
Level of Service	D	A	A		D	
Approach Delay (s)		3.7	2.3		41.1	
Approach LOS		A	A		D	
Intersection Summary						
HCM Average Control Delay			4.0		HCM Level of Service	A
HCM Volume to Capacity ratio			0.63			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			58.2%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
 11: East Cypress Road & Frank Hengel Way

Background +Project PM Volumes
 2/4/2010























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖		↕			↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.96	1.00
Satd. Flow (prot)	1770	3522		1770	3539	1583		1768			1780	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.73			0.80	1.00
Satd. Flow (perm)	1770	3522		1770	3539	1583		1343			1493	1583
Volume (vph)	133	1731	58	6	1397	13	39	2	3	26	2	125
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	145	1882	63	7	1518	14	42	2	3	28	2	136
RTOR Reduction (vph)	0	2	0	0	0	5	0	3	0	0	0	127
Lane Group Flow (vph)	145	1943	0	7	1518	9	0	44	0	0	30	9
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	12.5	70.5		1.4	59.4	59.4		6.1			6.1	6.1
Effective Green, g (s)	12.5	70.5		1.4	59.4	59.4		6.1			6.1	6.1
Actuated g/C Ratio	0.14	0.78		0.02	0.66	0.66		0.07			0.07	0.07
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	246	2759		28	2336	1045		91			101	107
v/s Ratio Prot	c0.08	c0.55		0.00	0.43							
v/s Ratio Perm						0.01		0.04			0.02	0.09
v/c Ratio	0.59	0.70		0.25	0.65	0.01		0.49			0.30	0.09
Uniform Delay, d1	36.3	4.7		43.8	9.1	5.2		40.4			39.9	39.3
Progression Factor	1.18	0.67		1.21	1.44	0.94		1.00			1.00	1.00
Incremental Delay, d2	3.0	0.7		4.5	0.6	0.0		17.4			7.4	1.6
Delay (s)	45.9	3.8		57.5	13.8	4.9		57.8			47.3	40.9
Level of Service	D	A		E	B	A		E			D	D
Approach Delay (s)		6.8			13.9			57.8			42.1	
Approach LOS		A			B			E			D	

Intersection Summary

HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 12: East Cypress Road & Machado Lane

Background +Project PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00	1.00	
Frt	1.00	1.00			1.00	0.85				1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3539			3539	1583				1770	1583	
Flt Permitted	0.95	1.00			1.00	1.00				0.76	1.00	
Satd. Flow (perm)	1770	3539			3539	1583				1410	1583	
Volume (vph)	278	907	0	0	628	61	0	0	0	53	0	241
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	302	986	0	0	683	66	0	0	0	58	0	262
RTOR Reduction (vph)	0	0	0	0	0	40	0	0	0	0	197	0
Lane Group Flow (vph)	302	986	0	0	683	26	0	0	0	58	65	0
Turn Type	Prot			Perm		Perm	Perm				Perm	
Protected Phases	7	4			8			2				6
Permitted Phases				8		8	2					6
Actuated Green, G (s)	20.9	59.7			34.8	34.8				22.3	22.3	
Effective Green, g (s)	20.9	59.7			34.8	34.8				22.3	22.3	
Actuated g/C Ratio	0.23	0.66			0.39	0.39				0.25	0.25	
Clearance Time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	411	2348			1368	612				349	392	
v/s Ratio Prot	c0.17	0.28			c0.19							c0.17
v/s Ratio Perm						0.04					0.04	
v/c Ratio	0.73	0.42			0.50	0.04				0.17	0.17	
Uniform Delay, d1	32.0	7.1			21.0	17.2				26.6	26.6	
Progression Factor	1.16	0.62			0.52	0.08				1.00	1.00	
Incremental Delay, d2	4.8	0.1			0.3	0.0				1.0	0.9	
Delay (s)	41.9	4.5			11.2	1.5				27.6	27.5	
Level of Service	D	A			B	A				C	C	
Approach Delay (s)		13.2			10.3			0.0			27.5	
Approach LOS		B			B			A			C	
Intersection Summary												
HCM Average Control Delay			14.3				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			57.7%				ICU Level of Service			B		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis
 13: East Cypress Road & Project Driveway

Background +Project PM Volumes
 2/4/2010




























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗↗			↗↗	↘				↘		↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1770	3539			3539	1583				1770		1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1770	3539			3539	1583				1770		1583
Volume (vph)	223	738	0	0	496	49	0	0	0	42	0	193
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	242	802	0	0	539	53	0	0	0	46	0	210
RTOR Reduction (vph)	0	0	0	0	0	38	0	0	0	0	0	124
Lane Group Flow (vph)	242	802	0	0	539	15	0	0	0	46	0	86
Turn Type	Prot			Perm			custom			custom		
Protected Phases	7	4			8							
Permitted Phases						8				6		6
Actuated Green, G (s)	16.2	45.3			25.1	25.1				36.7		36.7
Effective Green, g (s)	16.2	45.3			25.1	25.1				36.7		36.7
Actuated g/C Ratio	0.18	0.50			0.28	0.28				0.41		0.41
Clearance Time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0		3.0
Lane Grp Cap (vph)	319	1781			987	441				722		646
v/s Ratio Prot	c0.14	0.23			c0.15							
v/s Ratio Perm						0.03				0.03		0.13
v/c Ratio	0.76	0.45			0.55	0.03				0.06		0.13
Uniform Delay, d1	35.0	14.4			27.6	23.6				16.2		16.7
Progression Factor	1.24	0.54			0.76	0.62				1.00		1.00
Incremental Delay, d2	9.4	0.2			0.5	0.0				0.2		0.4
Delay (s)	52.8	7.9			21.6	14.7				16.4		17.1
Level of Service	D	A			C	B				B		B
Approach Delay (s)		18.3			21.0		0.0				17.0	
Approach LOS		B			C		A				B	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 14: East Cypress Road & Sellers Avenue

Background +Project PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3457		1770	3519		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.72	1.00	1.00	0.71	1.00	1.00
Satd. Flow (perm)	1770	3457		1770	3519		1337	1863	1583	1317	1863	1583
Volume (vph)	268	811	148	82	575	23	189	71	122	17	55	203
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	291	882	161	89	625	25	205	77	133	18	60	221
RTOR Reduction (vph)	0	17	0	0	3	0	0	0	88	0	0	146
Lane Group Flow (vph)	291	1026	0	89	647	0	205	77	45	18	60	75
Turn Type	Prot			Prot			Perm		Perm	Perm		Perm
Protected Phases	7	4		3	8			2	2	6		6
Permitted Phases							2		2	6		6
Actuated Green, G (s)	21.3	39.3		8.3	26.3		30.4	30.4	30.4	30.4	30.4	30.4
Effective Green, g (s)	21.3	39.3		8.3	26.3		30.4	30.4	30.4	30.4	30.4	30.4
Actuated g/C Ratio	0.24	0.44		0.09	0.29		0.34	0.34	0.34	0.34	0.34	0.34
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	419	1510		163	1028		452	629	535	445	629	535
v/s Ratio Prot	c0.16	c0.30		0.05	0.18			0.04			0.03	
v/s Ratio Perm							c0.15		0.08	0.01		0.14
v/c Ratio	0.69	0.68		0.55	0.63		0.45	0.12	0.08	0.04	0.10	0.14
Uniform Delay, d1	31.4	20.3		39.0	27.6		23.3	20.6	20.3	20.0	20.4	20.7
Progression Factor	1.15	0.66		1.07	0.79		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	1.2		3.7	1.2		3.3	0.4	0.3	0.2	0.3	0.5
Delay (s)	41.0	14.7		45.7	23.2		26.6	21.0	20.6	20.2	20.7	21.3
Level of Service	D	B		D	C		C	C	C	C	C	C
Approach Delay (s)		20.4			25.9			23.6			21.1	
Approach LOS		C			C			C			C	

Intersection Summary

HCM Average Control Delay	22.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
15: East Cypress Road &

Background +Project PM Volumes
2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕			↕			↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99			0.94			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.95	1.00
Satd. Flow (prot)	1770	3516		1770	3512			1708			1770	1583
Flt Permitted	0.59	1.00		0.48	1.00			0.91			0.74	1.00
Satd. Flow (perm)	1091	3516		887	3512			1600			1373	1583
Volume (vph)	184	339	16	10	222	12	17	0	12	7	0	102
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	200	368	17	11	241	13	18	0	13	8	0	111
RTOR Reduction (vph)	0	5	0	0	6	0	0	6	0	0	0	52
Lane Group Flow (vph)	200	380	0	11	248	0	0	25	0	0	8	59
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		8		8		2		6		6	
Permitted Phases	4		8		8		2		6		6	
Actuated Green, G (s)	34.0	34.0		34.0	34.0			48.0			48.0	48.0
Effective Green, g (s)	34.0	34.0		34.0	34.0			48.0			48.0	48.0
Actuated g/C Ratio	0.38	0.38		0.38	0.38			0.53			0.53	0.53
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	412	1328		335	1327			853			732	844
v/s Ratio Prot		0.11			0.07							
v/s Ratio Perm	c0.18			0.01				0.02			0.01	0.07
v/c Ratio	0.49	0.29		0.03	0.19			0.03			0.01	0.07
Uniform Delay, d1	21.3	19.5		17.6	18.7			10.0			9.9	10.2
Progression Factor	0.64	0.73		0.79	0.70			1.00			1.00	1.00
Incremental Delay, d2	0.7	0.1		0.0	0.1			0.1			0.0	0.2
Delay (s)	14.3	14.3		13.9	13.1			10.0			9.9	10.3
Level of Service	B	B		B	B			B			A	B
Approach Delay (s)		14.3			13.1			10.0			10.3	
Approach LOS		B			B			B			B	

Intersection Summary

HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
 16: East Cypress Road & Knightsen Avenue

	→	↘	↙	←	↖	↗			
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	↑↑	↑	↘	↑↑	↘	↑			
Sign Control	Free			Free		Stop			
Grade	0%			0%		0%			
Volume (veh/h)	672	112	39	406	118	87			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Hourly flow rate (vph)	730	122	42	441	128	95			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type								None	
Median storage (veh)									
Upstream signal (ft)	1050								
pX, platoon unblocked									
vC, conflicting volume			852			1036	365		
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol			852			1036	365		
tC, single (s)			4.1			6.8	6.9		
tC, 2 stage (s)									
tF (s)			2.2			3.5	3.3		
p0 queue free %			95			40	85		
cM capacity (veh/h)			782			215	632		
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	
Volume Total	365	365	122	42	221	221	128	95	
Volume Left	0	0	0	42	0	0	128	0	
Volume Right	0	0	122	0	0	0	0	95	
cSH	1700	1700	1700	782	1700	1700	215	632	
Volume to Capacity	0.21	0.21	0.07	0.05	0.13	0.13	0.60	0.15	
Queue Length (ft)	0	0	0	4	0	0	85	13	
Control Delay (s)	0.0	0.0	0.0	9.9	0.0	0.0	43.8	11.7	
Lane LOS				A				E	B
Approach Delay (s)	0.0			0.9		30.2			
Approach LOS						D			
Intersection Summary									
Average Delay			4.6						
Intersection Capacity Utilization			38.4%		ICU Level of Service		A		
Analysis Period (min)			15						

HCM Unsignalized Intersection Capacity Analysis
 17: East Cypress Road & Jersey Island Road

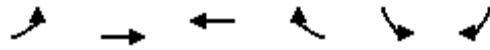


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↶↶	↶↶		↶	↷
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	18	691	475	4	1	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	20	751	516	4	1	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	521				933	260
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	521				933	260
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	98
cM capacity (veh/h)	1042				260	738

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1	SB 2
Volume Total	20	376	376	344	176	1	12
Volume Left	20	0	0	0	0	1	0
Volume Right	0	0	0	0	4	0	12
cSH	1042	1700	1700	1700	1700	260	738
Volume to Capacity	0.02	0.22	0.22	0.20	0.10	0.00	0.02
Queue Length (ft)	1	0	0	0	0	0	1
Control Delay (s)	8.5	0.0	0.0	0.0	0.0	18.9	10.0
Lane LOS	A					C	A
Approach Delay (s)	0.2			0.0		10.7	
Approach LOS						B	

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
 18: East Cypress Road & Bethel Island Road


















Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	2787
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	2787
Volume (vph)	367	416	226	15	21	279
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	399	452	246	16	23	303
RTOR Reduction (vph)	0	0	0	14	0	158
Lane Group Flow (vph)	399	452	246	2	23	145
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	23.7	38.9	11.2	11.2	43.1	43.1
Effective Green, g (s)	23.7	38.9	11.2	11.2	43.1	43.1
Actuated g/C Ratio	0.26	0.43	0.12	0.12	0.48	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	466	1530	440	197	848	1335
v/s Ratio Prot	c0.23	0.13	c0.07		0.01	
v/s Ratio Perm				0.01		0.11
v/c Ratio	0.86	0.30	0.56	0.01	0.03	0.11
Uniform Delay, d1	31.5	16.6	37.1	34.5	12.4	12.9
Progression Factor	0.76	0.73	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.3	0.1	1.5	0.0	0.1	0.2
Delay (s)	38.4	12.2	38.6	34.6	12.4	13.1
Level of Service	D	B	D	C	B	B
Approach Delay (s)		24.5	38.4		13.0	
Approach LOS		C	D		B	

Intersection Summary





















HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 19: Laurel Road & SR4 SB Ramps



























													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)						4.0				4.0	4.0		
Lane Util. Factor						1.00				0.95	0.95		
Frt						0.86				1.00	1.00		
Flt Protected						1.00				0.95	0.95		
Satd. Flow (prot)						1611				1681	1681		
Flt Permitted						1.00				0.95	0.95		
Satd. Flow (perm)						1611				1681	1681		
Volume (vph)	0	0	0	0	0	419	0	0	0	1146	0	0	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	0	0	0	0	455	0	0	0	1246	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	0	0	0	0	455	0	0	0	623	623	0	
Turn Type						Free				Prot			
Protected Phases										1	6		
Permitted Phases						Free							
Actuated Green, G (s)						90.0				90.0	90.0		
Effective Green, g (s)						90.0				90.0	90.0		
Actuated g/C Ratio						1.00				1.00	1.00		
Clearance Time (s)										4.0	4.0		
Vehicle Extension (s)										3.0	3.0		
Lane Grp Cap (vph)						1611				1681	1681		
v/s Ratio Prot										0.37	0.37		
v/s Ratio Perm						0.28							
v/c Ratio						0.28				0.37	0.37		
Uniform Delay, d1						0.0				0.0	0.0		
Progression Factor						1.00				1.00	1.00		
Incremental Delay, d2						0.4				0.1	0.1		
Delay (s)						0.4				0.1	0.1		
Level of Service						A				A	A		
Approach Delay (s)		0.0			0.4			0.0			0.1		
Approach LOS		A			A			A			A		
Intersection Summary													
HCM Average Control Delay			0.2									HCM Level of Service	A
HCM Volume to Capacity ratio			0.37										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	0.0
Intersection Capacity Utilization			35.1%									ICU Level of Service	A
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
20: Laurel Road & SR4 NB Ramps

Background +Project PM Volumes
2/4/2010
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0			4.0			
Lane Util. Factor		0.95			0.95	1.00			1.00			
Frt		1.00			1.00	0.85			0.85			
Flt Protected		1.00			1.00	1.00			1.00			
Satd. Flow (prot)		3539			3539	1583			1583			
Flt Permitted		1.00			1.00	1.00			1.00			
Satd. Flow (perm)		3539			3539	1583			1583			
Volume (vph)	0	1146	0	0	419	594	0	0	447	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1246	0	0	455	646	0	0	486	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	16	0	0	0
Lane Group Flow (vph)	0	1246	0	0	455	646	0	0	470	0	0	0
Turn Type	Prot						Free	Perm	Perm			
Protected Phases	7	4					8		2			
Permitted Phases							Free	2	2			
Actuated Green, G (s)	37.2						37.2	90.0	44.8			
Effective Green, g (s)	37.2						37.2	90.0	44.8			
Actuated g/C Ratio	0.41						0.41	1.00	0.50			
Clearance Time (s)	4.0						4.0		4.0			
Vehicle Extension (s)	3.0						3.0		3.0			
Lane Grp Cap (vph)	1463						1463	1583	788			
v/s Ratio Prot	c0.35						0.13					
v/s Ratio Perm								0.41	0.31			
v/c Ratio	0.85						0.31	0.41	0.60			
Uniform Delay, d1	23.9						17.8	0.0	16.1			
Progression Factor	1.00						0.49	1.00	1.00			
Incremental Delay, d2	4.7						0.1	0.7	3.3			
Delay (s)	28.7						8.7	0.7	19.5			
Level of Service	C						A	A	B			
Approach Delay (s)	28.7						4.0		19.5	0.0		
Approach LOS	C						A		B	A		
Intersection Summary												
HCM Average Control Delay	17.5		HCM Level of Service				B					
HCM Volume to Capacity ratio	0.72											
Actuated Cycle Length (s)	90.0		Sum of lost time (s)				8.0					
Intersection Capacity Utilization	66.0%		ICU Level of Service				C					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 21: Laurel Road & Empire Avenue

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3395		1770	3293	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.39	1.00		0.44	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	734	3395		819	3293	
Volume (vph)	353	882	225	158	551	64	125	273	102	83	229	199
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	384	959	245	172	599	70	136	297	111	90	249	216
RTOR Reduction (vph)	0	0	148	0	0	55	0	42	0	0	145	0
Lane Group Flow (vph)	384	959	97	172	599	15	136	366	0	90	320	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	28.8	35.5	35.5	13.0	19.7	19.7	29.5	29.5		29.5	29.5	
Effective Green, g (s)	28.8	35.5	35.5	13.0	19.7	19.7	29.5	29.5		29.5	29.5	
Actuated g/C Ratio	0.32	0.39	0.39	0.14	0.22	0.22	0.33	0.33		0.33	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	566	1396	624	256	775	347	241	1113		268	1079	
v/s Ratio Prot	0.22	c0.27		0.10	c0.17			0.12			0.14	
v/s Ratio Perm			0.15			0.04	c0.19			0.11		
v/c Ratio	0.68	0.69	0.15	0.67	0.77	0.04	0.56	0.33		0.34	0.30	
Uniform Delay, d1	26.6	22.6	17.6	36.5	33.0	27.7	24.9	22.8		22.8	22.5	
Progression Factor	0.62	0.58	0.18	0.37	0.32	0.18	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	1.0	0.1	6.2	4.4	0.0	9.2	0.8		3.4	0.7	
Delay (s)	18.8	14.2	3.3	19.8	14.9	5.0	34.2	23.6		26.2	23.2	
Level of Service	B	B	A	B	B	A	C	C		C	C	
Approach Delay (s)		13.6			15.1			26.2			23.7	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM Average Control Delay			17.5			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)			8.0					
Intersection Capacity Utilization			67.8%	ICU Level of Service			C					
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
22: Laurel Road & Ohara Avenue

Background +Project PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3433		1770	3408	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.47	1.00		0.54	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	870	3433		1012	3408	
Volume (vph)	125	941	96	93	670	36	65	225	56	31	279	91
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	1023	104	101	728	39	71	245	61	34	303	99
RTOR Reduction (vph)	0	0	65	0	0	29	0	19	0	0	28	0
Lane Group Flow (vph)	136	1023	39	101	728	10	71	287	0	34	374	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	19.4	34.1	34.1	8.7	23.4	23.4	35.2	35.2		35.2	35.2	
Effective Green, g (s)	19.4	34.1	34.1	8.7	23.4	23.4	35.2	35.2		35.2	35.2	
Actuated g/C Ratio	0.22	0.38	0.38	0.10	0.26	0.26	0.39	0.39		0.39	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	382	1341	600	171	920	412	340	1343		396	1333	
v/s Ratio Prot	0.08	c0.29		0.06	c0.21			0.09			c0.12	
v/s Ratio Perm			0.07			0.02	0.08			0.03		
v/c Ratio	0.36	0.76	0.07	0.59	0.79	0.02	0.21	0.21		0.09	0.28	
Uniform Delay, d1	30.0	24.4	17.8	38.9	31.0	24.8	18.2	18.2		17.3	18.7	
Progression Factor	0.63	0.55	0.51	0.83	0.87	0.65	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	2.2	0.0	5.2	4.5	0.0	1.4	0.4		0.4	0.5	
Delay (s)	19.2	15.5	9.1	37.5	31.4	16.2	19.6	18.6		17.7	19.3	
Level of Service	B	B	A	D	C	B	B	B		B	B	
Approach Delay (s)		15.4			31.4			18.8			19.1	
Approach LOS		B			C			B			B	
Intersection Summary												
HCM Average Control Delay			21.1			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			58.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Background +Project PM Volumes
 2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	221	810	1	0	536	11	1	0	0	7	0	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	240	880	1	0	583	12	1	0	0	8	0	172
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked				0.60			0.60	0.60	0.60	0.60	0.60	0.60
vC, conflicting volume	595			882			2122	1956	881	1950	1951	589
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	595			804			2855	2581	803	2571	2572	589
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	76			100			69	100	100	10	100	66
cM capacity (veh/h)	982			496			3	12	232	8	12	508

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1122	595	1	179
Volume Left	240	0	1	8
Volume Right	1	12	0	172
cSH	982	496	3	145
Volume to Capacity	0.24	0.00	0.31	1.23
Queue Length (ft)	24	0	13	265
Control Delay (s)	6.0	0.0	1292.2	210.5
Lane LOS	A		F	F
Approach Delay (s)	6.0	0.0	1292.2	210.5
Approach LOS			F	F

Intersection Summary			
Average Delay		24.2	
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
24: Laurel Road & Main Street

Background +Project PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85		1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583		1819	1583	1770	3472		1770	3406	
Flt Permitted	0.64	1.00	1.00		0.84	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1186	1863	1583		1562	1583	1770	3472		1770	3406	
Volume (vph)	326	71	74	64	69	81	132	665	97	125	679	228
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	354	77	80	70	75	88	143	723	105	136	738	248
RTOR Reduction (vph)	0	0	53	0	0	59	0	12	0	0	34	0
Lane Group Flow (vph)	354	77	27	0	145	29	143	816	0	136	952	0
Turn Type	Perm		Perm	Perm		Perm	Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)	29.9	29.9	29.9		29.9	29.9	11.0	37.7		10.4	37.1	
Effective Green, g (s)	29.9	29.9	29.9		29.9	29.9	11.0	37.7		10.4	37.1	
Actuated g/C Ratio	0.33	0.33	0.33		0.33	0.33	0.12	0.42		0.12	0.41	
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	394	619	526		519	526	216	1454		205	1404	
v/s Ratio Prot		0.04					0.08	c0.24		0.08	c0.29	
v/s Ratio Perm	c0.30		0.05		0.09	0.06						
v/c Ratio	0.90	0.12	0.05		0.28	0.06	0.66	0.56		0.66	0.68	
Uniform Delay, d1	28.6	20.9	20.4		22.1	20.4	37.7	19.9		38.1	21.6	
Progression Factor	0.30	0.33	0.03		1.00	1.00	0.92	0.88		0.88	1.12	
Incremental Delay, d2	18.9	0.1	0.0		0.3	0.0	7.2	1.5		5.8	2.0	
Delay (s)	27.5	7.0	0.7		22.4	20.5	42.0	19.0		39.3	26.0	
Level of Service	C	A	A		C	C	D	B		D	C	
Approach Delay (s)		20.2			21.7			22.4			27.7	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM Average Control Delay			24.0				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			68.1%				ICU Level of Service				C	
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷	↶	↶	↶	↷
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	0	196	147	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	213	160	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	373	160	160			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	373	160	160			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	628	885	1419			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	0	0	0	213	160	0
Volume Left	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.13	0.09	0.00
Queue Length (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	A	A				
Approach Delay (s)	0.0		0.0		0.0	
Approach LOS	A					

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization	13.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
 26: Malicoat Avenue & Main Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.85		1.00	0.86		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583		1770	1611		1770	3532		1770	3520	
Flt Permitted	1.00	1.00		1.00	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1863	1583		1863	1611		1770	3532		1770	3520	
Volume (vph)	16	0	11	2	1	8	10	927	12	10	856	31
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	0	12	2	1	9	11	1008	13	11	930	34
RTOR Reduction (vph)	0	12	0	0	9	0	0	0	0	0	1	0
Lane Group Flow (vph)	17	0	0	2	1	0	11	1021	0	11	963	0
Turn Type	Perm		Perm		Prot		Prot					
Protected Phases	4		8		5		2		1		6	
Permitted Phases	4		8									
Actuated Green, G (s)	3.0	3.0		3.0	3.0		1.5	72.6		2.4	73.5	
Effective Green, g (s)	3.0	3.0		3.0	3.0		1.5	72.6		2.4	73.5	
Actuated g/C Ratio	0.03	0.03		0.03	0.03		0.02	0.81		0.03	0.82	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	62	53		62	54		30	2849		47	2875	
v/s Ratio Prot		0.01			0.01		0.01	c0.29		0.01	c0.27	
v/s Ratio Perm	c0.01			0.00								
v/c Ratio	0.27	0.01		0.03	0.02		0.37	0.36		0.23	0.33	
Uniform Delay, d1	42.4	42.1		42.1	42.1		43.8	2.4		42.9	2.1	
Progression Factor	1.01	1.00		1.00	1.00		1.00	1.00		0.48	0.13	
Incremental Delay, d2	2.4	0.1		0.2	0.2		7.4	0.4		2.2	0.3	
Delay (s)	45.1	42.1		42.3	42.3		51.2	2.7		22.8	0.5	
Level of Service	D	D		D	D		D	A		C	A	
Approach Delay (s)		43.9			42.3			3.2			0.8	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	2.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	63	36	26	917	813	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	68	39	28	997	884	62
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1968	915	946			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1968	915	946			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	88	96			
cM capacity (veh/h)	66	331	726			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	108	1025	946			
Volume Left	68	28	0			
Volume Right	39	0	62			
cSH	93	726	1700			
Volume to Capacity	1.15	0.04	0.56			
Queue Length (ft)	183	3	0			
Control Delay (s)	223.1	1.2	0.0			
Lane LOS	F	A				
Approach Delay (s)	223.1	1.2	0.0			
Approach LOS	F					
Intersection Summary						
Average Delay			12.1			
Intersection Capacity Utilization		81.6%		ICU Level of Service		D
Analysis Period (min)			15			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↘		↙	↘
Sign Control	Stop		Free		Free	Free
Grade	0%		0%		0%	0%
Volume (veh/h)	90	93	859	147	91	659
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	98	101	934	160	99	716
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1928	1014			1093	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1928	1014			1093	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	65			85	
cM capacity (veh/h)	62	290			638	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	199	1093	99	716
Volume Left	98	0	99	0
Volume Right	101	160	0	0
cSH	103	1700	638	1700
Volume to Capacity	1.93	0.64	0.15	0.42
Queue Length (ft)	413	0	14	0
Control Delay (s)	523.1	0.0	11.7	0.0
Lane LOS	F		B	
Approach Delay (s)	523.1	0.0	1.4	
Approach LOS	F			

Intersection Summary			
Average Delay		49.9	
Intersection Capacity Utilization	79.9%		ICU Level of Service D
Analysis Period (min)		15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	82	75	45	41	78	64	62	301	41	49	155	50
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	89	82	49	45	85	70	67	327	45	53	168	54

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	220	199	439	276
Volume Left (vph)	89	45	67	53
Volume Right (vph)	49	70	45	54
Hadj (s)	0.0	-0.1	0.0	0.0
Departure Headway (s)	6.2	5.9	5.6	5.8
Degree Utilization, x	0.38	0.33	0.68	0.44
Capacity (veh/h)	531	485	617	589
Control Delay (s)	10.1	9.6	11.4	9.9
Approach Delay (s)	10.1	9.6	11.4	9.9
Approach LOS	B	A	B	A

Intersection Summary			
Delay		10.5	
HCM Level of Service		B	
Intersection Capacity Utilization	53.7%		ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
30: Lone Tree Way & Main Street

Background +Project PM Volumes
2/4/2010

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↘	↕↕	↗	↘	↕↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.96	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1783	1583		1804	1583	1770	3539	1583	1770	3420	
Flt Permitted		0.73	1.00		0.79	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1352	1583		1468	1583	1770	3539	1583	1770	3420	
Volume (vph)	192	23	259	19	10	9	215	595	16	9	563	163
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	209	25	282	21	11	10	234	647	17	10	612	177
RTOR Reduction (vph)	0	0	220	0	0	8	0	0	6	0	24	0
Lane Group Flow (vph)	0	234	62	0	32	2	234	647	11	10	765	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		19.9	19.9		19.9	19.9	15.3	57.1	57.1	1.0	42.8	
Effective Green, g (s)		19.9	19.9		19.9	19.9	15.3	57.1	57.1	1.0	42.8	
Actuated g/C Ratio		0.22	0.22		0.22	0.22	0.17	0.63	0.63	0.01	0.48	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		299	350		325	350	301	2245	1004	20	1626	
v/s Ratio Prot							c0.13	0.18		0.01	c0.23	
v/s Ratio Perm		0.17	0.18		0.02	0.01			0.01			
v/c Ratio		0.78	0.18		0.10	0.01	0.78	0.29	0.01	0.50	0.47	
Uniform Delay, d1		33.0	28.4		27.9	27.3	35.7	7.4	6.1	44.3	15.9	
Progression Factor		1.00	1.00		1.00	1.00	1.21	0.32	0.05	1.00	1.00	
Incremental Delay, d2		12.5	0.2		0.1	0.0	10.8	0.3	0.0	18.3	1.0	
Delay (s)		45.5	28.7		28.0	27.3	53.9	2.6	0.3	62.6	16.9	
Level of Service		D	C		C	C	D	A	A	E	B	
Approach Delay (s)		36.3			27.9			16.0			17.5	
Approach LOS		D			C			B			B	

Intersection Summary

HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			


























HCM Signalized Intersection Capacity Analysis
31: Main Street & Sellers Avenue

Background +Project PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1852	1583		1822	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.94	1.00		0.60	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583		1754	1583		1118	
Volume (vph)	8	685	29	15	570	134	37	279	18	95	129	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	745	32	16	620	146	40	303	20	103	140	3
RTOR Reduction (vph)	0	0	17	0	0	75	0	0	0	0	1	0
Lane Group Flow (vph)	9	745	15	16	620	71	0	343	20	0	245	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Free		Perm	
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2		Free		6	
Actuated Green, G (s)	0.8	43.2	43.2	1.6	44.0	44.0		33.2	90.0		33.2	
Effective Green, g (s)	0.8	43.2	43.2	1.6	44.0	44.0		33.2	90.0		33.2	
Actuated g/C Ratio	0.01	0.48	0.48	0.02	0.49	0.49		0.37	1.00		0.37	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	16	894	760	31	911	774		647	1583		412	
v/s Ratio Prot	0.01	c0.40		0.01	c0.33							
v/s Ratio Perm			0.02			0.09		0.20	0.01		c0.22	
v/c Ratio	0.56	0.83	0.02	0.52	0.68	0.09		0.53	0.01		0.60	
Uniform Delay, d1	44.4	20.3	12.3	43.8	17.6	12.3		22.3	0.0		23.0	
Progression Factor	0.70	0.62	0.31	1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	35.2	6.2	0.0	13.7	2.1	0.1		3.1	0.0		6.2	
Delay (s)	66.3	18.8	3.8	57.6	19.7	12.4		25.4	0.0		29.2	
Level of Service	E	B	A	E	B	B		C	A		C	
Approach Delay (s)		18.8			19.1			24.0			29.2	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM Average Control Delay			20.9				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			75.0%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 1: Main Street & SR160 SB Ramps

Cumulative AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00		1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85		1.00		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96		0.95	1.00	
Satd. Flow (prot)	1770	3417		3433	3539	1583		1788		1770	1695	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.79		0.71	1.00	
Satd. Flow (perm)	1770	3417		3433	3539	1583		1474		1331	1695	
Volume (vph)	10	200	60	350	1110	90	50	10	0	40	20	30
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	217	65	380	1207	98	54	11	0	43	22	33
RTOR Reduction (vph)	0	44	0	0	0	54	0	0	0	0	20	0
Lane Group Flow (vph)	11	238	0	380	1207	44	0	65	0	43	35	0
Turn Type	Prot			Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2				6
Permitted Phases						8	2		2		6	
Actuated Green, G (s)	1.5	10.7		31.1	40.3	40.3		36.2		36.2	36.2	
Effective Green, g (s)	1.5	10.7		31.1	40.3	40.3		36.2		36.2	36.2	
Actuated g/C Ratio	0.02	0.12		0.35	0.45	0.45		0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	30	406		1186	1585	709		593		535	682	
v/s Ratio Prot	0.01	0.08		c0.11	c0.34							0.03
v/s Ratio Perm						0.06		c0.04		0.03		
v/c Ratio	0.37	0.59		0.32	0.76	0.06		0.11		0.08	0.05	
Uniform Delay, d1	43.8	37.6		21.7	20.8	14.1		16.8		16.6	16.4	
Progression Factor	1.00	1.00		0.72	0.70	0.21		1.00		1.00	1.00	
Incremental Delay, d2	7.4	2.2		0.2	2.1	0.0		0.4		0.3	0.1	
Delay (s)	51.2	39.7		15.7	16.8	3.1		17.2		16.9	16.6	
Level of Service	D	D		B	B	A		B		B	B	
Approach Delay (s)		40.1			15.7			17.2			16.7	
Approach LOS		D			B			B			B	
Intersection Summary												
HCM Average Control Delay			19.2				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		8.0			
Intersection Capacity Utilization			54.0%				ICU Level of Service		A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
2: Main Street & SR160 NB Ramps

Cumulative AM Volumes
2/4/2010

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↘	↑↑↑	↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	1770	2787
Volume (vph)	160	40	20	1380	80	600
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	174	43	22	1500	87	652
RTOR Reduction (vph)	0	14	0	0	0	592
Lane Group Flow (vph)	174	29	22	1500	87	60
Turn Type		Perm	Prot			Over
Protected Phases	2		1	6	8	1
Permitted Phases		2				
Actuated Green, G (s)	61.5	61.5	8.3	73.8	8.2	8.3
Effective Green, g (s)	61.5	61.5	8.3	73.8	8.2	8.3
Actuated g/C Ratio	0.68	0.68	0.09	0.82	0.09	0.09
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3475	1082	163	4170	161	257
v/s Ratio Prot	0.03		0.01	c0.29	c0.05	c0.23
v/s Ratio Perm		0.03				
v/c Ratio	0.05	0.03	0.13	0.36	0.54	0.23
Uniform Delay, d1	4.7	4.6	37.6	2.1	39.1	37.9
Progression Factor	0.83	1.29	1.35	0.23	1.00	1.00
Incremental Delay, d2	0.0	0.0	0.4	0.2	3.7	0.5
Delay (s)	3.9	6.0	51.1	0.7	42.8	38.4
Level of Service	A	A	D	A	D	D
Approach Delay (s)	4.3			1.4	38.9	
Approach LOS	A			A	D	
Intersection Summary						
HCM Average Control Delay			12.9		HCM Level of Service	B
HCM Volume to Capacity ratio			0.59			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			37.8%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
 3: Main Street & Empire Avenue

Cumulative AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	1.00
Satd. Flow (prot)	1770	5085	1583	3433	5063		3433	1863	1583		1832	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.88	1.00
Satd. Flow (perm)	1770	5085	1583	3433	5063		3433	1863	1583		1641	1583
Volume (vph)	20	813	272	210	686	20	324	20	150	20	40	50
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	884	296	228	746	22	352	22	163	22	43	54
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	116	0	0	50
Lane Group Flow (vph)	22	884	296	228	766	0	352	22	47	0	65	5
Turn Type	Prot		Free	Prot			Prot		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases			Free						8	4		4
Actuated Green, G (s)	3.1	38.5	90.0	13.8	49.2		14.2	25.7	25.7		7.5	7.5
Effective Green, g (s)	3.1	38.5	90.0	13.8	49.2		14.2	25.7	25.7		7.5	7.5
Actuated g/C Ratio	0.03	0.43	1.00	0.15	0.55		0.16	0.29	0.29		0.08	0.08
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	61	2175	1583	526	2768		542	532	452		137	132
v/s Ratio Prot	0.01	c0.17		c0.07	0.15		c0.10	0.01				
v/s Ratio Perm			0.19						0.10		c0.04	0.03
v/c Ratio	0.36	0.41	0.19	0.43	0.28		0.65	0.04	0.10		0.47	0.03
Uniform Delay, d1	42.5	17.8	0.0	34.6	10.9		35.6	23.2	23.7		39.4	37.9
Progression Factor	0.96	0.82	1.00	0.92	0.19		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.5	0.6	0.3	0.5	0.2		2.7	0.0	0.1		2.6	0.1
Delay (s)	44.3	15.1	0.3	32.1	2.3		38.3	23.3	23.8		42.0	38.0
Level of Service	D	B	A	C	A		D	C	C		D	D
Approach Delay (s)		12.0			9.1			33.2			40.2	
Approach LOS		B			A			C			D	
Intersection Summary												
HCM Average Control Delay			16.2			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			47.6%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												






















HCM Signalized Intersection Capacity Analysis
4: Main Street & Vintage Parkway

Cumulative AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.96	1.00
Satd. Flow (prot)	1770	3509		1770	3512			1761			1780	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.86			0.78	1.00
Satd. Flow (perm)	1770	3509		1770	3512			1568			1448	1583
Volume (vph)	90	510	30	17	832	45	17	2	3	61	5	35
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	554	33	18	904	49	18	2	3	66	5	38
RTOR Reduction (vph)	0	4	0	0	4	0	0	2	0	0	0	23
Lane Group Flow (vph)	98	583	0	18	949	0	0	21	0	0	71	15
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	9.7	40.4		3.0	33.7			34.6			34.6	34.6
Effective Green, g (s)	9.7	40.4		3.0	33.7			34.6			34.6	34.6
Actuated g/C Ratio	0.11	0.45		0.03	0.37			0.38			0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	191	1575		59	1315			603			557	609
v/s Ratio Prot	c0.06	0.17		0.01	c0.27							
v/s Ratio Perm								0.01			c0.05	0.02
v/c Ratio	0.51	0.37		0.31	0.72			0.04			0.13	0.02
Uniform Delay, d1	37.9	16.4		42.5	24.1			17.3			17.9	17.2
Progression Factor	0.65	0.77		0.94	1.00			1.00			1.00	1.00
Incremental Delay, d2	2.2	0.1		2.3	1.6			0.1			0.5	0.1
Delay (s)	26.9	12.7		42.3	25.8			17.4			18.4	17.3
Level of Service	C	B		D	C			B			B	B
Approach Delay (s)		14.7			26.1			17.4			18.0	
Approach LOS		B			C			B			B	
Intersection Summary												
HCM Average Control Delay			21.1	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			47.3%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												



















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.91			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1855		1770	1695			1813	
Flt Permitted	0.24	1.00	1.00	0.37	1.00		0.95	1.00			0.97	
Satd. Flow (perm)	443	1863	1583	688	1855		1770	1695			1767	
Volume (vph)	10	520	80	40	700	20	110	40	60	10	90	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	565	87	43	761	22	120	43	65	11	98	22
RTOR Reduction (vph)	0	0	31	0	1	0	0	48	0	0	9	0
Lane Group Flow (vph)	11	565	56	43	782	0	120	60	0	0	122	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases	2		2	6	6		3	8		4		
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0		11.3		
Effective Green, g (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0		11.3		
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.64		0.10	0.27		0.13		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0		
Lane Grp Cap (vph)	285	1201	1020	443	1195		171	452		222		
v/s Ratio Prot		0.30			c0.42		c0.07	0.06				
v/s Ratio Perm	0.02		0.05	0.06						c0.07		
v/c Ratio	0.04	0.47	0.05	0.10	0.65		0.70	0.13		0.55		
Uniform Delay, d1	5.8	8.2	5.9	6.1	9.8		39.4	25.1		37.0		
Progression Factor	0.21	0.32	0.07	1.14	0.84		0.92	1.22		1.00		
Incremental Delay, d2	0.2	1.3	0.1	0.1	1.0		11.8	0.1		2.9		
Delay (s)	1.5	3.9	0.5	7.0	9.3		48.2	30.8		39.9		
Level of Service	A	A	A	A	A		D	C		D		
Approach Delay (s)		3.4			9.2			40.0		39.9		
Approach LOS		A			A			D		D		
Intersection Summary												
HCM Average Control Delay			13.1	HCM Level of Service				B				
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			57.9%	ICU Level of Service				B				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.98			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			0.99		0.95	1.00			0.98	1.00
Satd. Flow (prot)		3476			3521		1770	1583			1817	1583
Flt Permitted		0.95			0.74		0.76	1.00			0.94	1.00
Satd. Flow (perm)		3315			2630		1409	1583			1742	1583
Volume (vph)	2	686	92	120	1052	1	41	0	61	1	1	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	746	100	130	1143	1	45	0	66	1	1	2
RTOR Reduction (vph)	0	11	0	0	0	0	0	55	0	0	0	2
Lane Group Flow (vph)	0	837	0	0	1274	0	45	11	0	0	2	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		66.4			66.4		15.6	15.6			15.6	15.6
Effective Green, g (s)		66.4			66.4		15.6	15.6			15.6	15.6
Actuated g/C Ratio		0.74			0.74		0.17	0.17			0.17	0.17
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2446			1940		244	274			302	274
v/s Ratio Prot							c0.04					
v/s Ratio Perm		0.26			c0.48		0.03				0.00	0.00
v/c Ratio		0.34			0.66		0.18	0.04			0.01	0.00
Uniform Delay, d1		4.1			6.0		31.8	31.0			30.8	30.8
Progression Factor		0.50			1.08		1.00	1.00			1.00	1.00
Incremental Delay, d2		0.1			0.4		1.7	0.3			0.0	0.0
Delay (s)		2.1			6.8		33.4	31.3			30.8	30.8
Level of Service		A			A		C	C			C	C
Approach Delay (s)		2.1			6.8			32.1			30.8	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay			6.4			HCM Level of Service				A		
HCM Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			73.5%			ICU Level of Service				D		
Analysis Period (min)			15									
c	Critical Lane Group											

















HCM Signalized Intersection Capacity Analysis
7: West Cypress Road & Ohara Avenue

Cumulative AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1750		1770	1813		1770	1829		1770	1786	
Flt Permitted	0.18	1.00		0.58	1.00		0.51	1.00		0.50	1.00	
Satd. Flow (perm)	333	1750		1076	1813		957	1829		924	1786	
Volume (vph)	40	88	60	85	301	64	100	310	43	48	240	90
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	96	65	92	327	70	109	337	47	52	261	98
RTOR Reduction (vph)	0	39	0	0	12	0	0	3	0	0	9	0
Lane Group Flow (vph)	43	122	0	92	385	0	109	381	0	52	350	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	4			8			2			6		
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.4	22.4		22.4	22.4		59.6	59.6		59.6	59.6	
Effective Green, g (s)	22.4	22.4		22.4	22.4		59.6	59.6		59.6	59.6	
Actuated g/C Ratio	0.25	0.25		0.25	0.25		0.66	0.66		0.66	0.66	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	83	436		268	451		634	1211		612	1183	
v/s Ratio Prot		0.09			c0.22			c0.21			0.20	
v/s Ratio Perm	0.13			0.09			0.11			0.06		
v/c Ratio	0.52	0.28		0.34	0.85		0.17	0.31		0.08	0.30	
Uniform Delay, d1	29.1	27.3		27.8	32.2		5.8	6.5		5.4	6.4	
Progression Factor	1.00	1.00		1.00	1.00		0.53	0.52		0.72	0.72	
Incremental Delay, d2	5.4	0.4		0.8	14.5		0.5	0.5		0.3	0.6	
Delay (s)	34.5	27.6		28.5	46.7		3.5	3.9		4.2	5.2	
Level of Service	C			C			A			A		
Approach Delay (s)		29.1			43.3			3.8			5.1	
Approach LOS		C			D			A			A	
Intersection Summary												
HCM Average Control Delay			19.5			HCM Level of Service		B				
HCM Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		8.0				
Intersection Capacity Utilization			60.0%			ICU Level of Service		B				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 8: West Cypress Road & Rose Avenue

Cumulative AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	126	30	60	348	11	45	113	18	28	140	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	137	33	65	378	12	49	123	20	30	152	65
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	197	455	191	248								
Volume Left (vph)	27	65	49	30								
Volume Right (vph)	33	12	20	65								
Hadj (s)	0.0	0.0	0.0	-0.1								
Departure Headway (s)	6.1	6.3	6.4	6.1								
Degree Utilization, x	0.33	0.79	0.34	0.42								
Capacity (veh/h)	543	543	510	561								
Control Delay (s)	9.8	14.3	10.2	10.2								
Approach Delay (s)	9.8	14.3	10.2	10.2								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay			11.8									
HCM Level of Service			B									
Intersection Capacity Utilization			54.0%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
9: West Cypress Road & Main Street

Cumulative AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.96		1.00	0.97	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3412		1770	1715	1504	1770	3539	1583	3433	3527	
Flt Permitted	0.30	1.00		0.38	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	560	3412		705	1715	1504	1770	3539	1583	3433	3527	
Volume (vph)	73	253	80	221	310	910	90	591	106	337	506	12
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	275	87	240	337	989	98	642	115	366	550	13
RTOR Reduction (vph)	0	35	0	0	10	31	0	0	93	0	2	0
Lane Group Flow (vph)	79	327	0	240	415	870	98	642	22	366	561	0
Turn Type	pm+pt			pm+pt		pm+ov	Prot		Perm		Prot	
Protected Phases	7	4		3	8	1	5	2			1	6
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	16.5	13.3		30.1	22.9	53.7	8.0	17.1	17.1	30.8	39.9	
Effective Green, g (s)	16.5	13.3		30.1	22.9	53.7	8.0	17.1	17.1	30.8	39.9	
Actuated g/C Ratio	0.18	0.15		0.33	0.25	0.60	0.09	0.19	0.19	0.34	0.44	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	146	504		387	436	964	157	672	301	1175	1564	
v/s Ratio Prot	0.02	0.11		c0.09	c0.25	c0.32	0.06	c0.18		0.11	0.16	
v/s Ratio Perm	0.08			0.12		0.28			0.07			
v/c Ratio	0.54	0.65		0.62	0.95	0.90	0.62	0.96	0.07	0.31	0.36	
Uniform Delay, d1	41.9	36.1		28.5	33.0	15.9	39.5	36.1	29.9	21.8	16.6	
Progression Factor	1.00	1.00		0.77	0.63	0.40	0.96	1.07	2.40	0.84	0.70	
Incremental Delay, d2	4.0	2.9		2.4	26.0	9.3	6.5	23.1	0.4	0.1	0.6	
Delay (s)	45.9	39.0		24.4	46.6	15.6	44.3	61.6	72.3	18.5	12.3	
Level of Service	D	D		C	D	B	D	E	E	B	B	
Approach Delay (s)		40.3			25.4			61.1			14.7	
Approach LOS		D			C			E			B	
Intersection Summary												
HCM Average Control Delay			32.6				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			78.2%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 10: East Cypress Road & Picasso Drive





















Cumulative AM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑↑	↑↑		↘	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.87	
Flt Protected	0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	3529		1621	
Flt Permitted	0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	3529		1621	
Volume (vph)	221	515	1284	25	16	246
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	240	560	1396	27	17	267
RTOR Reduction (vph)	0	0	1	0	231	0
Lane Group Flow (vph)	240	560	1422	0	53	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	13.3	72.9	55.6		9.1	
Effective Green, g (s)	13.3	72.9	55.6		9.1	
Actuated g/C Ratio	0.15	0.81	0.62		0.10	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	262	2867	2180		164	
v/s Ratio Prot	c0.14	0.16	c0.40		c0.18	
v/s Ratio Perm						
v/c Ratio	0.92	0.20	0.65		0.32	
Uniform Delay, d1	37.8	1.9	11.0		37.6	
Progression Factor	0.79	0.24	0.27		1.00	
Incremental Delay, d2	32.5	0.0	0.6		5.2	
Delay (s)	62.4	0.5	3.5		42.7	
Level of Service	E	A	A		D	
Approach Delay (s)		19.1	3.5		42.7	
Approach LOS		B	A		D	
Intersection Summary						
HCM Average Control Delay			12.9		HCM Level of Service	B
HCM Volume to Capacity ratio			0.82			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			74.6%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						
























HCM Signalized Intersection Capacity Analysis
 11: East Cypress Road & Frank Hengel Way

Cumulative AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85		0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.96	1.00
Satd. Flow (prot)	1770	3479		1770	3539	1583		1781			1791	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.76			0.72	1.00
Satd. Flow (perm)	1770	3479		1770	3539	1583		1389			1340	1583
Volume (vph)	308	355	45	6	974	30	75	29	11	80	19	350
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	335	386	49	7	1059	33	82	32	12	87	21	380
RTOR Reduction (vph)	0	11	0	0	0	21	0	4	0	0	0	293
Lane Group Flow (vph)	335	424	0	7	1059	12	0	122	0	0	108	87
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	25.3	56.7		0.8	32.2	32.2		20.5			20.5	20.5
Effective Green, g (s)	25.3	56.7		0.8	32.2	32.2		20.5			20.5	20.5
Actuated g/C Ratio	0.28	0.63		0.01	0.36	0.36		0.23			0.23	0.23
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	498	2192		16	1266	566		316			305	361
v/s Ratio Prot	c0.19	0.13		0.00	c0.30							
v/s Ratio Perm						0.02		0.09			0.08	0.24
v/c Ratio	0.67	0.19		0.44	0.84	0.02		0.39			0.35	0.24
Uniform Delay, d1	28.7	7.0		44.4	26.5	18.7		29.4			29.2	28.4
Progression Factor	0.86	0.88		1.00	1.00	0.99		1.00			1.00	1.00
Incremental Delay, d2	3.6	0.0		16.7	4.6	0.0		3.5			3.2	1.6
Delay (s)	28.3	6.2		60.9	31.0	18.6		33.0			32.4	30.0
Level of Service	C	A		E	C	B		C			C	C
Approach Delay (s)		15.8			30.8			33.0			30.5	
Approach LOS		B			C			C			C	
Intersection Summary												
HCM Average Control Delay			26.2	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			67.0%	ICU Level of Service				C				
Analysis Period (min)			15									
c	Critical Lane Group											





















HCM Signalized Intersection Capacity Analysis
 12: East Cypress Road & Machado Lane

Cumulative AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0				4.0		
Lane Util. Factor		0.95			0.95	1.00				1.00		
Frt		1.00			1.00	0.85				1.00		
Flt Protected		1.00			1.00	1.00				0.95		
Satd. Flow (prot)		3539			3539	1583				1770		
Flt Permitted		1.00			1.00	1.00				0.76		
Satd. Flow (perm)		3539			3539	1583				1410		
Volume (vph)	0	507	0	0	964	11	0	0	0	26	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	551	0	0	1048	12	0	0	0	28	0	0
RTOR Reduction (vph)	0	0	0	0	0	4	0	0	0	0	0	0
Lane Group Flow (vph)	0	551	0	0	1048	8	0	0	0	28	0	0
Turn Type	Prot			Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)		60.2			60.2	60.2				21.8		
Effective Green, g (s)		60.2			60.2	60.2				21.8		
Actuated g/C Ratio		0.67			0.67	0.67				0.24		
Clearance Time (s)		4.0			4.0	4.0				4.0		
Vehicle Extension (s)		3.0			3.0	3.0				3.0		
Lane Grp Cap (vph)		2367			2367	1059				342		
v/s Ratio Prot		0.16			c0.30							
v/s Ratio Perm						0.01				c0.02		
v/c Ratio		0.23			0.44	0.01				0.08		
Uniform Delay, d1		5.8			7.0	5.0				26.4		
Progression Factor		0.79			0.66	0.75				1.00		
Incremental Delay, d2		0.1			0.1	0.0				0.5		
Delay (s)		4.7			4.7	3.7				26.8		
Level of Service		A			A	A				C		
Approach Delay (s)		4.7			4.7			0.0			26.8	
Approach LOS		A			A			A			C	
Intersection Summary												
HCM Average Control Delay			5.1				HCM Level of Service			A		
HCM Volume to Capacity ratio			0.35									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			36.6%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
 13: East Cypress Road & Project Driveway

Cumulative AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0				4.0		
Lane Util. Factor		0.95			0.95	1.00				1.00		
Frt		1.00			1.00	0.85				1.00		
Flt Protected		1.00			1.00	1.00				0.95		
Satd. Flow (prot)		3539			3539	1583				1770		
Flt Permitted		1.00			1.00	1.00				0.95		
Satd. Flow (perm)		3539			3539	1583				1770		
Volume (vph)	0	538	0	0	997	21	0	0	0	50	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	585	0	0	1084	23	0	0	0	54	0	0
RTOR Reduction (vph)	0	0	0	0	0	9	0	0	0	0	0	0
Lane Group Flow (vph)	0	585	0	0	1084	14	0	0	0	54	0	0
Turn Type	Prot			Perm			custom			custom		
Protected Phases	7	4		8								
Permitted Phases					8					6		6
Actuated Green, G (s)		54.9			54.9	54.9				27.1		
Effective Green, g (s)		54.9			54.9	54.9				27.1		
Actuated g/C Ratio		0.61			0.61	0.61				0.30		
Clearance Time (s)		4.0			4.0	4.0				4.0		
Vehicle Extension (s)		3.0			3.0	3.0				3.0		
Lane Grp Cap (vph)		2159			2159	966				533		
v/s Ratio Prot		0.17			c0.31							
v/s Ratio Perm						0.01				0.03		
v/c Ratio		0.27			0.50	0.01				0.10		
Uniform Delay, d1		8.2			9.9	6.9				22.7		
Progression Factor		0.40			0.61	0.71				1.00		
Incremental Delay, d2		0.1			0.2	0.0				0.4		
Delay (s)		3.3			6.1	4.9				23.1		
Level of Service		A			A	A				C		
Approach Delay (s)		3.3			6.1			0.0			23.1	
Approach LOS		A			A			A			C	
Intersection Summary												
HCM Average Control Delay			5.7		HCM Level of Service					A		
HCM Volume to Capacity ratio			0.37									
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					8.0		
Intersection Capacity Utilization			37.6%		ICU Level of Service					A		
Analysis Period (min)			15									
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
 14: East Cypress Road & Sellers Avenue

Cumulative AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.91	0.91
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	0.99	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3536		1770	3539	1583	1770	3370	1441
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3536		1770	3539	1583	1770	3370	1441
Volume (vph)	30	457	147	920	869	5	184	56	330	13	133	83
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	497	160	1000	945	5	200	61	359	14	145	90
RTOR Reduction (vph)	0	0	128	0	1	0	0	0	0	0	3	69
Lane Group Flow (vph)	33	497	32	1000	949	0	200	61	359	14	148	15
Turn Type	Prot		Perm	Prot			Prot		Free	Prot		Perm
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases			4						Free			6
Actuated Green, G (s)	3.3	17.9	17.9	28.0	42.6		12.5	27.1	90.0	1.0	15.6	15.6
Effective Green, g (s)	3.3	17.9	17.9	28.0	42.6		12.5	27.1	90.0	1.0	15.6	15.6
Actuated g/C Ratio	0.04	0.20	0.20	0.31	0.47		0.14	0.30	1.00	0.01	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	65	704	315	1068	1674		246	1066	1583	20	584	250
v/s Ratio Prot	0.02	c0.14		c0.29	0.27		c0.11	0.02		0.01	0.04	
v/s Ratio Perm			0.10						0.23			0.06
v/c Ratio	0.51	0.71	0.10	0.94	0.57		0.81	0.06	0.23	0.70	0.25	0.06
Uniform Delay, d1	42.6	33.6	29.5	30.1	17.1		37.6	22.4	0.0	44.4	32.2	31.1
Progression Factor	0.87	0.84	1.53	0.78	0.41		0.57	0.30	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	3.2	0.1	9.9	0.3		16.1	0.1	0.3	71.8	1.0	0.4
Delay (s)	43.1	31.3	45.4	33.3	7.2		37.5	6.8	0.3	116.2	33.2	31.5
Level of Service	D	C	D	C	A		D	A	A	F	C	C
Approach Delay (s)		35.1			20.6			12.9			37.3	
Approach LOS		D			C			B			D	
Intersection Summary												
HCM Average Control Delay			23.3			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			67.0%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 15: East Cypress Road &

Cumulative AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.97	1.00
Satd. Flow (prot)	1770	3533		1770	3526			1737			1802	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.87			0.82	1.00
Satd. Flow (perm)	1770	3533		1770	3526			1552			1532	1583
Volume (vph)	70	727	8	25	1610	42	15	4	8	30	15	207
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	790	9	27	1750	46	16	4	9	33	16	225
RTOR Reduction (vph)	0	1	0	0	2	0	0	8	0	0	0	127
Lane Group Flow (vph)	76	798	0	27	1794	0	0	21	0	0	49	98
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	6
Permitted Phases							2			6		6
Actuated Green, G (s)	5.6	50.5		12.9	57.8			14.6			14.6	14.6
Effective Green, g (s)	5.6	50.5		12.9	57.8			14.6			14.6	14.6
Actuated g/C Ratio	0.06	0.56		0.14	0.64			0.16			0.16	0.16
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	110	1982		254	2264			252			249	257
v/s Ratio Prot	c0.04	0.23		0.02	c0.51							
v/s Ratio Perm								0.02			0.03	0.14
v/c Ratio	0.69	0.40		0.11	0.79			0.09			0.20	0.38
Uniform Delay, d1	41.4	11.2		33.5	11.7			32.0			32.6	33.7
Progression Factor	0.75	0.54		0.78	0.40			1.00			1.00	1.00
Incremental Delay, d2	14.7	0.1		0.1	1.6			0.7			1.8	4.2
Delay (s)	45.6	6.2		26.4	6.3			32.7			34.4	37.9
Level of Service	D	A		C	A			C			C	D
Approach Delay (s)		9.6			6.6			32.7			37.3	
Approach LOS		A			A			C			D	
Intersection Summary												
HCM Average Control Delay			10.5			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			72.0%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 16: East Cypress Road & Knightsen Avenue

Cumulative AM Volumes
 2/4/2010

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.36	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	674	3539	1770	1583
Volume (vph)	680	92	140	1598	66	48
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	739	100	152	1737	72	52
RTOR Reduction (vph)	0	23	0	0	0	45
Lane Group Flow (vph)	739	77	152	1737	72	7
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	69.2	69.2	69.2	69.2	12.8	12.8
Effective Green, g (s)	69.2	69.2	69.2	69.2	12.8	12.8
Actuated g/C Ratio	0.77	0.77	0.77	0.77	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2721	1217	518	2721	252	225
v/s Ratio Prot	0.21			c0.49	c0.04	
v/s Ratio Perm		0.06	0.23			0.03
v/c Ratio	0.27	0.06	0.29	0.64	0.29	0.03
Uniform Delay, d1	3.0	2.5	3.1	4.7	34.5	33.3
Progression Factor	0.03	0.00	0.44	0.39	1.00	1.00
Incremental Delay, d2	0.1	0.0	0.2	0.4	2.8	0.3
Delay (s)	0.1	0.0	1.6	2.2	37.3	33.5
Level of Service	A	A	A	A	D	C
Approach Delay (s)	0.1			2.2	35.7	
Approach LOS	A			A	D	
Intersection Summary						
HCM Average Control Delay			3.0		HCM Level of Service	A
HCM Volume to Capacity ratio			0.58			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			54.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
 17: East Cypress Road & Jersey Island Road

Cumulative AM Volumes
 2/4/2010
































Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑		↖	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3531		1770	1583
Flt Permitted	0.09	1.00	1.00		0.95	1.00
Satd. Flow (perm)	162	3539	3531		1770	1583
Volume (vph)	88	709	1507	23	49	242
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	771	1638	25	53	263
RTOR Reduction (vph)	0	0	1	0	0	39
Lane Group Flow (vph)	96	771	1662	0	53	224
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	60.0	60.0	60.0		22.0	22.0
Effective Green, g (s)	60.0	60.0	60.0		22.0	22.0
Actuated g/C Ratio	0.67	0.67	0.67		0.24	0.24
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	108	2359	2354		433	387
v/s Ratio Prot		0.22	0.47		0.03	
v/s Ratio Perm	0.59					0.17
v/c Ratio	0.89	0.33	0.71		0.12	0.58
Uniform Delay, d1	12.3	6.4	9.4		26.5	29.9
Progression Factor	1.08	0.25	0.97		1.00	1.00
Incremental Delay, d2	52.0	0.1	0.6		0.6	6.2
Delay (s)	65.2	1.7	9.8		27.1	36.1
Level of Service	E	A	A		C	D
Approach Delay (s)		8.7	9.8		34.6	
Approach LOS		A	A		C	

Intersection Summary

HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			













HCM Signalized Intersection Capacity Analysis
18: East Cypress Road & Bethel Island Road

Cumulative AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 						 	 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	2787
Volume (vph)	302	310	194	264	594	83	329	437	98	37	403	605
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	328	337	211	287	646	90	358	475	107	40	438	658
RTOR Reduction (vph)	0	0	175	0	0	72	0	0	75	0	0	452
Lane Group Flow (vph)	328	337	36	287	646	19	358	475	32	40	438	206
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	11.7	15.2	15.2	15.0	18.5	18.5	19.2	27.0	27.0	16.8	24.6	24.6
Effective Green, g (s)	11.7	15.2	15.2	15.0	18.5	18.5	19.2	27.0	27.0	16.8	24.6	24.6
Actuated g/C Ratio	0.13	0.17	0.17	0.17	0.21	0.21	0.21	0.30	0.30	0.19	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	446	598	267	295	727	325	378	559	475	330	509	762
v/s Ratio Prot	0.10	0.10		0.16	c0.18		c0.20	c0.26		0.02	0.24	
v/s Ratio Perm			0.13			0.06			0.07			0.24
v/c Ratio	0.74	0.56	0.13	0.97	0.89	0.06	0.95	0.85	0.07	0.12	0.86	0.27
Uniform Delay, d1	37.7	34.4	31.8	37.3	34.7	28.7	34.9	29.6	22.5	30.5	31.1	25.7
Progression Factor	0.68	0.64	1.70	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.1	1.2	0.2	44.7	12.7	0.1	32.6	14.9	0.3	0.8	17.1	0.9
Delay (s)	31.5	23.1	54.4	82.0	47.5	28.8	67.5	44.5	22.8	31.2	48.2	26.5
Level of Service	C	C	D	F	D	C	E	D	C	C	D	C
Approach Delay (s)		33.8			55.5			50.8			35.1	
Approach LOS		C			E			D			D	
Intersection Summary												
HCM Average Control Delay			43.8	HCM Level of Service				D				
HCM Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			77.8%	ICU Level of Service				D				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 19: Laurel Road & SR4 SB Ramps

Cumulative AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑				↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0				4.0	4.0	4.0
Lane Util. Factor		0.95			0.95	1.00				0.95	0.95	1.00
Frt		0.98			1.00	0.85				1.00	1.00	0.85
Flt Protected		1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)		3458			3539	1583				1681	1681	1583
Flt Permitted		1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)		3458			3539	1583				1681	1681	1583
Volume (vph)	0	507	92	0	261	455	0	0	0	861	0	349
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	551	100	0	284	495	0	0	0	936	0	379
RTOR Reduction (vph)	0	20	0	0	0	0	0	0	0	0	0	123
Lane Group Flow (vph)	0	631	0	0	284	495	0	0	0	468	468	256
Turn Type						Free				Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases						Free						6
Actuated Green, G (s)		21.3			21.3	90.0				60.7	60.7	60.7
Effective Green, g (s)		21.3			21.3	90.0				60.7	60.7	60.7
Actuated g/C Ratio		0.24			0.24	1.00				0.67	0.67	0.67
Clearance Time (s)		4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		818			838	1583				1134	1134	1068
v/s Ratio Prot		c0.19			0.08					c0.28	0.28	
v/s Ratio Perm						0.31						0.24
v/c Ratio		0.77			0.34	0.31				0.41	0.41	0.24
Uniform Delay, d1		32.1			28.5	0.0				6.6	6.6	5.7
Progression Factor		1.00			0.05	1.00				1.00	1.00	1.00
Incremental Delay, d2		4.5			0.2	0.4				0.2	0.2	0.5
Delay (s)		36.6			1.6	0.4				6.9	6.9	6.2
Level of Service		D			A	A				A	A	A
Approach Delay (s)		36.6			0.8			0.0			6.7	
Approach LOS		D			A			A			A	
Intersection Summary												
HCM Average Control Delay			12.1				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			47.5%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												





























HCM Signalized Intersection Capacity Analysis
 20: Laurel Road & SR4 NB Ramps

Cumulative AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		1770	1583			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1770	3539			3539	1583		1770	1583			
Volume (vph)	267	1102	0	0	695	841	21	0	255	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	290	1198	0	0	755	914	23	0	277	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	57	0	0	0
Lane Group Flow (vph)	290	1198	0	0	755	914	0	23	220	0	0	0
Turn Type	Prot						Free	Perm	Perm			
Protected Phases	7	4					8		2			
Permitted Phases							Free	2	2			
Actuated Green, G (s)	24.0	52.7					24.7	90.0	29.3	29.3		
Effective Green, g (s)	24.0	52.7					24.7	90.0	29.3	29.3		
Actuated g/C Ratio	0.27	0.59					0.27	1.00	0.33	0.33		
Clearance Time (s)	4.0	4.0					4.0		4.0	4.0		
Vehicle Extension (s)	3.0	3.0					3.0		3.0	3.0		
Lane Grp Cap (vph)	472	2072					971	1583	576	515		
v/s Ratio Prot	0.16	0.34					c0.21					
v/s Ratio Perm							0.58		0.01	0.17		
v/c Ratio	0.61	0.58					0.78	0.58	0.04	0.43		
Uniform Delay, d1	28.9	11.7					30.1	0.0	20.7	23.8		
Progression Factor	0.78	0.63					1.21	1.00	1.00	1.00		
Incremental Delay, d2	2.2	0.4					2.4	0.9	0.1	2.6		
Delay (s)	24.7	7.7					38.7	0.9	20.9	26.4		
Level of Service	C	A					D	A	C	C		
Approach Delay (s)	11.0						18.0		25.9	0.0		
Approach LOS	B						B		C	A		
Intersection Summary												
HCM Average Control Delay	15.7		HCM Level of Service				B					
HCM Volume to Capacity ratio	0.63											
Actuated Cycle Length (s)	90.0		Sum of lost time (s)				4.0					
Intersection Capacity Utilization	52.9%		ICU Level of Service				A					
Analysis Period (min)	15											
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Cumulative AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3486		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3486		1770	3539	1583
Volume (vph)	220	710	202	95	1095	260	180	450	50	50	220	320
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	772	220	103	1190	283	196	489	54	54	239	348
RTOR Reduction (vph)	0	0	139	0	0	161	0	9	0	0	0	186
Lane Group Flow (vph)	239	772	81	103	1190	122	196	534	0	54	239	162
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases			4			8						6
Actuated Green, G (s)	8.2	33.0	33.0	13.4	38.2	38.2	13.2	22.0		5.6	14.4	14.4
Effective Green, g (s)	8.2	33.0	33.0	13.4	38.2	38.2	13.2	22.0		5.6	14.4	14.4
Actuated g/C Ratio	0.09	0.37	0.37	0.15	0.42	0.42	0.15	0.24		0.06	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	313	1298	580	264	1502	672	260	852		110	566	253
v/s Ratio Prot	c0.07	0.22		0.06	c0.34		c0.11	c0.16		0.03	0.07	
v/s Ratio Perm			0.14			0.18						0.22
v/c Ratio	0.76	0.59	0.14	0.39	0.79	0.18	0.75	0.63		0.49	0.42	0.64
Uniform Delay, d1	40.0	23.1	19.0	34.6	22.5	16.1	36.8	30.3		40.8	34.1	35.4
Progression Factor	1.25	0.79	0.86	0.45	0.25	0.09	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.1	0.6	0.1	0.5	1.6	0.1	11.7	3.5		3.4	2.3	11.7
Delay (s)	59.1	18.8	16.5	16.2	7.2	1.6	48.5	33.8		44.2	36.4	47.1
Level of Service	E	B	B	B	A	A	D	C		D	D	D
Approach Delay (s)		26.2			6.8			37.7			42.8	
Approach LOS		C			A			D			D	
Intersection Summary												
HCM Average Control Delay			23.5				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			70.1%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
22: Laurel Road & Ohara Avenue

Cumulative AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3446		1770	3445	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3446		1770	3445	
Volume (vph)	110	516	210	235	1075	210	200	580	123	100	511	110
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	561	228	255	1168	228	217	630	134	109	555	120
RTOR Reduction (vph)	0	0	164	0	0	145	0	20	0	0	20	0
Lane Group Flow (vph)	120	561	64	255	1168	83	217	744	0	109	655	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	7.6	25.2	25.2	15.1	32.7	32.7	12.0	27.1		6.6	21.7	
Effective Green, g (s)	7.6	25.2	25.2	15.1	32.7	32.7	12.0	27.1		6.6	21.7	
Actuated g/C Ratio	0.08	0.28	0.28	0.17	0.36	0.36	0.13	0.30		0.07	0.24	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	149	991	443	297	1286	575	236	1038		130	831	
v/s Ratio Prot	c0.07	0.16		0.14	c0.33		c0.12	0.22		0.06	c0.20	
v/s Ratio Perm			0.14			0.14						
v/c Ratio	0.81	0.57	0.14	0.86	0.91	0.14	0.92	0.72		0.84	0.79	
Uniform Delay, d1	40.5	27.7	24.3	36.4	27.2	19.2	38.5	28.0		41.2	32.0	
Progression Factor	0.72	0.74	0.89	0.75	0.38	0.42	1.00	1.00		1.07	1.05	
Incremental Delay, d2	23.2	0.6	0.1	14.7	6.5	0.1	36.9	4.2		35.1	7.4	
Delay (s)	52.4	21.2	21.8	41.9	16.9	8.1	75.4	32.3		79.3	41.0	
Level of Service	D	C	C	D	B	A	E	C		E	D	
Approach Delay (s)		25.5			19.5			41.8			46.3	
Approach LOS		C			B			D			D	
Intersection Summary												
HCM Average Control Delay			30.7				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			16.0		
Intersection Capacity Utilization			77.9%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
23: Laurel Road & Rose Avenue

Cumulative AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	3524		1770	3535		1770	1706			1785	1583
Flt Permitted	0.95	1.00		0.44	1.00		0.44	1.00			0.74	1.00
Satd. Flow (perm)	1770	3524		825	3535		819	1706			1381	1583
Volume (vph)	160	499	15	23	1387	10	10	6	8	172	25	33
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	174	542	16	25	1508	11	11	7	9	187	27	36
RTOR Reduction (vph)	0	2	0	0	0	0	0	7	0	0	0	28
Lane Group Flow (vph)	174	556	0	25	1519	0	11	9	0	0	214	8
Turn Type	Prot		Perm			Perm			Perm			Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases				8			2			6		6
Actuated Green, G (s)	12.4	63.1		46.7	46.7		18.9	18.9			18.9	18.9
Effective Green, g (s)	12.4	63.1		46.7	46.7		18.9	18.9			18.9	18.9
Actuated g/C Ratio	0.14	0.70		0.52	0.52		0.21	0.21			0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	244	2471		428	1834		172	358			290	332
v/s Ratio Prot	c0.10	0.16			c0.43			0.01				
v/s Ratio Perm				0.03			0.01				c0.15	0.02
v/c Ratio	0.71	0.22		0.06	0.83		0.06	0.02			0.74	0.02
Uniform Delay, d1	37.1	4.8		10.7	18.3		28.5	28.2			33.2	28.2
Progression Factor	1.04	0.05		0.56	0.51		0.79	0.76			1.00	1.00
Incremental Delay, d2	7.5	0.0		0.0	1.2		0.7	0.1			15.5	0.1
Delay (s)	46.0	0.3		6.1	10.6		23.2	21.4			48.7	28.3
Level of Service	D	A		A	B		C	C			D	C
Approach Delay (s)		11.1			10.5			22.1			45.8	
Approach LOS		B			B			C			D	
Intersection Summary												
HCM Average Control Delay			14.3			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			75.0%			ICU Level of Service					D	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 24: Laurel Road & Main Street

Cumulative AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3324		1770	3539	1583	1770	3539	1583	3433	3375	
Flt Permitted	0.25	1.00		0.20	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	466	3324		373	3539	1583	1770	3539	1583	3433	3375	
Volume (vph)	137	322	220	391	943	230	200	594	139	200	582	261
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	149	350	239	425	1025	250	217	646	151	217	633	284
RTOR Reduction (vph)	0	135	0	0	0	175	0	0	100	0	57	0
Lane Group Flow (vph)	149	454	0	425	1025	75	217	646	51	217	860	0
Turn Type	pm+pt			pm+pt			Perm	Prot		Perm	Prot	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	23.0	16.0		38.0	27.0	27.0	12.0	30.5	30.5	9.5	28.0	
Effective Green, g (s)	23.0	16.0		38.0	27.0	27.0	12.0	30.5	30.5	9.5	28.0	
Actuated g/C Ratio	0.26	0.18		0.42	0.30	0.30	0.13	0.34	0.34	0.11	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	221	591		437	1062	475	236	1199	536	362	1050	
v/s Ratio Prot	0.05	0.18		c0.19	0.29		c0.12	0.18		0.06	c0.27	
v/s Ratio Perm	0.12			c0.22		0.16			0.10			
v/c Ratio	0.67	0.77		0.97	0.97	0.16	0.92	0.54	0.10	0.60	0.82	
Uniform Delay, d1	28.1	35.2		23.4	31.0	23.1	38.5	24.1	20.3	38.4	28.7	
Progression Factor	1.17	0.88		0.76	0.68	0.55	0.95	1.17	2.67	1.13	0.61	
Incremental Delay, d2	7.6	5.7		31.2	16.8	0.1	35.3	1.6	0.3	2.6	6.8	
Delay (s)	40.5	36.8		48.9	37.8	12.8	71.9	29.7	54.7	45.9	24.2	
Level of Service	D	D		D	D	B	E	C	D	D	C	
Approach Delay (s)		37.6			36.9			42.5			28.3	
Approach LOS		D			D			D			C	
Intersection Summary												
HCM Average Control Delay			36.1				HCM Level of Service			D		
HCM Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			86.5%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
25: Laurel Road & Sellers Avenue

Cumulative AM Volumes
2/4/2010

























Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1863	2787
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	1770	3539	1863	2787
Volume (vph)	620	21	120	172	210	1310
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	674	23	130	187	228	1424
RTOR Reduction (vph)	0	17	0	0	0	764
Lane Group Flow (vph)	674	6	130	187	228	660
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	24.8	24.8	11.5	57.2	41.7	41.7
Effective Green, g (s)	24.8	24.8	11.5	57.2	41.7	41.7
Actuated g/C Ratio	0.28	0.28	0.13	0.64	0.46	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	946	436	226	2249	863	1291
v/s Ratio Prot	c0.20		c0.07	0.05	0.12	
v/s Ratio Perm		0.01				0.51
v/c Ratio	0.71	0.01	0.58	0.08	0.26	0.51
Uniform Delay, d1	29.4	23.7	37.0	6.3	14.8	17.0
Progression Factor	0.55	0.13	1.08	1.08	0.37	2.48
Incremental Delay, d2	2.0	0.0	3.5	0.1	0.6	1.1
Delay (s)	18.1	3.0	43.3	6.9	6.0	43.2
Level of Service	B	A	D	A	A	D
Approach Delay (s)	17.6			21.8	38.1	
Approach LOS	B			C	D	

Intersection Summary

HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
26: Malicoat Avenue & Main Street

Cumulative AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	0.93		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1681		1770	1725		1770	3530		1770	3436	
Flt Permitted	0.62	1.00		0.62	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1161	1681		1161	1725		1770	3530		1770	3436	
Volume (vph)	226	43	80	37	63	61	57	647	12	31	744	180
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	246	47	87	40	68	66	62	703	13	34	809	196
RTOR Reduction (vph)	0	66	0	0	44	0	0	1	0	0	19	0
Lane Group Flow (vph)	246	68	0	40	90	0	62	715	0	34	986	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	21.3	21.3		21.3	21.3		7.0	53.1		3.6	49.7	
Effective Green, g (s)	21.3	21.3		21.3	21.3		7.0	53.1		3.6	49.7	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.08	0.59		0.04	0.55	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	275	398		275	408		138	2083		71	1897	
v/s Ratio Prot		0.08			0.08		c0.04	0.20		0.02	c0.29	
v/s Ratio Perm	c0.21			0.03								
v/c Ratio	0.89	0.17		0.15	0.22		0.45	0.34		0.48	0.52	
Uniform Delay, d1	33.3	27.3		27.2	27.7		39.7	9.5		42.3	12.7	
Progression Factor	0.99	0.99		1.00	1.00		1.00	1.00		0.84	0.75	
Incremental Delay, d2	28.6	0.2		0.2	0.3		2.3	0.5		2.3	0.5	
Delay (s)	61.5	27.3		27.4	27.9		42.0	9.9		38.0	9.9	
Level of Service	E	C		C	C		D	A		D	A	
Approach Delay (s)		49.5			27.8			12.5			10.9	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			18.8			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			62.5%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
27: Brownstone Road & Main Street

Cumulative AM Volumes
2/4/2010
















Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.94			1.00	0.97	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1709			3523	3429	
Flt Permitted	0.97			0.75	1.00	
Satd. Flow (perm)	1709			2663	3429	
Volume (vph)	84	59	64	638	836	220
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	91	64	70	693	909	239
RTOR Reduction (vph)	37	0	0	0	13	0
Lane Group Flow (vph)	118	0	0	763	1135	0
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	10.9			71.1	71.1	
Effective Green, g (s)	10.9			71.1	71.1	
Actuated g/C Ratio	0.12			0.79	0.79	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	207			2104	2709	
v/s Ratio Prot	c0.09				c0.33	
v/s Ratio Perm				0.29		
v/c Ratio	0.57			0.36	0.42	
Uniform Delay, d1	37.3			2.8	3.0	
Progression Factor	1.00			0.65	1.00	
Incremental Delay, d2	3.8			0.4	0.5	
Delay (s)	41.1			2.2	3.4	
Level of Service	D			A	A	
Approach Delay (s)	41.1			2.2	3.4	
Approach LOS	D			A	A	

Intersection Summary

HCM Average Control Delay	5.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

















HCM Signalized Intersection Capacity Analysis
28: Delta Road & Main Street

Cumulative AM Volumes
2/4/2010

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3491		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3491		1770	3539
Volume (vph)	111	247	724	72	226	863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	268	787	78	246	938
RTOR Reduction (vph)	0	235	6	0	0	0
Lane Group Flow (vph)	121	33	859	0	246	938
Turn Type	Perm			Prot		
Protected Phases	8		2		1	6
Permitted Phases	8					
Actuated Green, G (s)	11.1	11.1	49.6		17.3	70.9
Effective Green, g (s)	11.1	11.1	49.6		17.3	70.9
Actuated g/C Ratio	0.12	0.12	0.55		0.19	0.79
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	218	195	1924		340	2788
v/s Ratio Prot	0.07		c0.25		c0.14	0.27
v/s Ratio Perm		0.17				
v/c Ratio	0.56	0.17	0.45		0.72	0.34
Uniform Delay, d1	37.1	35.3	12.0		34.1	2.8
Progression Factor	0.95	0.89	0.53		1.06	0.86
Incremental Delay, d2	3.0	0.4	0.7		7.1	0.3
Delay (s)	38.3	31.8	7.1		43.4	2.7
Level of Service	D	C	A		D	A
Approach Delay (s)	33.8		7.1			11.1
Approach LOS	C		A			B
Intersection Summary						
HCM Average Control Delay			13.3		HCM Level of Service	B
HCM Volume to Capacity ratio			0.64			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			51.0%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						























HCM Signalized Intersection Capacity Analysis
 29: Delta Road & Sellers Avenue

Cumulative AM Volumes
 2/4/2010

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		4.0			4.0			4.0			4.0		
Lane Util. Factor		1.00			1.00			1.00			1.00		
Frt		0.97			0.99			0.96			0.97		
Flt Protected		0.99			0.98			0.99			0.99		
Satd. Flow (prot)		1789			1819			1777			1786		
Flt Permitted		0.89			0.77			0.94			0.95		
Satd. Flow (perm)		1609			1432			1678			1711		
Volume (vph)	34	108	41	71	143	14	25	92	47	33	159	67	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	37	117	45	77	155	15	27	100	51	36	173	73	
RTOR Reduction (vph)	0	16	0	0	4	0	0	10	0	0	9	0	
Lane Group Flow (vph)	0	183	0	0	243	0	0	168	0	0	273	0	
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm		
Protected Phases		4			8			2			6		
Permitted Phases	4			8			2			6			
Actuated Green, G (s)		20.7			20.7			61.3			61.3		
Effective Green, g (s)		20.7			20.7			61.3			61.3		
Actuated g/C Ratio		0.23			0.23			0.68			0.68		
Clearance Time (s)		4.0			4.0			4.0			4.0		
Vehicle Extension (s)		3.0			3.0			3.0			3.0		
Lane Grp Cap (vph)		370			329			1143			1165		
v/s Ratio Prot													
v/s Ratio Perm		0.12			0.17			0.11			0.16		
v/c Ratio		0.49			0.74			0.15			0.23		
Uniform Delay, d1		30.1			32.1			5.1			5.4		
Progression Factor		1.04			1.00			1.47			0.33		
Incremental Delay, d2		0.9			8.4			0.3			0.5		
Delay (s)		32.3			40.6			7.7			2.3		
Level of Service		C			D			A			A		
Approach Delay (s)		32.3			40.6			7.7			2.3		
Approach LOS		C			D			A			A		
Intersection Summary													
HCM Average Control Delay			20.4									HCM Level of Service	C
HCM Volume to Capacity ratio			0.37										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	8.0
Intersection Capacity Utilization			45.3%									ICU Level of Service	A
Analysis Period (min)			15										
c	Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
30: Lone Tree Way & Main Street

Cumulative AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1779	1583		1788	1583	1770	3539	1583	1770	3419	
Flt Permitted		0.69	1.00		0.57	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1281	1583		1063	1583	1770	3539	1583	1770	3419	
Volume (vph)	165	11	323	55	11	6	307	521	25	6	638	186
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	12	351	60	12	7	334	566	27	7	693	202
RTOR Reduction (vph)	0	0	283	0	0	6	0	0	9	0	26	0
Lane Group Flow (vph)	0	191	68	0	72	1	334	566	18	7	869	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		17.5	17.5		17.5	17.5	20.6	59.7	59.7	0.8	39.9	
Effective Green, g (s)		17.5	17.5		17.5	17.5	20.6	59.7	59.7	0.8	39.9	
Actuated g/C Ratio		0.19	0.19		0.19	0.19	0.23	0.66	0.66	0.01	0.44	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		249	308		207	308	405	2348	1050	16	1516	
v/s Ratio Prot							c0.19	0.16		0.00	c0.26	
v/s Ratio Perm		0.15	0.22		0.07	0.00			0.02			
v/c Ratio		0.77	0.22		0.35	0.00	0.82	0.24	0.02	0.44	0.57	
Uniform Delay, d1		34.3	30.5		31.3	29.2	33.0	6.1	5.2	44.4	18.7	
Progression Factor		1.00	1.00		1.00	1.00	0.59	0.78	0.60	0.85	0.75	
Incremental Delay, d2		13.2	0.4		1.0	0.0	11.8	0.2	0.0	17.3	1.5	
Delay (s)		47.5	30.9		32.3	29.2	31.2	5.0	3.1	54.8	15.6	
Level of Service		D	C		C	C	C	A	A	D	B	
Approach Delay (s)		36.7			32.1			14.4			15.9	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			20.4				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			67.0%				ICU Level of Service				C	
Analysis Period (min)			15									
c Critical Lane Group												























HCM Signalized Intersection Capacity Analysis
 31: Main Street & Sellers Avenue

Cumulative AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1826	1583		1816	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.88	1.00		0.84	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583		1638	1583		1570	
Volume (vph)	2	470	38	26	594	37	26	38	10	68	71	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	511	41	28	646	40	28	41	11	74	77	2
RTOR Reduction (vph)	0	0	24	0	0	23	0	0	6	0	1	0
Lane Group Flow (vph)	2	511	17	28	646	17	0	69	5	0	152	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2		2	6		
Actuated Green, G (s)	1.2	37.1	37.1	3.3	39.2	39.2		37.6	37.6		37.6	
Effective Green, g (s)	1.2	37.1	37.1	3.3	39.2	39.2		37.6	37.6		37.6	
Actuated g/C Ratio	0.01	0.41	0.41	0.04	0.44	0.44		0.42	0.42		0.42	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	24	768	653	65	811	689		684	661		656	
v/s Ratio Prot	0.00	c0.27		0.02	c0.35							
v/s Ratio Perm			0.03			0.03		0.04	0.01		c0.10	
v/c Ratio	0.08	0.67	0.03	0.43	0.80	0.03		0.10	0.01		0.23	
Uniform Delay, d1	43.9	21.4	15.7	42.4	22.0	14.5		15.9	15.3		16.9	
Progression Factor	0.73	0.58	0.18	1.00	1.00	1.00		1.00	1.00		1.03	
Incremental Delay, d2	1.3	1.9	0.0	4.5	5.5	0.0		0.3	0.0		0.8	
Delay (s)	33.4	14.3	2.8	47.0	27.4	14.5		16.2	15.3		18.3	
Level of Service	C	B	A	D	C	B		B	B		B	
Approach Delay (s)		13.5			27.5			16.1			18.3	
Approach LOS		B			C			B			B	
Intersection Summary												
HCM Average Control Delay			20.8			HCM Level of Service			C			
HCM Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			52.2%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
1: Main Street & SR160 SB Ramps

Cumulative PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3501		3433	3539	1583		1793	1583	1770	1751	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.76	1.00	0.69	1.00	
Satd. Flow (perm)	1770	3501		3433	3539	1583		1414	1583	1292	1751	
Volume (vph)	30	1020	80	620	320	100	70	20	10	90	30	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	1109	87	674	348	109	76	22	11	98	33	22
RTOR Reduction (vph)	0	7	0	0	0	43	0	0	8	0	17	0
Lane Group Flow (vph)	33	1189	0	674	348	66	0	98	3	98	38	0
Turn Type	Prot			Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2				6
Permitted Phases						8	2		2		6	
Actuated Green, G (s)	3.0	34.8		22.7	54.5	54.5		20.5	20.5	20.5	20.5	
Effective Green, g (s)	3.0	34.8		22.7	54.5	54.5		20.5	20.5	20.5	20.5	
Actuated g/C Ratio	0.03	0.39		0.25	0.61	0.61		0.23	0.23	0.23	0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	59	1354		866	2143	959		322	361	294	399	
v/s Ratio Prot	0.02	c0.34		c0.20	0.10							0.03
v/s Ratio Perm						0.07		0.07	0.01	c0.08		
v/c Ratio	0.56	0.88		0.78	0.16	0.07		0.30	0.01	0.33	0.10	
Uniform Delay, d1	42.8	25.6		31.3	7.8	7.3		28.8	26.9	29.0	27.4	
Progression Factor	1.00	1.00		0.81	0.83	0.75		1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.0	6.8		4.4	0.0	0.0		2.4	0.0	3.0	0.5	
Delay (s)	53.9	32.4		29.8	6.5	5.5		31.3	26.9	32.1	27.9	
Level of Service	D	C		C	A	A		C	C	C	C	
Approach Delay (s)		33.0			20.3			30.8			30.6	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM Average Control Delay			27.3				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			70.1%				ICU Level of Service		C			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis
 2: Main Street & SR160 NB Ramps

Cumulative PM Volumes
 2/4/2010

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↓	↑↑↑	↓	↗↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.91	1.00		0.91	1.00	0.88
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	5085	1583		5085	1770	2787
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	5085	1583		5085	1770	2787
Volume (vph)	1010	20	0	900	40	440
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1098	22	0	978	43	478
RTOR Reduction (vph)	0	10	0	0	0	356
Lane Group Flow (vph)	1098	12	0	978	43	122
Turn Type		Perm	Prot			Over
Protected Phases	2		1	6	8	1
Permitted Phases		2				
Actuated Green, G (s)	49.9	49.9		76.9	5.1	23.0
Effective Green, g (s)	49.9	49.9		76.9	5.1	23.0
Actuated g/C Ratio	0.55	0.55		0.85	0.06	0.26
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	2819	878		4345	100	712
v/s Ratio Prot	c0.22			0.19	c0.02	c0.17
v/s Ratio Perm		0.01				
v/c Ratio	0.39	0.01		0.23	0.43	0.17
Uniform Delay, d1	11.4	9.0		1.2	41.0	26.1
Progression Factor	0.09	0.05		0.58	1.00	1.00
Incremental Delay, d2	0.3	0.0		0.1	3.0	0.1
Delay (s)	1.3	0.4		0.8	44.0	26.2
Level of Service	A	A		A	D	C
Approach Delay (s)	1.3			0.8	27.7	
Approach LOS	A			A	C	
Intersection Summary						
HCM Average Control Delay			6.3		HCM Level of Service	A
HCM Volume to Capacity ratio			0.48			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			41.6%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						
























HCM Signalized Intersection Capacity Analysis
3: Main Street & Empire Avenue

Cumulative PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.97	1.00
Satd. Flow (prot)	1770	5085	1583	3433	5071		3433	1863	1583		1808	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.79	1.00
Satd. Flow (perm)	1770	5085	1583	3433	5071		3433	1863	1583		1474	1583
Volume (vph)	40	1651	540	350	1078	20	430	40	280	30	20	30
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	1795	587	380	1172	22	467	43	304	33	22	33
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	214	0	0	30
Lane Group Flow (vph)	43	1795	587	380	1192	0	467	43	90	0	55	3
Turn Type	Prot		Free	Prot			Prot		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases			Free						8	4		4
Actuated Green, G (s)	5.3	41.0	90.0	12.6	48.3		13.0	24.4	24.4		7.4	7.4
Effective Green, g (s)	5.3	41.0	90.0	12.6	48.3		13.0	24.4	24.4		7.4	7.4
Actuated g/C Ratio	0.06	0.46	1.00	0.14	0.54		0.14	0.27	0.27		0.08	0.08
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	104	2317	1583	481	2721		496	505	429		121	130
v/s Ratio Prot	0.02	c0.35		c0.11	0.24		c0.14	0.02				
v/s Ratio Perm			0.37						0.19		0.04	0.02
v/c Ratio	0.41	0.77	0.37	0.79	0.44		0.94	0.09	0.21		0.45	0.02
Uniform Delay, d1	40.9	20.6	0.0	37.4	12.6		38.1	24.5	25.3		39.4	38.0
Progression Factor	1.23	0.62	1.00	0.83	0.56		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.6	2.6	0.7	8.3	0.5		26.4	0.1	0.2		2.7	0.1
Delay (s)	53.0	15.3	0.7	39.4	7.5		64.5	24.5	25.6		42.1	38.0
Level of Service	D	B	A	D	A		E	C	C		D	D
Approach Delay (s)		12.4			15.2			47.9			40.6	
Approach LOS		B			B			D			D	
Intersection Summary												
HCM Average Control Delay			19.7			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			70.8%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												






















HCM Signalized Intersection Capacity Analysis
4: Main Street & Vintage Parkway

Cumulative PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.95	1.00
Satd. Flow (prot)	1770	3535		1770	3507			1758			1776	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.81			0.72	1.00
Satd. Flow (perm)	1770	3535		1770	3507			1482			1342	1583
Volume (vph)	40	1142	9	12	896	58	18	1	3	96	3	43
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	1241	10	13	974	63	20	1	3	104	3	47
RTOR Reduction (vph)	0	0	0	0	5	0	0	2	0	0	0	36
Lane Group Flow (vph)	43	1251	0	13	1032	0	0	22	0	0	107	11
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	6
Permitted Phases							2			6		6
Actuated Green, G (s)	10.4	55.1		1.5	46.2			21.4			21.4	21.4
Effective Green, g (s)	10.4	55.1		1.5	46.2			21.4			21.4	21.4
Actuated g/C Ratio	0.12	0.61		0.02	0.51			0.24			0.24	0.24
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	205	2164		30	1800			352			319	376
v/s Ratio Prot	0.02	c0.35		0.01	c0.30							
v/s Ratio Perm								0.02			c0.08	0.03
v/c Ratio	0.21	0.58		0.43	0.57			0.06			0.34	0.03
Uniform Delay, d1	36.1	10.5		43.8	15.1			26.5			28.4	26.3
Progression Factor	0.56	0.54		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.4	0.3		9.7	0.4			0.3			2.8	0.1
Delay (s)	20.7	6.0		53.6	15.5			26.9			31.2	26.5
Level of Service	C	A		D	B			C			C	C
Approach Delay (s)		6.4			16.0			26.9			29.8	
Approach LOS		A			B			C			C	
Intersection Summary												
HCM Average Control Delay			12.1			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			47.8%			ICU Level of Service					A	
Analysis Period (min)			15									
c Critical Lane Group												



















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.94			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1855		1770	1751			1797	
Flt Permitted	0.25	1.00	1.00	0.16	1.00		0.95	1.00			0.83	
Satd. Flow (perm)	457	1863	1583	302	1855		1770	1751			1519	
Volume (vph)	20	910	130	60	740	20	140	60	40	30	40	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	989	141	65	804	22	152	65	43	33	43	11
RTOR Reduction (vph)	0	0	42	0	1	0	0	26	0	0	5	0
Lane Group Flow (vph)	22	989	99	65	825	0	152	82	0	0	82	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1	
Effective Green, g (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1	
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.70		0.09	0.22			0.09	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	319	1302	1107	211	1297		159	387			138	
v/s Ratio Prot		c0.53			0.45		c0.09	0.06				
v/s Ratio Perm	0.05		0.09	0.22							c0.06	
v/c Ratio	0.07	0.76	0.09	0.31	0.64		0.96	0.21			0.59	
Uniform Delay, d1	4.8	9.7	4.8	5.8	8.2		45.3	31.8			43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.4	4.2	0.2	0.8	1.0		57.8	0.3			6.6	
Delay (s)	5.2	13.9	5.0	6.6	9.2		103.1	32.1			50.3	
Level of Service	A	B	A	A	A		F	C			D	
Approach Delay (s)		12.6			9.0			73.6			50.3	
Approach LOS		B			A			E			D	
Intersection Summary												
HCM Average Control Delay			19.3			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			71.0%			ICU Level of Service					C	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.99			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)		3494			3536		1770	1583			1770	1583
Flt Permitted		0.95			0.85		0.76	1.00			0.75	1.00
Satd. Flow (perm)		3336			3014		1407	1583			1399	1583
Volume (vph)	1	1640	154	25	1215	0	29	0	9	4	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1783	167	27	1321	0	32	0	10	4	0	3
RTOR Reduction (vph)	0	8	0	0	0	0	0	8	0	0	0	2
Lane Group Flow (vph)	0	1943	0	0	1348	0	32	2	0	0	4	1
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		8		8		2		6		6	
Permitted Phases	4		8		2		6		6		6	
Actuated Green, G (s)	63.7		63.7		18.3		18.3		18.3		18.3	
Effective Green, g (s)	63.7		63.7		18.3		18.3		18.3		18.3	
Actuated g/C Ratio	0.71		0.71		0.20		0.20		0.20		0.20	
Clearance Time (s)	4.0		4.0		4.0		4.0		4.0		4.0	
Vehicle Extension (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lane Grp Cap (vph)	2361		2133		286		322		284		322	
v/s Ratio Prot					0.01							
v/s Ratio Perm	c0.58		0.45		c0.02				0.00		0.00	
v/c Ratio	0.82		0.63		0.11		0.01		0.01		0.00	
Uniform Delay, d1	9.2		7.0		29.2		28.6		28.6		28.6	
Progression Factor	1.00		1.29		1.00		1.00		1.00		1.00	
Incremental Delay, d2	2.4		0.4		0.8		0.0		0.0		0.0	
Delay (s)	11.6		9.4		30.0		28.6		28.7		28.6	
Level of Service	B		A		C		C		C		C	
Approach Delay (s)	11.6		9.4		29.7		28.6		28.6			
Approach LOS	B		A		C		C		C			
Intersection Summary												
HCM Average Control Delay	11.0		HCM Level of Service		B							
HCM Volume to Capacity ratio	0.67											
Actuated Cycle Length (s)	90.0		Sum of lost time (s)		8.0							
Intersection Capacity Utilization	66.4%		ICU Level of Service		C							
Analysis Period (min)	15											
c Critical Lane Group												

















HCM Signalized Intersection Capacity Analysis
7: West Cypress Road & Ohara Avenue

Cumulative PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1751		1770	1814		1770	1814		1770	1814	
Flt Permitted	0.23	1.00		0.21	1.00		0.31	1.00		0.51	1.00	
Satd. Flow (perm)	422	1751		386	1814		586	1814		954	1814	
Volume (vph)	100	195	130	66	259	55	70	280	59	92	520	110
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	212	141	72	282	60	76	304	64	100	565	120
RTOR Reduction (vph)	0	33	0	0	11	0	0	6	0	0	6	0
Lane Group Flow (vph)	109	320	0	72	331	0	76	362	0	100	679	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.7	20.7		20.7	20.7		61.3	61.3		61.3	61.3	
Effective Green, g (s)	20.7	20.7		20.7	20.7		61.3	61.3		61.3	61.3	
Actuated g/C Ratio	0.23	0.23		0.23	0.23		0.68	0.68		0.68	0.68	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	97	403		89	417		399	1236		650	1236	
v/s Ratio Prot		0.20			0.19			0.20			c0.38	
v/s Ratio Perm	c0.26			0.19			0.13			0.10		
v/c Ratio	1.12	0.79		0.81	0.79		0.19	0.29		0.15	0.55	
Uniform Delay, d1	34.6	32.6		32.8	32.6		5.3	5.7		5.1	7.3	
Progression Factor	1.00	1.00		1.00	1.00		0.68	0.64		1.00	1.00	
Incremental Delay, d2	128.6	10.3		39.8	10.0		0.9	0.5		0.5	1.8	
Delay (s)	163.3	42.9		72.6	42.7		4.5	4.2		5.6	9.1	
Level of Service	F	D		E	D		A	A		A	A	
Approach Delay (s)		71.3			47.9			4.2			8.6	
Approach LOS		E			D			A			A	
Intersection Summary												
HCM Average Control Delay			29.2			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			73.8%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 8: West Cypress Road & Rose Avenue

Cumulative PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	313	31	12	388	34	28	133	14	28	135	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	340	34	13	422	37	30	145	15	30	147	27
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	377	472	190	204								
Volume Left (vph)	3	13	30	30								
Volume Right (vph)	34	37	15	27								
Hadj (s)	0.0	0.0	0.0	0.0								
Departure Headway (s)	6.2	6.9	7.0	6.9								
Degree Utilization, x	0.65	0.91	0.37	0.39								
Capacity (veh/h)	554	472	464	485								
Control Delay (s)	11.9	18.9	11.0	11.0								
Approach Delay (s)	11.9	18.9	11.0	11.0								
Approach LOS	B	C	B	B								
Intersection Summary												
Delay			14.3									
HCM Level of Service			B									
Intersection Capacity Utilization			50.3%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
9: West Cypress Road & Main Street

Cumulative PM Volumes
2/4/2010

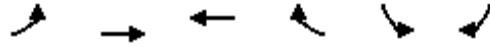
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3442		1770	1770	1504	1770	3539	1583	3433	3529	
Flt Permitted	0.23	1.00		0.36	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	436	3442		669	1770	1504	1770	3539	1583	3433	3529	
Volume (vph)	100	311	70	58	303	567	130	545	154	755	1023	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	338	76	63	329	616	141	592	167	821	1112	22
RTOR Reduction (vph)	0	21	0	0	0	26	0	0	132	0	2	0
Lane Group Flow (vph)	109	393	0	63	329	590	141	592	35	821	1132	0
Turn Type	pm+pt			pm+pt		pm+ov	Prot		Perm		Prot	
Protected Phases	7	4		3	8	1	5	2			1	6
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	22.9	17.1		29.7	20.5	49.3	9.8	18.9	18.9	28.8	37.9	
Effective Green, g (s)	22.9	17.1		29.7	20.5	49.3	9.8	18.9	18.9	28.8	37.9	
Actuated g/C Ratio	0.25	0.19		0.33	0.23	0.55	0.11	0.21	0.21	0.32	0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	197	654		333	403	891	193	743	332	1099	1486	
v/s Ratio Prot	c0.04	0.12		c0.02	c0.19	c0.22	0.08	0.17		0.24	c0.32	
v/s Ratio Perm	0.11			0.04		0.19			0.11			
v/c Ratio	0.55	0.60		0.19	0.82	0.66	0.73	0.80	0.11	0.75	0.76	
Uniform Delay, d1	37.4	33.3		26.2	33.0	14.4	38.8	33.7	28.7	27.3	22.2	
Progression Factor	1.00	1.00		0.57	0.59	0.70	0.94	0.83	0.69	1.14	0.79	
Incremental Delay, d2	3.3	1.6		0.3	11.3	1.7	10.1	6.6	0.5	2.0	2.7	
Delay (s)	40.7	34.9		15.2	30.8	11.8	46.5	34.6	20.2	33.1	20.1	
Level of Service	D	C		B	C	B	D	C	C	C	C	
Approach Delay (s)		36.1			18.2			33.8			25.6	
Approach LOS		D			B			C			C	

Intersection Summary

HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 10: East Cypress Road & Picasso Drive

Cumulative PM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶		↶	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.87	
Flt Protected	0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	3536		1620	
Flt Permitted	0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	3536		1620	
Volume (vph)	101	1118	821	5	4	70
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	110	1215	892	5	4	76
RTOR Reduction (vph)	0	0	1	0	55	0
Lane Group Flow (vph)	110	1215	896	0	25	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	9.6	57.6	44.0		24.4	
Effective Green, g (s)	9.6	57.6	44.0		24.4	
Actuated g/C Ratio	0.11	0.64	0.49		0.27	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	189	2265	1729		439	
v/s Ratio Prot	0.06	c0.34	0.25		c0.05	
v/s Ratio Perm						
v/c Ratio	0.58	0.54	0.52		0.06	
Uniform Delay, d1	38.3	8.9	15.7		24.3	
Progression Factor	1.25	0.78	0.75		1.00	
Incremental Delay, d2	3.4	0.2	0.3		0.2	
Delay (s)	51.4	7.1	12.0		24.5	
Level of Service	D	A	B		C	
Approach Delay (s)		10.8	12.0		24.5	
Approach LOS		B	B		C	
Intersection Summary						
HCM Average Control Delay			11.8		HCM Level of Service	B
HCM Volume to Capacity ratio			0.43			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			43.0%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						
























HCM Signalized Intersection Capacity Analysis
 11: East Cypress Road & Frank Hengel Way

Cumulative PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.97	1.00
Satd. Flow (prot)	1770	3514		1770	3539	1583		1768			1799	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.75			0.86	1.00
Satd. Flow (perm)	1770	3514		1770	3539	1583		1393			1603	1583
Volume (vph)	9	1174	58	6	853	2	39	2	3	5	2	14
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	1276	63	7	927	2	42	2	3	5	2	15
RTOR Reduction (vph)	0	3	0	0	0	1	0	3	0	0	0	13
Lane Group Flow (vph)	10	1336	0	7	927	1	0	44	0	0	7	2
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	1.5	65.8		1.4	65.7	65.7		10.8			10.8	10.8
Effective Green, g (s)	1.5	65.8		1.4	65.7	65.7		10.8			10.8	10.8
Actuated g/C Ratio	0.02	0.73		0.02	0.73	0.73		0.12			0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	30	2569		28	2583	1156		167			192	190
v/s Ratio Prot	c0.01	c0.38		0.00	0.26							
v/s Ratio Perm						0.00		c0.03			0.00	0.01
v/c Ratio	0.33	0.52		0.25	0.36	0.00		0.27			0.04	0.01
Uniform Delay, d1	43.8	5.2		43.8	4.4	3.3		36.0			35.0	34.9
Progression Factor	0.98	0.41		0.82	2.10	1.65		1.00			1.00	1.00
Incremental Delay, d2	6.0	0.2		4.2	0.1	0.0		3.9			0.4	0.1
Delay (s)	49.1	2.3		40.0	9.4	5.4		39.8			35.4	35.0
Level of Service	D	A		D	A	A		D			D	C
Approach Delay (s)		2.7			9.6			39.8			35.1	
Approach LOS		A			A			D			D	
Intersection Summary												
HCM Average Control Delay			6.5				HCM Level of Service				A	
HCM Volume to Capacity ratio			0.46									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			50.1%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												





















HCM Signalized Intersection Capacity Analysis
 12: East Cypress Road & Machado Lane

Cumulative PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0				4.0		
Lane Util. Factor		0.95			0.95	1.00				1.00		
Frt		1.00			1.00	0.85				1.00		
Flt Protected		1.00			1.00	1.00				0.95		
Satd. Flow (prot)		3539			3539	1583				1770		
Flt Permitted		1.00			1.00	1.00				0.76		
Satd. Flow (perm)		3539			3539	1583				1410		
Volume (vph)	0	1215	0	0	891	36	0	0	0	25	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1321	0	0	968	39	0	0	0	27	0	0
RTOR Reduction (vph)	0	0	0	0	0	15	0	0	0	0	0	0
Lane Group Flow (vph)	0	1321	0	0	968	24	0	0	0	27	0	0
Turn Type	Prot			Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2				6	
Actuated Green, G (s)		55.5			55.5	55.5				26.5		
Effective Green, g (s)		55.5			55.5	55.5				26.5		
Actuated g/C Ratio		0.62			0.62	0.62				0.29		
Clearance Time (s)		4.0			4.0	4.0				4.0		
Vehicle Extension (s)		3.0			3.0	3.0				3.0		
Lane Grp Cap (vph)		2182			2182	976				415		
v/s Ratio Prot		c0.37			0.27							
v/s Ratio Perm						0.02				c0.02		
v/c Ratio		0.61			0.44	0.02				0.07		
Uniform Delay, d1		10.6			9.1	6.7				22.8		
Progression Factor		0.13			0.73	0.39				1.00		
Incremental Delay, d2		0.4			0.1	0.0				0.3		
Delay (s)		1.8			6.7	2.6				23.1		
Level of Service		A			A	A				C		
Approach Delay (s)		1.8			6.6			0.0			23.1	
Approach LOS		A			A			A			C	
Intersection Summary												
HCM Average Control Delay			4.1				HCM Level of Service			A		
HCM Volume to Capacity ratio			0.43									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			43.6%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												



























HCM Signalized Intersection Capacity Analysis
 13: East Cypress Road & Project Driveway

Cumulative PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0				4.0		
Lane Util. Factor		0.95			0.95	1.00				1.00		
Frt		1.00			1.00	0.85				1.00		
Flt Protected		1.00			1.00	1.00				0.95		
Satd. Flow (prot)		3539			3539	1583				1770		
Flt Permitted		1.00			1.00	1.00				0.95		
Satd. Flow (perm)		3539			3539	1583				1770		
Volume (vph)	0	1252	0	0	975	69	0	0	0	49	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1361	0	0	1060	75	0	0	0	53	0	0
RTOR Reduction (vph)	0	0	0	0	0	22	0	0	0	0	0	0
Lane Group Flow (vph)	0	1361	0	0	1060	53	0	0	0	53	0	0
Turn Type	Prot			Perm			custom			custom		
Protected Phases	7	4			8							
Permitted Phases						8				6		6
Actuated Green, G (s)		63.8			63.8	63.8				18.2		
Effective Green, g (s)		63.8			63.8	63.8				18.2		
Actuated g/C Ratio		0.71			0.71	0.71				0.20		
Clearance Time (s)		4.0			4.0	4.0				4.0		
Vehicle Extension (s)		3.0			3.0	3.0				3.0		
Lane Grp Cap (vph)		2509			2509	1122				358		
v/s Ratio Prot		c0.38			0.30							
v/s Ratio Perm						0.05				0.03		
v/c Ratio		0.54			0.42	0.05				0.15		
Uniform Delay, d1		6.2			5.4	3.9				29.5		
Progression Factor		0.04			1.00	1.00				1.00		
Incremental Delay, d2		0.2			0.1	0.0				0.9		
Delay (s)		0.4			5.6	4.0				30.4		
Level of Service		A			A	A				C		
Approach Delay (s)		0.4			5.5			0.0			30.4	
Approach LOS		A			A			A			C	
Intersection Summary												
HCM Average Control Delay			3.3				HCM Level of Service				A	
HCM Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			44.6%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												

























HCM Signalized Intersection Capacity Analysis
 14: East Cypress Road & Sellers Avenue

Cumulative PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3530		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3530		1770	1863	1583	1770	1863	1583
Volume (vph)	29	1152	157	546	861	15	172	170	938	11	126	31
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	1252	171	593	936	16	187	185	1020	12	137	34
RTOR Reduction (vph)	0	0	103	0	1	0	0	0	0	0	0	30
Lane Group Flow (vph)	32	1252	68	593	951	0	187	185	1020	12	137	4
Turn Type	Prot		Perm	Prot			Prot		Free	Prot		Perm
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases			4						Free			6
Actuated Green, G (s)	4.9	36.0	36.0	18.6	49.7		17.2	28.2	100.0	1.2	12.2	12.2
Effective Green, g (s)	4.9	36.0	36.0	18.6	49.7		17.2	28.2	100.0	1.2	12.2	12.2
Actuated g/C Ratio	0.05	0.36	0.36	0.19	0.50		0.17	0.28	1.00	0.01	0.12	0.12
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	87	1274	570	639	1754		304	525	1583	21	227	193
v/s Ratio Prot	0.02	c0.35		c0.17	0.27		0.11	0.10		0.01	0.07	
v/s Ratio Perm			0.11						0.64			0.02
v/c Ratio	0.37	0.98	0.12	0.93	0.54		0.62	0.35	0.64	0.57	0.60	0.02
Uniform Delay, d1	46.1	31.7	21.4	40.0	17.3		38.3	28.6	0.0	49.1	41.6	38.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	21.0	0.1	19.7	0.3		3.7	1.9	2.0	32.5	11.3	0.2
Delay (s)	48.7	52.7	21.5	59.7	17.7		42.0	30.5	2.0	81.6	53.0	38.9
Level of Service	D	D	C	E	B		D	C	A	F	D	D
Approach Delay (s)		48.9			33.8			11.2			52.2	
Approach LOS		D			C			B			D	
Intersection Summary												
HCM Average Control Delay			32.5	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			100.0	Sum of lost time (s)				8.0				
Intersection Capacity Utilization			76.9%	ICU Level of Service				D				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 15: East Cypress Road &

Cumulative PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.96	1.00
Satd. Flow (prot)	1770	3533		1770	3521			1751			1791	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.80			0.80	1.00
Satd. Flow (perm)	1770	3533		1770	3521			1450			1486	1583
Volume (vph)	240	1833	23	8	1269	46	40	6	12	18	5	134
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	261	1992	25	9	1379	50	43	7	13	20	5	146
RTOR Reduction (vph)	0	1	0	0	3	0	0	11	0	0	0	125
Lane Group Flow (vph)	261	2016	0	9	1426	0	0	52	0	0	25	21
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	6
Permitted Phases							2			6		6
Actuated Green, G (s)	15.9	64.4		0.8	49.3			12.8			12.8	12.8
Effective Green, g (s)	15.9	64.4		0.8	49.3			12.8			12.8	12.8
Actuated g/C Ratio	0.18	0.72		0.01	0.55			0.14			0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	313	2528		16	1929			206			211	225
v/s Ratio Prot	0.15	c0.57		0.01	c0.41							
v/s Ratio Perm								0.04			0.02	0.09
v/c Ratio	0.83	0.80		0.56	0.74			0.25			0.12	0.09
Uniform Delay, d1	35.8	8.5		44.4	15.5			34.3			33.7	33.6
Progression Factor	1.00	1.00		0.87	0.79			1.00			1.00	1.00
Incremental Delay, d2	17.1	1.8		34.9	1.4			2.9			1.1	0.8
Delay (s)	52.9	10.3		73.5	13.7			37.3			34.8	34.4
Level of Service	D	B		E	B			D			C	C
Approach Delay (s)		15.2			14.0			37.3			34.4	
Approach LOS		B			B			D			C	
Intersection Summary												
HCM Average Control Delay			16.0			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			74.7%			ICU Level of Service					D	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 16: East Cypress Road & Knightsen Avenue

Cumulative PM Volumes
 2/4/2010

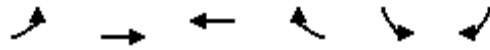
	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.06	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	120	3539	1770	1583
Volume (vph)	1884	105	27	1222	110	67
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2048	114	29	1328	120	73
RTOR Reduction (vph)	0	24	0	0	0	20
Lane Group Flow (vph)	2048	90	29	1328	120	53
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	70.8	70.8	70.8	70.8	11.2	11.2
Effective Green, g (s)	70.8	70.8	70.8	70.8	11.2	11.2
Actuated g/C Ratio	0.79	0.79	0.79	0.79	0.12	0.12
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2784	1245	94	2784	220	197
v/s Ratio Prot	c0.58			0.38	c0.07	
v/s Ratio Perm		0.07	0.24			0.05
v/c Ratio	0.74	0.07	0.31	0.48	0.55	0.27
Uniform Delay, d1	4.9	2.2	2.7	3.3	37.0	35.7
Progression Factor	0.19	0.01	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.0	1.9	0.1	9.4	3.3
Delay (s)	1.6	0.0	4.6	3.4	46.4	39.0
Level of Service	A	A	A	A	D	D
Approach Delay (s)	1.5			3.4	43.6	
Approach LOS	A			A	D	

Intersection Summary

HCM Average Control Delay	4.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: East Cypress Road & Jersey Island Road

Cumulative PM Volumes
 2/4/2010
































Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑		↖	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3515		1770	1583
Flt Permitted	0.19	1.00	1.00		0.95	1.00
Satd. Flow (perm)	361	3539	3515		1770	1583
Volume (vph)	246	1726	1120	53	45	167
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	267	1876	1217	58	49	182
RTOR Reduction (vph)	0	0	3	0	0	127
Lane Group Flow (vph)	267	1876	1272	0	49	55
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	95.6	95.6	95.6		16.4	16.4
Effective Green, g (s)	95.6	95.6	95.6		16.4	16.4
Actuated g/C Ratio	0.80	0.80	0.80		0.14	0.14
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	288	2819	2800		242	216
v/s Ratio Prot		0.53	0.36		0.03	
v/s Ratio Perm	0.74					0.11
v/c Ratio	0.93	0.67	0.45		0.20	0.26
Uniform Delay, d1	9.5	5.3	3.9		46.0	46.3
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	34.0	0.6	0.1		1.9	2.8
Delay (s)	43.5	5.9	4.0		47.9	49.2
Level of Service	D	A	A		D	D
Approach Delay (s)		10.6	4.0		48.9	
Approach LOS		B	A		D	

Intersection Summary

HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			






















HCM Signalized Intersection Capacity Analysis
 18: East Cypress Road & Bethel Island Road

Cumulative PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 						 	 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	2787
Volume (vph)	763	613	413	161	428	55	295	352	170	69	230	474
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	829	666	449	175	465	60	321	383	185	75	250	515
RTOR Reduction (vph)	0	0	316	0	0	50	0	0	146	0	0	412
Lane Group Flow (vph)	829	666	133	175	465	10	321	383	39	75	250	103
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	23.0	26.6	26.6	11.5	15.1	15.1	17.9	19.0	19.0	16.9	18.0	18.0
Effective Green, g (s)	23.0	26.6	26.6	11.5	15.1	15.1	17.9	19.0	19.0	16.9	18.0	18.0
Actuated g/C Ratio	0.26	0.30	0.30	0.13	0.17	0.17	0.20	0.21	0.21	0.19	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	877	1046	468	226	594	266	352	393	334	332	373	557
v/s Ratio Prot	c0.24	0.19		0.10	0.13		c0.18	c0.21		0.04	0.13	
v/s Ratio Perm			0.28			0.04			0.12			0.18
v/c Ratio	0.95	0.64	0.28	0.77	0.78	0.04	0.91	0.97	0.12	0.23	0.67	0.18
Uniform Delay, d1	32.9	27.5	24.4	38.0	35.9	31.4	35.3	35.3	28.7	31.0	33.3	29.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	18.4	1.3	0.3	15.2	6.7	0.1	27.0	39.5	0.7	1.6	9.2	0.7
Delay (s)	51.2	28.8	24.7	53.2	42.5	31.4	62.2	74.7	29.4	32.6	42.5	30.6
Level of Service	D	C	C	D	D	C	E	E	C	C	D	C
Approach Delay (s)		37.4			44.2			60.8			34.3	
Approach LOS		D			D			E			C	
Intersection Summary												
HCM Average Control Delay			42.7	HCM Level of Service				D				
HCM Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				8.0				
Intersection Capacity Utilization			75.4%	ICU Level of Service				D				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 19: Laurel Road & SR4 SB Ramps

Cumulative PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0				4.0	4.0	4.0
Lane Util. Factor		0.95			0.95	1.00				0.95	0.95	1.00
Frt		0.99			1.00	0.85				1.00	1.00	0.85
Flt Protected		1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)		3516			3539	1583				1681	1681	1583
Flt Permitted		1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)		3516			3539	1583				1681	1681	1583
Volume (vph)	0	892	41	0	595	457	0	0	0	738	0	605
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	970	45	0	647	497	0	0	0	802	0	658
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	0	46
Lane Group Flow (vph)	0	1011	0	0	647	497	0	0	0	401	401	612
Turn Type						Free				Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases						Free						6
Actuated Green, G (s)		31.3			31.3	90.0				50.7	50.7	50.7
Effective Green, g (s)		31.3			31.3	90.0				50.7	50.7	50.7
Actuated g/C Ratio		0.35			0.35	1.00				0.56	0.56	0.56
Clearance Time (s)		4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1223			1231	1583				947	947	892
v/s Ratio Prot		c0.29			0.18					0.24	0.24	
v/s Ratio Perm						0.31						0.42
v/c Ratio		0.83			0.53	0.31				0.42	0.42	0.69
Uniform Delay, d1		26.9			23.4	0.0				11.3	11.3	14.0
Progression Factor		1.00			0.29	1.00				1.00	1.00	1.00
Incremental Delay, d2		4.7			0.3	0.4				0.3	0.3	4.3
Delay (s)		31.6			7.0	0.4				11.6	11.6	18.3
Level of Service		C			A	A				B	B	B
Approach Delay (s)		31.6			4.1			0.0			14.6	
Approach LOS		C			A			A			B	
Intersection Summary												
HCM Average Control Delay			16.1				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			60.6%				ICU Level of Service			B		
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis
 20: Laurel Road & SR4 NB Ramps

Cumulative PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		1770	1583			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1770	3539			3539	1583		1770	1583			
Volume (vph)	226	1605	0	0	923	748	92	0	365	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	246	1745	0	0	1003	813	100	0	397	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	12	0	0	0
Lane Group Flow (vph)	246	1745	0	0	1003	813	0	100	385	0	0	0
Turn Type	Prot						Free	Perm	Perm			
Protected Phases	7	4					8		2			
Permitted Phases							Free	2	2			
Actuated Green, G (s)	15.2	52.0					32.8	90.0	30.0	30.0		
Effective Green, g (s)	15.2	52.0					32.8	90.0	30.0	30.0		
Actuated g/C Ratio	0.17	0.58					0.36	1.00	0.33	0.33		
Clearance Time (s)	4.0	4.0					4.0		4.0	4.0		
Vehicle Extension (s)	3.0	3.0					3.0		3.0	3.0		
Lane Grp Cap (vph)	299	2045					1290	1583	590	528		
v/s Ratio Prot	0.14	c0.49					0.28					
v/s Ratio Perm							0.51		0.06	0.25		
v/c Ratio	0.82	0.85					0.78	0.51	0.17	0.73		
Uniform Delay, d1	36.1	15.8					25.4	0.0	21.2	26.4		
Progression Factor	1.14	0.82					1.00	1.00	1.00	1.00		
Incremental Delay, d2	14.2	3.1					3.0	1.2	0.6	8.6		
Delay (s)	55.3	16.0					28.4	1.2	21.8	35.0		
Level of Service	E	B					C	A	C	C		
Approach Delay (s)	20.9						16.2		32.3	0.0		
Approach LOS	C						B		C	A		
Intersection Summary												
HCM Average Control Delay			20.2					HCM Level of Service		C		
HCM Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			90.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			73.6%					ICU Level of Service		D		
Analysis Period (min)			15									
c Critical Lane Group												



























HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Cumulative PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3424		1770	3285	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3424		1770	3285	
Volume (vph)	460	1393	310	110	1030	120	160	430	120	180	360	330
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	500	1514	337	120	1120	130	174	467	130	196	391	359
RTOR Reduction (vph)	0	0	145	0	0	73	0	21	0	0	138	0
Lane Group Flow (vph)	500	1514	192	120	1120	57	174	576	0	196	612	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	31.0	56.4	56.4	13.6	39.0	39.0	11.0	21.0		13.0	23.0	
Effective Green, g (s)	31.0	56.4	56.4	13.6	39.0	39.0	11.0	21.0		13.0	23.0	
Actuated g/C Ratio	0.26	0.47	0.47	0.11	0.32	0.32	0.09	0.18		0.11	0.19	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	457	1663	744	201	1150	514	162	599		192	630	
v/s Ratio Prot	c0.28	0.43		0.07	c0.32		0.10	0.17		c0.11	c0.23	
v/s Ratio Perm			0.21			0.08						
v/c Ratio	1.09	0.91	0.26	0.60	0.97	0.11	1.07	0.96		1.02	0.97	
Uniform Delay, d1	44.5	29.5	19.2	50.6	40.0	28.4	54.5	49.1		53.5	48.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	70.0	7.9	0.2	4.7	20.4	0.1	91.8	28.3		70.5	29.4	
Delay (s)	114.5	37.3	19.4	55.3	60.3	28.5	146.3	77.4		124.0	77.6	
Level of Service	F	D	B	E	E	C	F	E		F	E	
Approach Delay (s)		51.2			56.9			92.9			87.2	
Approach LOS		D			E			F			F	
Intersection Summary												
HCM Average Control Delay			64.8				HCM Level of Service				E	
HCM Volume to Capacity ratio			1.04									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			96.7%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
22: Laurel Road & Ohara Avenue

Cumulative PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3417		1770	3384	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3417		1770	3384	
Volume (vph)	190	1105	310	106	753	210	220	431	129	110	481	200
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	1201	337	115	818	228	239	468	140	120	523	217
RTOR Reduction (vph)	0	0	208	0	0	163	0	31	0	0	49	0
Lane Group Flow (vph)	207	1201	129	115	818	65	239	577	0	120	691	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	14.9	34.5	34.5	6.0	25.6	25.6	13.1	24.6		8.9	20.4	
Effective Green, g (s)	14.9	34.5	34.5	6.0	25.6	25.6	13.1	24.6		8.9	20.4	
Actuated g/C Ratio	0.17	0.38	0.38	0.07	0.28	0.28	0.15	0.27		0.10	0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	1357	607	118	1007	450	258	934		175	767	
v/s Ratio Prot	0.12	c0.34		0.06	c0.23		c0.14	0.18		0.07	c0.22	
v/s Ratio Perm			0.21			0.14						
v/c Ratio	0.71	0.89	0.21	0.97	0.81	0.14	0.93	0.62		0.69	0.90	
Uniform Delay, d1	35.5	25.9	18.6	41.9	30.0	24.0	38.0	28.6		39.2	33.8	
Progression Factor	1.00	1.00	1.00	1.22	0.53	0.28	1.00	1.00		0.96	0.98	
Incremental Delay, d2	7.6	7.2	0.2	73.0	4.9	0.1	36.4	3.1		9.6	14.4	
Delay (s)	43.0	33.1	18.8	124.1	20.9	6.8	74.4	31.7		47.2	47.5	
Level of Service	D	C	B	F	C	A	E	C		D	D	
Approach Delay (s)		31.5			28.3			43.7			47.5	
Approach LOS		C			C			D			D	

Intersection Summary

HCM Average Control Delay	35.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
23: Laurel Road & Rose Avenue

Cumulative PM Volumes
2/4/2010






























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1770	3537		1770	3525		1770	1730			1810	1583
Flt Permitted	0.95	1.00		0.18	1.00		0.69	1.00			0.81	1.00
Satd. Flow (perm)	1770	3537		341	3525		1283	1730			1501	1583
Volume (vph)	42	1296	6	29	792	22	5	18	17	50	35	110
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	46	1409	7	32	861	24	5	20	18	54	38	120
RTOR Reduction (vph)	0	0	0	0	1	0	0	15	0	0	0	103
Lane Group Flow (vph)	46	1416	0	32	884	0	5	23	0	0	92	17
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases				8			2			6		6
Actuated Green, G (s)	4.8	69.2		60.4	60.4		12.8	12.8			12.8	12.8
Effective Green, g (s)	4.8	69.2		60.4	60.4		12.8	12.8			12.8	12.8
Actuated g/C Ratio	0.05	0.77		0.67	0.67		0.14	0.14			0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	94	2720		229	2366		182	246			213	225
v/s Ratio Prot	0.03	c0.40			0.25			0.02				
v/s Ratio Perm				0.09			0.00				0.06	0.08
v/c Ratio	0.49	0.52		0.14	0.37		0.03	0.09			0.43	0.08
Uniform Delay, d1	41.4	4.0		5.4	6.5		33.2	33.5			35.3	33.5
Progression Factor	1.41	0.13		0.11	0.36		0.79	0.79			1.00	1.00
Incremental Delay, d2	2.2	0.1		0.2	0.1		0.3	0.7			6.3	0.7
Delay (s)	60.5	0.6		0.8	2.4		26.4	27.1			41.5	34.1
Level of Service	E	A		A	A		C	C			D	C
Approach Delay (s)		2.5			2.4			27.0			37.3	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	5.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
24: Laurel Road & Main Street

Cumulative PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 	 	 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3414		1770	3539	1583	1770	3539	1583	3433	3519	
Flt Permitted	0.21	1.00		0.25	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	400	3414		469	3539	1583	1770	3539	1583	3433	3519	
Volume (vph)	286	748	230	188	509	310	210	636	375	480	743	29
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	311	813	250	204	553	337	228	691	408	522	808	32
RTOR Reduction (vph)	0	32	0	0	0	277	0	0	137	0	3	0
Lane Group Flow (vph)	311	1031	0	204	553	60	228	691	271	522	837	0
Turn Type	pm+pt			pm+pt			Perm	Prot		Perm	Prot	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	38.0	27.0		22.9	15.9	15.9	12.0	26.0	26.0	14.0	28.0	
Effective Green, g (s)	38.0	27.0		22.9	15.9	15.9	12.0	26.0	26.0	14.0	28.0	
Actuated g/C Ratio	0.42	0.30		0.25	0.18	0.18	0.13	0.29	0.29	0.16	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	444	1024		221	625	280	236	1022	457	534	1095	
v/s Ratio Prot	c0.14	c0.31		0.07	0.16		0.13	0.20		c0.15	0.24	
v/s Ratio Perm	0.15			0.16		0.21			0.26			
v/c Ratio	0.70	1.01		0.92	0.88	0.21	0.97	0.68	0.59	0.98	0.76	
Uniform Delay, d1	27.5	31.5		39.8	36.2	31.7	38.8	28.3	27.5	37.8	28.0	
Progression Factor	0.62	0.48		0.84	0.75	0.51	0.93	0.91	0.81	0.79	0.40	
Incremental Delay, d2	4.3	27.8		26.5	8.4	0.2	46.5	3.3	5.2	28.0	3.9	
Delay (s)	21.3	43.0		60.1	35.5	16.4	82.7	29.0	27.6	57.8	15.1	
Level of Service	C	D		E	D	B	F	C	C	E	B	
Approach Delay (s)		38.1			34.2			37.8			31.5	
Approach LOS		D			C			D			C	

Intersection Summary

HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
25: Laurel Road & Sellers Avenue

Cumulative PM Volumes
2/4/2010



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1863	2787
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	1770	3539	1863	2787
Volume (vph)	1360	180	440	49	30	760
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1478	196	478	53	33	826
RTOR Reduction (vph)	0	100	0	0	0	736
Lane Group Flow (vph)	1478	96	478	53	33	90
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	44.2	44.2	24.0	37.8	9.8	9.8
Effective Green, g (s)	44.2	44.2	24.0	37.8	9.8	9.8
Actuated g/C Ratio	0.49	0.49	0.27	0.42	0.11	0.11
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1686	777	472	1486	203	303
v/s Ratio Prot	c0.43		c0.27	0.01	0.02	
v/s Ratio Perm		0.12				0.30
v/c Ratio	0.88	0.12	1.01	0.04	0.16	0.30
Uniform Delay, d1	20.5	12.4	33.0	15.4	36.4	36.9
Progression Factor	0.67	0.46	1.00	1.12	1.00	1.00
Incremental Delay, d2	2.2	0.0	42.8	0.0	1.7	2.5
Delay (s)	15.8	5.7	75.7	17.3	38.1	39.4
Level of Service	B	A	E	B	D	D
Approach Delay (s)	14.6			69.8	39.4	
Approach LOS	B			E	D	

Intersection Summary

HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 26: Malicoat Avenue & Main Street

Cumulative PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.87		1.00	0.86		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1621		1770	1609		1770	3534		1770	3524	
Flt Permitted	0.87	1.00		0.87	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1620	1621		1620	1609		1770	3534		1770	3524	
Volume (vph)	18	2	12	2	1	9	11	1194	13	11	1117	33
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	2	13	2	1	10	12	1298	14	12	1214	36
RTOR Reduction (vph)	0	12	0	0	9	0	0	0	0	0	1	0
Lane Group Flow (vph)	20	3	0	2	2	0	12	1312	0	12	1249	0
Turn Type	Perm		Perm		Prot		Prot					
Protected Phases	4		8		5		2		1		6	
Permitted Phases	4		8									
Actuated Green, G (s)	4.6	4.6		4.6	4.6		1.5	71.9		1.5	71.9	
Effective Green, g (s)	4.6	4.6		4.6	4.6		1.5	71.9		1.5	71.9	
Actuated g/C Ratio	0.05	0.05		0.05	0.05		0.02	0.80		0.02	0.80	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	83	83		83	82		30	2823		30	2815	
v/s Ratio Prot		0.01			0.01		c0.01	c0.37		0.01	0.35	
v/s Ratio Perm	c0.01			0.00								
v/c Ratio	0.24	0.03		0.02	0.02		0.40	0.46		0.40	0.44	
Uniform Delay, d1	41.0	40.6		40.6	40.6		43.8	2.9		43.8	2.8	
Progression Factor	0.54	0.41		1.00	1.00		1.00	1.00		0.90	0.10	
Incremental Delay, d2	1.5	0.2		0.1	0.1		8.5	0.6		4.5	0.3	
Delay (s)	23.8	16.9		40.7	40.6		52.3	3.4		43.7	0.6	
Level of Service	C	B		D	D		D	A		D	A	
Approach Delay (s)		20.9			40.7			3.9			1.0	
Approach LOS		C			D			A			A	
Intersection Summary												
HCM Average Control Delay			2.9	HCM Level of Service				A				
HCM Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			47.7%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
27: Brownstone Road & Main Street














Cumulative PM Volumes
2/4/2010



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↕	↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.88			1.00	1.00	
Flt Protected	0.99			1.00	1.00	
Satd. Flow (prot)	1636			3531	3528	
Flt Permitted	0.99			0.82	1.00	
Satd. Flow (perm)	1636			2910	3528	
Volume (vph)	8	50	58	1237	1078	24
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	54	63	1345	1172	26
RTOR Reduction (vph)	51	0	0	0	1	0
Lane Group Flow (vph)	12	0	0	1408	1197	0
Turn Type	Perm					
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	5.6			76.4	76.4	
Effective Green, g (s)	5.6			76.4	76.4	
Actuated g/C Ratio	0.06			0.85	0.85	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	102			2470	2995	
v/s Ratio Prot	c0.04				0.34	
v/s Ratio Perm				c0.48		
v/c Ratio	0.12			0.57	0.40	
Uniform Delay, d1	39.9			2.0	1.6	
Progression Factor	1.00			0.63	1.00	
Incremental Delay, d2	0.5			0.7	0.4	
Delay (s)	40.4			2.0	2.0	
Level of Service	D			A	A	
Approach Delay (s)	40.4			2.0	2.0	
Approach LOS	D			A	A	
Intersection Summary						
HCM Average Control Delay			2.9	HCM Level of Service		A
HCM Volume to Capacity ratio			0.57			
Actuated Cycle Length (s)			90.0	Sum of lost time (s)	8.0	
Intersection Capacity Utilization			80.0%	ICU Level of Service	D	
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
28: Delta Road & Main Street

Cumulative PM Volumes
2/4/2010

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3467		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3467		1770	3539
Volume (vph)	94	230	1064	167	234	918
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	250	1157	182	254	998
RTOR Reduction (vph)	0	220	12	0	0	0
Lane Group Flow (vph)	102	30	1327	0	254	998
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	10.7	10.7	51.4		15.9	71.3
Effective Green, g (s)	10.7	10.7	51.4		15.9	71.3
Actuated g/C Ratio	0.12	0.12	0.57		0.18	0.79
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	210	188	1980		313	2804
v/s Ratio Prot	0.06		c0.39		c0.14	0.28
v/s Ratio Perm		0.16				
v/c Ratio	0.49	0.16	0.67		0.81	0.36
Uniform Delay, d1	37.1	35.6	13.4		35.6	2.7
Progression Factor	1.09	1.98	0.59		1.03	0.81
Incremental Delay, d2	1.7	0.4	1.7		14.0	0.3
Delay (s)	42.1	71.0	9.6		50.7	2.5
Level of Service	D	E	A		D	A
Approach Delay (s)	62.6		9.6			12.3
Approach LOS	E		A			B
Intersection Summary						
HCM Average Control Delay			17.1		HCM Level of Service	B
HCM Volume to Capacity ratio			0.79			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			62.9%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
29: Delta Road & Sellers Avenue























Cumulative PM Volumes
2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.96	
Flt Protected		0.98			0.99			0.99			1.00	
Satd. Flow (prot)		1782			1829			1813			1784	
Flt Permitted		0.68			0.94			0.87			0.96	
Satd. Flow (perm)		1241			1725			1586			1721	
Volume (vph)	170	145	61	25	170	19	80	235	42	20	169	75
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	158	66	27	185	21	87	255	46	22	184	82
RTOR Reduction (vph)	0	10	0	0	5	0	0	4	0	0	12	0
Lane Group Flow (vph)	0	399	0	0	228	0	0	384	0	0	276	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		31.9			31.9			50.1			50.1	
Effective Green, g (s)		31.9			31.9			50.1			50.1	
Actuated g/C Ratio		0.35			0.35			0.56			0.56	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		440			611			883			958	
v/s Ratio Prot												
v/s Ratio Perm		c0.33			0.14			c0.24			0.17	
v/c Ratio		0.91			0.37			0.43			0.29	
Uniform Delay, d1		27.6			21.6			11.7			10.5	
Progression Factor		1.02			1.00			0.49			1.04	
Incremental Delay, d2		16.3			0.4			1.5			0.8	
Delay (s)		44.4			22.0			7.2			11.7	
Level of Service		D			C			A			B	
Approach Delay (s)		44.4			22.0			7.2			11.7	
Approach LOS		D			C			A			B	
Intersection Summary												
HCM Average Control Delay			22.3				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			79.5%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
30: Lone Tree Way & Main Street

Cumulative PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.96	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1788	1583		1803	1583	1770	3539	1583	1770	3442	
Flt Permitted		0.72	1.00		0.67	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1347	1583		1251	1583	1770	3539	1583	1770	3442	
Volume (vph)	189	37	430	33	17	16	357	770	27	16	769	173
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	205	40	467	36	18	17	388	837	29	17	836	188
RTOR Reduction (vph)	0	0	364	0	0	13	0	0	11	0	20	0
Lane Group Flow (vph)	0	245	103	0	54	4	388	837	18	17	1004	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		19.9	19.9		19.9	19.9	21.7	56.5	56.5	1.6	36.4	
Effective Green, g (s)		19.9	19.9		19.9	19.9	21.7	56.5	56.5	1.6	36.4	
Actuated g/C Ratio		0.22	0.22		0.22	0.22	0.24	0.63	0.63	0.02	0.40	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		298	350		277	350	427	2222	994	31	1392	
v/s Ratio Prot							c0.22	0.24		0.01	c0.30	
v/s Ratio Perm		0.18	0.29		0.04	0.01			0.02			
v/c Ratio		0.82	0.30		0.19	0.01	0.91	0.38	0.02	0.55	0.72	
Uniform Delay, d1		33.4	29.2		28.5	27.4	33.2	8.2	6.3	43.8	22.5	
Progression Factor		1.00	1.00		1.00	1.00	0.77	0.62	0.30	0.87	0.81	
Incremental Delay, d2		16.5	0.5		0.3	0.0	20.7	0.4	0.0	17.6	3.1	
Delay (s)		49.9	29.7		28.9	27.4	46.3	5.5	1.9	55.8	21.3	
Level of Service		D	C		C	C	D	A	A	E	C	
Approach Delay (s)		36.6			28.5			18.1			21.9	
Approach LOS		D			C			B			C	
Intersection Summary												
HCM Average Control Delay			23.9				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			75.6%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												



























HCM Signalized Intersection Capacity Analysis
31: Main Street & Sellers Avenue

Cumulative PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.97	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1848	1583		1805	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.92	1.00		0.41	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583		1720	1583		761	
Volume (vph)	11	873	37	19	727	171	47	245	24	122	81	4
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	949	40	21	790	186	51	266	26	133	88	4
RTOR Reduction (vph)	0	0	16	0	0	80	0	0	0	0	1	0
Lane Group Flow (vph)	12	949	24	21	790	106	0	317	26	0	224	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Free		Perm	
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2		Free		6	
Actuated Green, G (s)	0.8	50.6	50.6	1.6	51.4	51.4		25.8	90.0		25.8	
Effective Green, g (s)	0.8	50.6	50.6	1.6	51.4	51.4		25.8	90.0		25.8	
Actuated g/C Ratio	0.01	0.56	0.56	0.02	0.57	0.57		0.29	1.00		0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	16	1047	890	31	1064	904		493	1583		218	
v/s Ratio Prot	0.01	c0.51		0.01	c0.42							
v/s Ratio Perm			0.03			0.12		0.18	0.02		c0.30	
v/c Ratio	0.75	0.91	0.03	0.68	0.74	0.12		0.64	0.02		1.03	
Uniform Delay, d1	44.5	17.6	8.8	43.9	14.4	8.9		28.1	0.0		32.1	
Progression Factor	0.72	0.50	0.06	1.00	1.00	1.00		1.00	1.00		0.96	
Incremental Delay, d2	85.4	8.5	0.0	45.6	2.8	0.1		6.3	0.0		66.9	
Delay (s)	117.6	17.2	0.5	89.6	17.2	8.9		34.4	0.0		97.6	
Level of Service	F	B	A	F	B	A		C	A		F	
Approach Delay (s)		17.8			17.2			31.8			97.6	
Approach LOS		B			B			C			F	
Intersection Summary												
HCM Average Control Delay			26.4				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.96									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			82.7%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 1: Main Street & SR160 SB Ramps

Cumulative +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 						 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85		1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3421		3433	3539	1583		1788	1583	1770	1695	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.79	1.00	0.71	1.00	
Satd. Flow (perm)	1770	3421		3433	3539	1583		1474	1583	1331	1695	
Volume (vph)	10	208	60	366	1121	90	50	10	8	40	20	30
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	226	65	398	1218	98	54	11	9	43	22	33
RTOR Reduction (vph)	0	41	0	0	0	54	0	0	5	0	20	0
Lane Group Flow (vph)	11	250	0	398	1218	44	0	65	4	43	35	0
Turn Type	Prot		Prot		Perm	Perm		Perm	Perm			
Protected Phases	7	4		3	8			2				6
Permitted Phases						8	2		2		6	
Actuated Green, G (s)	1.5	11.0		31.0	40.5	40.5		36.0	36.0	36.0	36.0	
Effective Green, g (s)	1.5	11.0		31.0	40.5	40.5		36.0	36.0	36.0	36.0	
Actuated g/C Ratio	0.02	0.12		0.34	0.45	0.45		0.40	0.40	0.40	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	30	418		1182	1593	712		590	633	532	678	
v/s Ratio Prot	0.01	0.09		c0.12	c0.34			c0.04	0.01	0.03		0.03
v/s Ratio Perm						0.06						
v/c Ratio	0.37	0.60		0.34	0.76	0.06		0.11	0.01	0.08	0.05	
Uniform Delay, d1	43.8	37.4		21.9	20.8	14.0		16.9	16.2	16.7	16.5	
Progression Factor	1.00	1.00		0.72	0.72	0.27		1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.4	2.3		0.2	2.2	0.0		0.4	0.0	0.3	0.1	
Delay (s)	51.2	39.7		16.0	17.0	3.8		17.3	16.3	17.0	16.7	
Level of Service	D	D		B	B	A		B	B	B	B	
Approach Delay (s)		40.1			16.0			17.2			16.8	
Approach LOS		D			B			B			B	
Intersection Summary												
HCM Average Control Delay			19.4				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			54.3%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
2: Main Street & SR160 NB Ramps

Cumulative +Project AM Volumes
2/4/2010

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↓	↑↑↑	↓	↗↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	1770	2787
Volume (vph)	175	40	31	1406	80	611
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	190	43	34	1528	87	664
RTOR Reduction (vph)	0	14	0	0	0	601
Lane Group Flow (vph)	190	29	34	1528	87	63
Turn Type		Perm	Prot			Over
Protected Phases	2		1	6	8	1
Permitted Phases		2				
Actuated Green, G (s)	61.3	61.3	8.5	73.8	8.2	8.5
Effective Green, g (s)	61.3	61.3	8.5	73.8	8.2	8.5
Actuated g/C Ratio	0.68	0.68	0.09	0.82	0.09	0.09
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	3463	1078	167	4170	161	263
v/s Ratio Prot	0.04		0.02	c0.30	c0.05	c0.24
v/s Ratio Perm		0.03				
v/c Ratio	0.05	0.03	0.20	0.37	0.54	0.24
Uniform Delay, d1	4.8	4.7	37.6	2.1	39.1	37.8
Progression Factor	0.85	1.33	1.33	0.22	1.00	1.00
Incremental Delay, d2	0.0	0.0	0.6	0.2	3.7	0.5
Delay (s)	4.1	6.3	50.5	0.7	42.8	38.2
Level of Service	A	A	D	A	D	D
Approach Delay (s)	4.5			1.8	38.7	
Approach LOS	A			A	D	
Intersection Summary						
HCM Average Control Delay			12.9		HCM Level of Service	B
HCM Volume to Capacity ratio			0.60			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			38.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
3: Main Street & Empire Avenue

Cumulative +Project AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.98	1.00
Satd. Flow (prot)	1770	5085	1583	3433	5065		3433	1863	1583		1832	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.88	1.00
Satd. Flow (perm)	1770	5085	1583	3433	5065		3433	1863	1583		1641	1583
Volume (vph)	20	839	272	210	723	20	324	20	150	20	40	50
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	912	296	228	786	22	352	22	163	22	43	54
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	116	0	0	50
Lane Group Flow (vph)	22	912	296	228	806	0	352	22	47	0	65	5
Turn Type	Prot		Free	Prot			Prot		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases			Free						8	4		4
Actuated Green, G (s)	3.1	38.5	90.0	13.8	49.2		14.2	25.7	25.7		7.5	7.5
Effective Green, g (s)	3.1	38.5	90.0	13.8	49.2		14.2	25.7	25.7		7.5	7.5
Actuated g/C Ratio	0.03	0.43	1.00	0.15	0.55		0.16	0.29	0.29		0.08	0.08
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	61	2175	1583	526	2769		542	532	452		137	132
v/s Ratio Prot	0.01	c0.18		c0.07	0.16		c0.10	0.01				
v/s Ratio Perm			0.19						0.10		c0.04	0.03
v/c Ratio	0.36	0.42	0.19	0.43	0.29		0.65	0.04	0.10		0.47	0.03
Uniform Delay, d1	42.5	18.0	0.0	34.6	11.0		35.6	23.2	23.7		39.4	37.9
Progression Factor	0.96	0.81	1.00	0.89	0.19		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.5	0.6	0.3	0.5	0.2		2.7	0.0	0.1		2.6	0.1
Delay (s)	44.3	15.1	0.3	31.3	2.2		38.3	23.3	23.8		42.0	38.0
Level of Service	D	B	A	C	A		D	C	C		D	D
Approach Delay (s)		12.1			8.6			33.2			40.2	
Approach LOS		B			A			C			D	
Intersection Summary												
HCM Average Control Delay			15.9	HCM Level of Service				B				
HCM Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				16.0				
Intersection Capacity Utilization			48.1%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
4: Main Street & Vintage Parkway

Cumulative +Project AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.99			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.96	1.00
Satd. Flow (prot)	1770	3511		1770	3513			1761			1780	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.85			0.77	1.00
Satd. Flow (perm)	1770	3511		1770	3513			1563			1443	1583
Volume (vph)	90	536	30	17	869	45	17	2	3	61	5	35
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	98	583	33	18	945	49	18	2	3	66	5	38
RTOR Reduction (vph)	0	4	0	0	4	0	0	2	0	0	0	25
Lane Group Flow (vph)	98	612	0	18	990	0	0	21	0	0	71	13
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.5	43.2		3.0	35.7			31.8			31.8	31.8
Effective Green, g (s)	10.5	43.2		3.0	35.7			31.8			31.8	31.8
Actuated g/C Ratio	0.12	0.48		0.03	0.40			0.35			0.35	0.35
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	207	1685		59	1393			552			510	559
v/s Ratio Prot	c0.06	0.18		0.01	c0.28							
v/s Ratio Perm								0.01			c0.05	0.02
v/c Ratio	0.47	0.36		0.31	0.71			0.04			0.14	0.02
Uniform Delay, d1	37.2	14.7		42.5	22.8			19.1			19.8	19.0
Progression Factor	0.60	0.70		0.95	1.10			1.00			1.00	1.00
Incremental Delay, d2	1.6	0.1		1.9	1.1			0.1			0.6	0.1
Delay (s)	24.1	10.5		42.2	26.3			19.2			20.4	19.1
Level of Service	C	B		D	C			B			C	B
Approach Delay (s)		12.3			26.6			19.2			19.9	
Approach LOS		B			C			B			B	
Intersection Summary												
HCM Average Control Delay			20.6			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			48.3%			ICU Level of Service					A	
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative +Project AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.91			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1856		1770	1695			1813	
Flt Permitted	0.17	1.00	1.00	0.31	1.00		0.95	1.00			0.97	
Satd. Flow (perm)	312	1863	1583	586	1856		1770	1695			1767	
Volume (vph)	10	601	80	40	813	20	110	40	60	10	90	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	653	87	43	884	22	120	43	65	11	98	22
RTOR Reduction (vph)	0	0	31	0	1	0	0	48	0	0	9	0
Lane Group Flow (vph)	11	653	56	43	905	0	120	60	0	0	122	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0			11.3	
Effective Green, g (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0			11.3	
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.64		0.10	0.27			0.13	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	201	1201	1020	378	1196		171	452			222	
v/s Ratio Prot		0.35			c0.49		c0.07	0.06				
v/s Ratio Perm	0.04		0.05	0.07							c0.07	
v/c Ratio	0.05	0.54	0.05	0.11	0.76		0.70	0.13			0.55	
Uniform Delay, d1	5.9	8.8	5.9	6.1	11.1		39.4	25.1			37.0	
Progression Factor	0.35	0.43	0.13	1.21	0.90		0.92	1.22			1.00	
Incremental Delay, d2	0.5	1.7	0.1	0.1	1.9		11.8	0.1			2.9	
Delay (s)	2.6	5.5	0.9	7.5	11.9		48.0	30.8			39.9	
Level of Service	A	A	A	A	B		D	C			D	
Approach Delay (s)		4.9			11.7			39.9			39.9	
Approach LOS		A			B			D			D	
Intersection Summary												
HCM Average Control Delay			14.1			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			63.8%			ICU Level of Service					B	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative +Project AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.98			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)		3486			3523		1770	1583			1817	1583
Flt Permitted		0.95			0.73		0.76	1.00			0.92	1.00
Satd. Flow (perm)		3323			2581		1409	1583			1720	1583
Volume (vph)	2	822	92	120	1242	1	41	0	61	1	1	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	893	100	130	1350	1	45	0	66	1	1	2
RTOR Reduction (vph)	0	8	0	0	0	0	0	57	0	0	0	2
Lane Group Flow (vph)	0	987	0	0	1481	0	45	9	0	0	2	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		69.4			69.4		12.6	12.6			12.6	12.6
Effective Green, g (s)		69.4			69.4		12.6	12.6			12.6	12.6
Actuated g/C Ratio		0.77			0.77		0.14	0.14			0.14	0.14
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2562			1990		197	222			241	222
v/s Ratio Prot							c0.04					
v/s Ratio Perm		0.30			c0.57		0.03				0.00	0.00
v/c Ratio		0.39			0.74		0.23	0.04			0.01	0.00
Uniform Delay, d1		3.4			5.5		34.4	33.5			33.3	33.3
Progression Factor		0.46			1.15		1.00	1.00			1.00	1.00
Incremental Delay, d2		0.1			0.1		2.7	0.4			0.0	0.0
Delay (s)		1.6			6.5		37.1	33.8			33.3	33.3
Level of Service		A			A		D	C			C	C
Approach Delay (s)		1.6			6.5		35.1				33.3	
Approach LOS		A			A		D				C	
Intersection Summary												
HCM Average Control Delay		5.9		HCM Level of Service		A						
HCM Volume to Capacity ratio		0.68										
Actuated Cycle Length (s)		90.0		Sum of lost time (s)		8.0						
Intersection Capacity Utilization		82.5%		ICU Level of Service		E						
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
7: West Cypress Road & Ohara Avenue

Cumulative +Project AM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00		
Frt	1.00	0.95		1.00	0.98		1.00	0.98		1.00	0.96		
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	1762		1770	1817		1770	1825		1770	1786		
Flt Permitted	0.17	1.00		0.55	1.00		0.51	1.00		0.49	1.00		
Satd. Flow (perm)	312	1762		1028	1817		949	1825		909	1786		
Volume (vph)	40	107	60	91	327	64	100	310	48	48	240	90	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	43	116	65	99	355	70	109	337	52	52	261	98	
RTOR Reduction (vph)	0	32	0	0	11	0	0	4	0	0	10	0	
Lane Group Flow (vph)	43	149	0	99	414	0	109	385	0	52	349	0	
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm		
Protected Phases	4		8		8		2		2		6		
Permitted Phases	4		8		8		2		2		6		
Actuated Green, G (s)	23.9	23.9		23.9	23.9		58.1	58.1		58.1	58.1		
Effective Green, g (s)	23.9	23.9		23.9	23.9		58.1	58.1		58.1	58.1		
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.65	0.65		0.65	0.65		
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	83	468		273	483		613	1178		587	1153		
v/s Ratio Prot		0.10			c0.23			c0.21			0.20		
v/s Ratio Perm	0.14			0.10			0.11			0.06			
v/c Ratio	0.52	0.32		0.36	0.86		0.18	0.33		0.09	0.30		
Uniform Delay, d1	28.1	26.5		26.9	31.4		6.4	7.2		6.0	7.0		
Progression Factor	1.00	1.00		1.00	1.00		0.50	0.48		0.73	0.72		
Incremental Delay, d2	5.4	0.4		0.8	14.0		0.5	0.6		0.3	0.7		
Delay (s)	33.5	26.9		27.7	45.4		3.7	4.0		4.7	5.7		
Level of Service	C	C		C	D		A	A		A	A		
Approach Delay (s)		28.2			42.0			4.0			5.6		
Approach LOS		C			D			A			A		
Intersection Summary													
HCM Average Control Delay			19.7			HCM Level of Service				B			
HCM Volume to Capacity ratio			0.49										
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				8.0			
Intersection Capacity Utilization			61.4%			ICU Level of Service				B			
Analysis Period (min)			15										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis
 8: West Cypress Road & Rose Avenue

Cumulative +Project AM Volumes
 2/4/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	149	30	97	381	11	45	113	44	28	140	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	162	33	105	414	12	49	123	48	30	152	65

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	222	532	220	248
Volume Left (vph)	27	105	49	30
Volume Right (vph)	33	12	48	65
Hadj (s)	0.0	0.1	-0.1	-0.1
Departure Headway (s)	6.6	6.9	6.9	6.7
Degree Utilization, x	0.40	1.02	0.42	0.46
Capacity (veh/h)	519	528	494	513
Control Delay (s)	10.7	25.0	11.1	11.2
Approach Delay (s)	10.7	25.0	11.1	11.2
Approach LOS	B	D	B	B

Intersection Summary			
Delay		17.1	
HCM Level of Service		C	
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)		15	

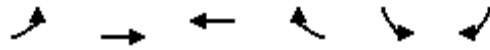
HCM Signalized Intersection Capacity Analysis
 9: West Cypress Road & Main Street

Cumulative +Project AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.97		1.00	0.97	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3428		1770	1717	1504	1770	3539	1583	3433	3527	
Flt Permitted	0.28	1.00		0.33	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	521	3428		612	1717	1504	1770	3539	1583	3433	3527	
Volume (vph)	73	303	80	380	379	1100	90	591	220	473	506	12
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	329	87	413	412	1196	98	642	239	514	550	13
RTOR Reduction (vph)	0	27	0	0	9	29	0	0	198	0	2	0
Lane Group Flow (vph)	79	389	0	413	506	1064	98	642	41	514	561	0
Turn Type	pm+pt			pm+pt		pm+ov	Prot		Perm		Prot	
Protected Phases	7	4		3	8	1	5	2			1	6
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	17.5	14.3		31.8	24.6	55.4	8.0	15.4	15.4	30.8	38.2	
Effective Green, g (s)	17.5	14.3		31.8	24.6	55.4	8.0	15.4	15.4	30.8	38.2	
Actuated g/C Ratio	0.19	0.16		0.35	0.27	0.62	0.09	0.17	0.17	0.34	0.42	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	146	545		390	469	993	157	606	271	1175	1497	
v/s Ratio Prot	0.02	0.12		c0.16	0.30	c0.38	0.06	c0.18		0.15	0.16	
v/s Ratio Perm	0.09			0.22		0.35			0.15			
v/c Ratio	0.54	0.71		1.06	1.08	1.07	0.62	1.06	0.15	0.44	0.37	
Uniform Delay, d1	41.9	35.9		31.1	32.7	17.3	39.5	37.3	31.7	22.9	17.7	
Progression Factor	1.00	1.00		0.71	0.57	0.42	1.02	1.06	3.14	0.80	0.73	
Incremental Delay, d2	4.0	4.4		49.0	52.8	42.4	6.0	49.5	0.9	0.3	0.7	
Delay (s)	45.9	40.3		71.1	71.5	49.8	46.3	88.9	100.6	18.5	13.7	
Level of Service	D	D		E	E	D	D	F	F	B	B	
Approach Delay (s)		41.2			59.7			87.5			16.0	
Approach LOS		D			E			F			B	
Intersection Summary												
HCM Average Control Delay			53.3				HCM Level of Service			D		
HCM Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			89.6%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 10: East Cypress Road & Picasso Drive

Cumulative +Project AM Volumes
 2/4/2010























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑↗	↑	↙↘	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.87	
Flt Protected	0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	3532		1621	
Flt Permitted	0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	3532		1621	
Volume (vph)	221	815	1702	25	16	246
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	240	886	1850	27	17	267
RTOR Reduction (vph)	0	0	1	0	212	0
Lane Group Flow (vph)	240	886	1876	0	72	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	13.6	71.4	53.8		10.6	
Effective Green, g (s)	13.6	71.4	53.8		10.6	
Actuated g/C Ratio	0.15	0.79	0.60		0.12	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	267	2808	2111		191	
v/s Ratio Prot	c0.14	0.25	c0.53		c0.18	
v/s Ratio Perm						
v/c Ratio	0.90	0.32	0.89		0.38	
Uniform Delay, d1	37.5	2.6	15.5		36.7	
Progression Factor	0.79	0.25	0.20		1.00	
Incremental Delay, d2	27.2	0.1	2.8		5.6	
Delay (s)	56.8	0.7	5.9		42.3	
Level of Service	E	A	A		D	
Approach Delay (s)		12.7	5.9		42.3	
Approach LOS		B	A		D	

Intersection Summary

HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 11: East Cypress Road & Frank Hengel Way

Cumulative +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85		0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97			0.96	1.00
Satd. Flow (prot)	1770	3505		1770	3539	1583		1781			1791	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.69			0.70	1.00
Satd. Flow (perm)	1770	3505		1770	3539	1583		1275			1308	1583
Volume (vph)	308	655	45	6	1392	30	75	29	11	80	19	350
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	335	712	49	7	1513	33	82	32	12	87	21	380
RTOR Reduction (vph)	0	4	0	0	0	18	0	4	0	0	0	321
Lane Group Flow (vph)	335	757	0	7	1513	15	0	122	0	0	108	59
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	22.3	63.3		0.8	41.8	41.8		13.9			13.9	13.9
Effective Green, g (s)	22.3	63.3		0.8	41.8	41.8		13.9			13.9	13.9
Actuated g/C Ratio	0.25	0.70		0.01	0.46	0.46		0.15			0.15	0.15
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	439	2465		16	1644	735		197			202	244
v/s Ratio Prot	c0.19	0.22		0.00	c0.43							
v/s Ratio Perm						0.02		0.10			0.08	0.24
v/c Ratio	0.76	0.31		0.44	0.92	0.02		0.62			0.53	0.24
Uniform Delay, d1	31.4	5.1		44.4	22.5	13.0		35.6			35.1	33.4
Progression Factor	0.80	0.70		0.92	0.94	0.69		1.00			1.00	1.00
Incremental Delay, d2	7.5	0.1		15.2	7.6	0.0		13.7			9.8	2.3
Delay (s)	32.7	3.6		55.8	28.8	9.1		49.3			44.9	35.7
Level of Service	C	A		E	C	A		D			D	D
Approach Delay (s)		12.5			28.5			49.3			37.8	
Approach LOS		B			C			D			D	
Intersection Summary												
HCM Average Control Delay			25.3	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			78.6%	ICU Level of Service				D				
Analysis Period (min)			15									
c Critical Lane Group												




















HCM Signalized Intersection Capacity Analysis
 12: East Cypress Road & Machado Lane

Cumulative +Project AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00	1.00	
Frt	1.00	1.00			1.00	0.85				1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3539			3539	1583				1770	1583	
Flt Permitted	0.95	1.00			1.00	1.00				0.76	1.00	
Satd. Flow (perm)	1770	3539			3539	1583				1410	1583	
Volume (vph)	124	683	0	0	1209	38	0	0	0	64	0	173
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	135	742	0	0	1314	41	0	0	0	70	0	188
RTOR Reduction (vph)	0	0	0	0	0	16	0	0	0	0	164	0
Lane Group Flow (vph)	135	742	0	0	1314	25	0	0	0	70	24	0
Turn Type	Prot			Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	12.2	70.5			54.3	54.3				11.5	11.5	
Effective Green, g (s)	12.2	70.5			54.3	54.3				11.5	11.5	
Actuated g/C Ratio	0.14	0.78			0.60	0.60				0.13	0.13	
Clearance Time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	240	2772			2135	955				180	202	
v/s Ratio Prot	c0.08	0.21			c0.37						c0.12	
v/s Ratio Perm						0.03				0.05		
v/c Ratio	0.56	0.27			0.62	0.03				0.39	0.12	
Uniform Delay, d1	36.4	2.7			11.3	7.2				36.0	34.8	
Progression Factor	1.21	1.23			0.21	0.07				1.00	1.00	
Incremental Delay, d2	2.9	0.1			0.4	0.0				6.2	1.2	
Delay (s)	47.0	3.3			2.7	0.5				42.2	36.0	
Level of Service	D	A			A	A				D	D	
Approach Delay (s)		10.1			2.7			0.0			37.7	
Approach LOS		B			A			A			D	
Intersection Summary												
HCM Average Control Delay			8.9				HCM Level of Service			A		
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			61.0%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 13: East Cypress Road & Project Driveway

Cumulative +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00	1.00	1.00
Frt	1.00	1.00			1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95	1.00	1.00
Satd. Flow (prot)	1770	3539			3539	1583				1770	1583	1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95	1.00	1.00
Satd. Flow (perm)	1770	3539			3539	1583				1770	1583	1583
Volume (vph)	99	653	0	0	1131	43	0	0	0	80	0	138
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	108	710	0	0	1229	47	0	0	0	87	0	150
RTOR Reduction (vph)	0	0	0	0	0	24	0	0	0	0	0	109
Lane Group Flow (vph)	108	710	0	0	1229	23	0	0	0	87	0	41
Turn Type	Prot				Perm				custom		custom	
Protected Phases	7	4			8							
Permitted Phases					8					6		6
Actuated Green, G (s)	8.4	57.2			44.8	44.8				24.8		24.8
Effective Green, g (s)	8.4	57.2			44.8	44.8				24.8		24.8
Actuated g/C Ratio	0.09	0.64			0.50	0.50				0.28		0.28
Clearance Time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0		3.0
Lane Grp Cap (vph)	165	2249			1762	788				488		436
v/s Ratio Prot	c0.06	0.20			c0.35							
v/s Ratio Perm						0.03				0.05		0.09
v/c Ratio	0.65	0.32			0.70	0.03				0.18		0.09
Uniform Delay, d1	39.4	7.5			17.4	11.5				24.8		24.3
Progression Factor	0.89	0.68			0.64	0.59				1.00		1.00
Incremental Delay, d2	8.8	0.1			0.9	0.0				0.8		0.4
Delay (s)	44.0	5.2			12.0	6.9				25.6		24.7
Level of Service	D	A			B	A				C		C
Approach Delay (s)		10.3			11.8		0.0				25.0	
Approach LOS		B			B		A				C	
Intersection Summary												
HCM Average Control Delay			12.6		HCM Level of Service					B		
HCM Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					12.0		
Intersection Capacity Utilization			51.2%		ICU Level of Service					A		
Analysis Period (min)			15									
c Critical Lane Group												




















HCM Signalized Intersection Capacity Analysis
 14: East Cypress Road & Sellers Avenue

Cumulative +Project AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	0.95	1.00	1.00	0.91	0.91
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	0.96	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	3433	3532		1770	3539	1583	1770	3250	1441
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	3433	3532		1770	3539	1583	1770	3250	1441
Volume (vph)	107	481	192	920	886	12	216	79	330	22	165	190
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	116	523	209	1000	963	13	235	86	359	24	179	207
RTOR Reduction (vph)	0	0	171	0	1	0	0	0	0	0	40	114
Lane Group Flow (vph)	116	523	38	1000	975	0	235	86	359	24	207	25
Turn Type	Prot		Perm	Prot			Prot		Free	Prot		Perm
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases			4						Free			6
Actuated Green, G (s)	7.2	16.5	16.5	28.0	37.3		13.2	27.5	90.0	2.0	16.3	16.3
Effective Green, g (s)	7.2	16.5	16.5	28.0	37.3		13.2	27.5	90.0	2.0	16.3	16.3
Actuated g/C Ratio	0.08	0.18	0.18	0.31	0.41		0.15	0.31	1.00	0.02	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	142	649	290	1068	1464		260	1081	1583	39	589	261
v/s Ratio Prot	0.07	c0.15		c0.29	0.28		c0.13	0.02		0.01	0.08	
v/s Ratio Perm			0.13						0.23			0.10
v/c Ratio	0.82	0.81	0.13	0.94	0.67		0.90	0.08	0.23	0.62	0.35	0.10
Uniform Delay, d1	40.8	35.2	30.8	30.1	21.3		37.8	22.2	0.0	43.6	32.2	30.7
Progression Factor	0.92	0.87	1.44	0.78	0.47		0.64	0.38	1.00	1.00	1.00	1.00
Incremental Delay, d2	28.6	7.1	0.2	9.7	0.7		28.9	0.1	0.3	25.5	1.6	0.7
Delay (s)	66.3	37.8	44.5	33.1	10.8		53.1	8.6	0.3	69.1	33.9	31.4
Level of Service	E	D	D	C	B		D	A	A	E	C	C
Approach Delay (s)		43.4			22.1			19.6			35.1	
Approach LOS		D			C			B			D	
Intersection Summary												
HCM Average Control Delay			27.6			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			71.4%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 15: East Cypress Road &

Cumulative +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00			0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.97	1.00
Satd. Flow (prot)	1770	3533		1770	3526			1737			1802	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.87			0.82	1.00
Satd. Flow (perm)	1770	3533		1770	3526			1552			1532	1583
Volume (vph)	70	760	8	25	1633	42	15	4	8	30	15	207
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	826	9	27	1775	46	16	4	9	33	16	225
RTOR Reduction (vph)	0	1	0	0	2	0	0	8	0	0	0	127
Lane Group Flow (vph)	76	834	0	27	1819	0	0	21	0	0	49	98
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	6
Permitted Phases							2			6		6
Actuated Green, G (s)	5.6	51.1		12.3	57.8			14.6			14.6	14.6
Effective Green, g (s)	5.6	51.1		12.3	57.8			14.6			14.6	14.6
Actuated g/C Ratio	0.06	0.57		0.14	0.64			0.16			0.16	0.16
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	110	2006		242	2264			252			249	257
v/s Ratio Prot	c0.04	0.24		0.02	c0.52							
v/s Ratio Perm								0.02			0.03	0.14
v/c Ratio	0.69	0.42		0.11	0.80			0.09			0.20	0.38
Uniform Delay, d1	41.4	11.0		34.1	11.9			32.0			32.6	33.7
Progression Factor	0.74	0.59		0.77	0.41			1.00			1.00	1.00
Incremental Delay, d2	14.3	0.1		0.2	1.7			0.7			1.8	4.3
Delay (s)	44.8	6.6		26.5	6.6			32.7			34.4	38.0
Level of Service	D	A		C	A			C			C	D
Approach Delay (s)		9.8			6.8			32.7			37.3	
Approach LOS		A			A			C			D	
Intersection Summary												
HCM Average Control Delay			10.7			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			72.6%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 16: East Cypress Road & Knightsen Avenue

Cumulative +Project AM Volumes
 2/4/2010

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.35	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	653	3539	1770	1583
Volume (vph)	706	98	140	1617	71	48
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	767	107	152	1758	77	52
RTOR Reduction (vph)	0	24	0	0	0	45
Lane Group Flow (vph)	767	83	152	1758	77	7
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	69.4	69.4	69.4	69.4	12.6	12.6
Effective Green, g (s)	69.4	69.4	69.4	69.4	12.6	12.6
Actuated g/C Ratio	0.77	0.77	0.77	0.77	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2729	1221	504	2729	248	222
v/s Ratio Prot	0.22			c0.50	c0.04	
v/s Ratio Perm		0.07	0.23			0.03
v/c Ratio	0.28	0.07	0.30	0.64	0.31	0.03
Uniform Delay, d1	3.0	2.5	3.1	4.7	34.8	33.4
Progression Factor	0.03	0.00	0.45	0.41	1.00	1.00
Incremental Delay, d2	0.1	0.0	0.3	0.4	3.2	0.3
Delay (s)	0.1	0.0	1.6	2.3	38.0	33.7
Level of Service	A	A	A	A	D	C
Approach Delay (s)	0.1			2.3	36.3	
Approach LOS	A			A	D	

Intersection Summary

HCM Average Control Delay	3.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 17: East Cypress Road & Jersey Island Road

Cumulative +Project AM Volumes
 2/4/2010
































Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗		↙	↘
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3531		1770	1583
Flt Permitted	0.09	1.00	1.00		0.95	1.00
Satd. Flow (perm)	160	3539	3531		1770	1583
Volume (vph)	88	735	1526	23	49	242
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	799	1659	25	53	263
RTOR Reduction (vph)	0	0	1	0	0	38
Lane Group Flow (vph)	96	799	1683	0	53	225
Turn Type	Perm				Perm	
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	60.7	60.7	60.7		21.3	21.3
Effective Green, g (s)	60.7	60.7	60.7		21.3	21.3
Actuated g/C Ratio	0.67	0.67	0.67		0.24	0.24
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	108	2387	2381		419	375
v/s Ratio Prot		0.23	0.48		0.03	
v/s Ratio Perm	c0.60					0.17
v/c Ratio	0.89	0.33	0.71		0.13	0.60
Uniform Delay, d1	11.9	6.2	9.1		27.0	30.6
Progression Factor	1.08	0.24	0.99		1.00	1.00
Incremental Delay, d2	51.9	0.1	0.6		0.6	6.9
Delay (s)	64.8	1.5	9.6		27.7	37.5
Level of Service	E	A	A		C	D
Approach Delay (s)		8.3	9.6		35.8	
Approach LOS		A	A		D	

Intersection Summary

HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			













HCM Signalized Intersection Capacity Analysis
18: East Cypress Road & Bethel Island Road

Cumulative +Project AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 						 	 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	2787
Volume (vph)	328	310	194	264	594	83	329	437	98	37	403	624
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	357	337	211	287	646	90	358	475	107	40	438	678
RTOR Reduction (vph)	0	0	175	0	0	72	0	0	75	0	0	453
Lane Group Flow (vph)	357	337	36	287	646	19	358	475	32	40	438	225
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	11.9	15.4	15.4	15.0	18.5	18.5	19.2	27.0	27.0	16.6	24.4	24.4
Effective Green, g (s)	11.9	15.4	15.4	15.0	18.5	18.5	19.2	27.0	27.0	16.6	24.4	24.4
Actuated g/C Ratio	0.13	0.17	0.17	0.17	0.21	0.21	0.21	0.30	0.30	0.18	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	454	606	271	295	727	325	378	559	475	326	505	756
v/s Ratio Prot	0.10	0.10		0.16	c0.18		c0.20	c0.26		0.02	0.24	
v/s Ratio Perm			0.13			0.06			0.07			0.24
v/c Ratio	0.79	0.56	0.13	0.97	0.89	0.06	0.95	0.85	0.07	0.12	0.87	0.30
Uniform Delay, d1	37.8	34.2	31.6	37.3	34.7	28.7	34.9	29.6	22.5	30.6	31.3	26.0
Progression Factor	0.67	0.63	1.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.5	1.1	0.2	44.7	12.7	0.1	32.6	14.9	0.3	0.8	17.9	1.0
Delay (s)	33.9	22.6	51.8	82.0	47.5	28.8	67.5	44.5	22.8	31.4	49.2	27.0
Level of Service	C	C	D	F	D	C	E	D	C	C	D	C
Approach Delay (s)		33.9			55.5			50.8			35.6	
Approach LOS		C			E			D			D	
Intersection Summary												
HCM Average Control Delay			43.8	HCM Level of Service				D				
HCM Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				16.0				
Intersection Capacity Utilization			78.5%	ICU Level of Service				D				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 19: Laurel Road & SR4 SB Ramps

Cumulative +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑				↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0				4.0	4.0	4.0
Lane Util. Factor		0.95			0.95	1.00				0.95	0.95	1.00
Frt		0.98			1.00	0.85				1.00	1.00	0.85
Flt Protected		1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)		3458			3539	1583				1681	1681	1583
Flt Permitted		1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)		3458			3539	1583				1681	1681	1583
Volume (vph)	0	507	92	0	261	476	0	0	0	906	0	349
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	551	100	0	284	517	0	0	0	985	0	379
RTOR Reduction (vph)	0	20	0	0	0	0	0	0	0	0	0	123
Lane Group Flow (vph)	0	631	0	0	284	517	0	0	0	493	492	256
Turn Type						Free				Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases						Free						6
Actuated Green, G (s)		21.2			21.2	90.0				60.8	60.8	60.8
Effective Green, g (s)		21.2			21.2	90.0				60.8	60.8	60.8
Actuated g/C Ratio		0.24			0.24	1.00				0.68	0.68	0.68
Clearance Time (s)		4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		815			834	1583				1136	1136	1069
v/s Ratio Prot		c0.19			0.08					c0.29	0.29	
v/s Ratio Perm						0.33						0.24
v/c Ratio		0.77			0.34	0.33				0.43	0.43	0.24
Uniform Delay, d1		32.2			28.6	0.0				6.7	6.7	5.7
Progression Factor		1.00			0.05	1.00				1.00	1.00	1.00
Incremental Delay, d2		4.6			0.2	0.4				0.3	0.3	0.5
Delay (s)		36.8			1.5	0.4				7.0	7.0	6.2
Level of Service		D			A	A				A	A	A
Approach Delay (s)		36.8			0.8			0.0			6.7	
Approach LOS		D			A			A			A	
Intersection Summary												
HCM Average Control Delay			12.0				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			48.7%				ICU Level of Service			A		
Analysis Period (min)			15									
c Critical Lane Group												





























HCM Signalized Intersection Capacity Analysis
 20: Laurel Road & SR4 NB Ramps

Cumulative +Project AM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		1770	1583			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1770	3539			3539	1583		1770	1583			
Volume (vph)	267	1147	0	0	716	904	21	0	270	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	290	1247	0	0	778	983	23	0	293	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	52	0	0	0
Lane Group Flow (vph)	290	1247	0	0	778	983	0	23	241	0	0	0
Turn Type	Prot						Free	Perm	Perm			
Protected Phases	7	4					8			2		
Permitted Phases							Free	2	2			
Actuated Green, G (s)	24.4	53.0					24.6	90.0	29.0			
Effective Green, g (s)	24.4	53.0					24.6	90.0	29.0			
Actuated g/C Ratio	0.27	0.59					0.27	1.00	0.32			
Clearance Time (s)	4.0	4.0					4.0	4.0				
Vehicle Extension (s)	3.0	3.0					3.0	3.0				
Lane Grp Cap (vph)	480	2084					967	1583	570		510	
v/s Ratio Prot	0.16	0.35					c0.22					
v/s Ratio Perm							0.62	0.01		0.19		
v/c Ratio	0.60	0.60					0.80	0.62	0.04		0.47	
Uniform Delay, d1	28.6	11.7					30.5	0.0	20.9		24.4	
Progression Factor	0.80	0.66					1.20	1.00	1.00		1.00	
Incremental Delay, d2	1.9	0.4					2.6	1.0	0.1		3.1	
Delay (s)	24.8	8.2					39.1	1.0	21.1		27.5	
Level of Service	C	A					D	A	C		C	
Approach Delay (s)	11.3						17.8		27.1		0.0	
Approach LOS	B						B		C		A	
Intersection Summary												
HCM Average Control Delay	15.8		HCM Level of Service				B					
HCM Volume to Capacity ratio	0.67											
Actuated Cycle Length (s)	90.0		Sum of lost time (s)				4.0					
Intersection Capacity Utilization	55.1%		ICU Level of Service				B					
Analysis Period (min)	15											
c Critical Lane Group												




























HCM Signalized Intersection Capacity Analysis
 21: Laurel Road & Empire Avenue

Cumulative +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3469		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3469		1770	3539	1583
Volume (vph)	220	770	202	121	1179	260	180	450	69	50	220	320
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	837	220	132	1282	283	196	489	75	54	239	348
RTOR Reduction (vph)	0	0	144	0	0	164	0	13	0	0	0	181
Lane Group Flow (vph)	239	837	76	132	1282	119	196	551	0	54	239	167
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases			4			8						6
Actuated Green, G (s)	8.2	31.0	31.0	14.6	37.4	37.4	13.2	22.8		5.6	15.2	15.2
Effective Green, g (s)	8.2	31.0	31.0	14.6	37.4	37.4	13.2	22.8		5.6	15.2	15.2
Actuated g/C Ratio	0.09	0.34	0.34	0.16	0.42	0.42	0.15	0.25		0.06	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	313	1219	545	287	1471	658	260	879		110	598	267
v/s Ratio Prot	0.07	c0.24		0.07	c0.36		c0.11	c0.16		0.03	0.07	
v/s Ratio Perm			0.14			0.18						0.22
v/c Ratio	0.76	0.69	0.14	0.46	0.87	0.18	0.75	0.63		0.49	0.40	0.62
Uniform Delay, d1	40.0	25.3	20.3	34.1	24.1	16.6	36.8	29.8		40.8	33.3	34.8
Progression Factor	1.25	0.76	0.82	0.47	0.25	0.07	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.0	1.4	0.1	0.5	2.5	0.1	11.7	3.4		3.4	2.0	10.6
Delay (s)	58.9	20.6	16.8	16.6	8.6	1.2	48.5	33.2		44.2	35.3	45.3
Level of Service	E	C	B	B	A	A	D	C		D	D	D
Approach Delay (s)		27.0			8.0			37.1			41.5	
Approach LOS		C			A			D			D	
Intersection Summary												
HCM Average Control Delay			23.5			HCM Level of Service		C				
HCM Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			72.4%			ICU Level of Service		C				
Analysis Period (min)			15									
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
22: Laurel Road & Ohara Avenue

Cumulative +Project AM Volumes
2/4/2010

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 			 			 		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.97		
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3447		1770	3446		
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3447		1770	3446		
Volume (vph)	110	595	210	235	1186	210	200	585	123	100	517	110	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	120	647	228	255	1289	228	217	636	134	109	562	120	
RTOR Reduction (vph)	0	0	162	0	0	142	0	20	0	0	20	0	
Lane Group Flow (vph)	120	647	66	255	1289	86	217	750	0	109	662	0	
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot			
Protected Phases	7	4		3	8		5	2		1	6		
Permitted Phases			4			8							
Actuated Green, G (s)	7.0	25.9	25.9	15.1	34.0	34.0	12.0	27.0		6.0	21.0		
Effective Green, g (s)	7.0	25.9	25.9	15.1	34.0	34.0	12.0	27.0		6.0	21.0		
Actuated g/C Ratio	0.08	0.29	0.29	0.17	0.38	0.38	0.13	0.30		0.07	0.23		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	138	1018	456	297	1337	598	236	1034		118	804		
v/s Ratio Prot	c0.07	0.18		0.14	c0.36		c0.12	0.22		0.06	c0.20		
v/s Ratio Perm			0.14			0.14							
v/c Ratio	0.87	0.64	0.14	0.86	0.96	0.14	0.92	0.73		0.92	0.82		
Uniform Delay, d1	41.0	27.9	23.8	36.4	27.4	18.4	38.5	28.2		41.8	32.7		
Progression Factor	0.77	0.75	1.10	0.80	0.38	0.36	1.00	1.00		1.07	1.06		
Incremental Delay, d2	33.7	1.0	0.1	13.8	11.7	0.1	36.9	4.4		59.0	9.3		
Delay (s)	65.2	21.8	26.3	42.8	22.0	6.7	75.4	32.6		103.7	43.9		
Level of Service	E	C	C	D	C	A	E	C		F	D		
Approach Delay (s)		28.1			23.0			42.0			52.1		
Approach LOS		C			C			D			D		
Intersection Summary													
HCM Average Control Delay			33.3			HCM Level of Service			C				
HCM Volume to Capacity ratio			0.92										
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			16.0				
Intersection Capacity Utilization			81.1%			ICU Level of Service			D				
Analysis Period (min)			15										
c Critical Lane Group													
























HCM Signalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Cumulative +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	3525		1770	3536		1770	1706			1785	1583
Flt Permitted	0.95	1.00		0.42	1.00		0.43	1.00			0.74	1.00
Satd. Flow (perm)	1770	3525		780	3536		796	1706			1381	1583
Volume (vph)	186	552	15	23	1461	10	10	6	8	172	25	70
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	202	600	16	25	1588	11	11	7	9	187	27	76
RTOR Reduction (vph)	0	2	0	0	0	0	0	7	0	0	0	61
Lane Group Flow (vph)	202	614	0	25	1599	0	11	9	0	0	214	15
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases				8			2			6		6
Actuated Green, G (s)	13.3	63.9		46.6	46.6		18.1	18.1			18.1	18.1
Effective Green, g (s)	13.3	63.9		46.6	46.6		18.1	18.1			18.1	18.1
Actuated g/C Ratio	0.15	0.71		0.52	0.52		0.20	0.20			0.20	0.20
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	262	2503		404	1831		160	343			278	318
v/s Ratio Prot	c0.11	0.17			c0.45			0.01				
v/s Ratio Perm				0.03			0.01				c0.15	0.05
v/c Ratio	0.77	0.25		0.06	0.87		0.07	0.03			0.77	0.05
Uniform Delay, d1	36.9	4.6		10.8	19.1		29.1	28.9			34.0	29.0
Progression Factor	0.99	0.04		0.59	0.57		0.78	0.72			1.00	1.00
Incremental Delay, d2	9.7	0.0		0.0	1.7		0.8	0.1			18.4	0.3
Delay (s)	46.2	0.2		6.4	12.5		23.4	21.0			52.4	29.3
Level of Service	D	A		A	B		C	C			D	C
Approach Delay (s)		11.6			12.4			21.9			46.3	
Approach LOS		B			B			C			D	
Intersection Summary												
HCM Average Control Delay			15.8			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			78.5%			ICU Level of Service					D	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
24: Laurel Road & Main Street

Cumulative +Project AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3324		1770	3539	1583	1770	3539	1583	3433	3362	
Flt Permitted	0.25	1.00		0.20	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	466	3324		373	3539	1583	1770	3539	1583	3433	3362	
Volume (vph)	190	322	220	391	943	230	200	655	139	200	667	335
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	350	239	425	1025	250	217	712	151	217	725	364
RTOR Reduction (vph)	0	135	0	0	0	175	0	0	100	0	70	0
Lane Group Flow (vph)	207	454	0	425	1025	75	217	712	51	217	1019	0
Turn Type	pm+pt			pm+pt			Perm	Prot		Perm	Prot	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	23.0	16.0		38.0	27.0	27.0	12.0	30.5	30.5	9.5	28.0	
Effective Green, g (s)	23.0	16.0		38.0	27.0	27.0	12.0	30.5	30.5	9.5	28.0	
Actuated g/C Ratio	0.26	0.18		0.42	0.30	0.30	0.13	0.34	0.34	0.11	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	221	591		437	1062	475	236	1199	536	362	1046	
v/s Ratio Prot	0.07	0.18		c0.19	0.29		c0.12	0.20		0.06	c0.32	
v/s Ratio Perm	0.17			c0.22		0.16			0.10			
v/c Ratio	0.94	0.77		0.97	0.97	0.16	0.92	0.59	0.10	0.60	0.97	
Uniform Delay, d1	31.3	35.2		23.4	31.0	23.1	38.5	24.6	20.3	38.4	30.6	
Progression Factor	1.26	0.86		0.75	0.69	0.54	0.92	1.17	2.73	1.21	0.59	
Incremental Delay, d2	41.5	5.7		31.2	16.8	0.1	35.1	2.0	0.3	2.3	20.3	
Delay (s)	80.8	36.0		48.7	38.3	12.6	70.7	30.8	55.9	48.9	38.5	
Level of Service	F	D		D	D	B	E	C	E	D	D	
Approach Delay (s)		47.7			37.1			42.3			40.2	
Approach LOS		D			D			D			D	
Intersection Summary												
HCM Average Control Delay			40.8				HCM Level of Service				D	
HCM Volume to Capacity ratio			0.96									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			91.2%				ICU Level of Service				F	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
25: Laurel Road & Sellers Avenue

Cumulative +Project AM Volumes
2/4/2010

























Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1863	2787
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	1770	3539	1863	2787
Volume (vph)	620	21	120	227	286	1310
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	674	23	130	247	311	1424
RTOR Reduction (vph)	0	17	0	0	0	761
Lane Group Flow (vph)	674	6	130	247	311	663
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	24.7	24.7	11.4	57.3	41.9	41.9
Effective Green, g (s)	24.7	24.7	11.4	57.3	41.9	41.9
Actuated g/C Ratio	0.27	0.27	0.13	0.64	0.47	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	942	434	224	2253	867	1298
v/s Ratio Prot	c0.20		c0.07	0.07	0.17	
v/s Ratio Perm		0.01				0.51
v/c Ratio	0.72	0.01	0.58	0.11	0.36	0.51
Uniform Delay, d1	29.5	23.8	37.0	6.4	15.4	16.9
Progression Factor	0.55	0.13	1.07	0.99	0.40	1.99
Incremental Delay, d2	2.1	0.0	3.8	0.1	0.9	1.1
Delay (s)	18.1	3.1	43.3	6.4	7.0	34.7
Level of Service	B	A	D	A	A	C
Approach Delay (s)	17.6			19.1	29.8	
Approach LOS	B			B	C	

Intersection Summary

HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 26: Malicoat Avenue & Main Street

Cumulative +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	0.93		1.00	1.00		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1681		1770	1725		1770	3530		1770	3444	
Flt Permitted	0.62	1.00		0.62	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1163	1681		1163	1725		1770	3530		1770	3444	
Volume (vph)	226	43	80	37	63	61	57	708	12	31	829	180
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	246	47	87	40	68	66	62	770	13	34	901	196
RTOR Reduction (vph)	0	66	0	0	44	0	0	1	0	0	17	0
Lane Group Flow (vph)	246	68	0	40	90	0	62	782	0	34	1080	0
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases	4			8			5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	21.5	21.5		21.5	21.5		7.0	52.9		3.6	49.5	
Effective Green, g (s)	21.5	21.5		21.5	21.5		7.0	52.9		3.6	49.5	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.08	0.59		0.04	0.55	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	278	402		278	412		138	2075		71	1894	
v/s Ratio Prot		0.08			0.08		c0.04	0.22		0.02	c0.32	
v/s Ratio Perm	c0.21			0.03								
v/c Ratio	0.88	0.17		0.14	0.22		0.45	0.38		0.48	0.57	
Uniform Delay, d1	33.1	27.2		27.0	27.5		39.7	9.8		42.3	13.3	
Progression Factor	0.99	0.97		1.00	1.00		1.00	1.00		0.87	0.73	
Incremental Delay, d2	26.6	0.2		0.2	0.3		2.3	0.5		1.7	0.4	
Delay (s)	59.2	26.7		27.2	27.8		42.0	10.3		38.3	10.1	
Level of Service	E	C		C	C		D	B		D	B	
Approach Delay (s)		47.7			27.6			12.7			10.9	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			18.2			HCM Level of Service		B				
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			64.9%			ICU Level of Service		C				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 27: Brownstone Road & Main Street














Cumulative +Project AM Volumes
 2/4/2010



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.95			1.00	0.97	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1714			3524	3430	
Flt Permitted	0.97			0.75	1.00	
Satd. Flow (perm)	1714			2638	3430	
Volume (vph)	95	59	64	688	906	235
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	64	70	748	985	255
RTOR Reduction (vph)	32	0	0	0	14	0
Lane Group Flow (vph)	135	0	0	818	1226	0
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	11.7			70.3	70.3	
Effective Green, g (s)	11.7			70.3	70.3	
Actuated g/C Ratio	0.13			0.78	0.78	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	223			2061	2679	
v/s Ratio Prot	c0.10				c0.36	
v/s Ratio Perm				0.31		
v/c Ratio	0.60			0.40	0.46	
Uniform Delay, d1	37.0			3.1	3.4	
Progression Factor	1.00			0.46	1.00	
Incremental Delay, d2	4.6			0.5	0.6	
Delay (s)	41.5			1.9	3.9	
Level of Service	D			A	A	
Approach Delay (s)	41.5			1.9	3.9	
Approach LOS	D			A	A	
Intersection Summary						
HCM Average Control Delay			6.0		HCM Level of Service	A
HCM Volume to Capacity ratio			0.50			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			72.3%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

















HCM Signalized Intersection Capacity Analysis
28: Delta Road & Main Street

Cumulative +Project AM Volumes
2/4/2010

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3488		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3488		1770	3539
Volume (vph)	125	247	774	82	226	933
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	268	841	89	246	1014
RTOR Reduction (vph)	0	237	6	0	0	0
Lane Group Flow (vph)	136	31	924	0	246	1014
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	10.3	10.3	50.4		17.3	71.7
Effective Green, g (s)	10.3	10.3	50.4		17.3	71.7
Actuated g/C Ratio	0.11	0.11	0.56		0.19	0.80
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	203	181	1953		340	2819
v/s Ratio Prot	0.08		c0.27		c0.14	0.29
v/s Ratio Perm		0.17				
v/c Ratio	0.67	0.17	0.47		0.72	0.36
Uniform Delay, d1	38.2	36.0	11.9		34.1	2.6
Progression Factor	1.21	2.37	0.52		1.01	0.53
Incremental Delay, d2	8.0	0.4	0.8		7.0	0.3
Delay (s)	54.4	85.6	7.0		41.5	1.7
Level of Service	D	F	A		D	A
Approach Delay (s)	75.1		7.0			9.5
Approach LOS	E		A			A
Intersection Summary						
HCM Average Control Delay			18.8		HCM Level of Service	B
HCM Volume to Capacity ratio			0.66			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			53.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						























HCM Signalized Intersection Capacity Analysis
 29: Delta Road & Sellers Avenue

Cumulative +Project AM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.97			0.98			0.97			0.97	
Flt Protected		0.99			0.99			0.99			0.99	
Satd. Flow (prot)		1788			1804			1789			1786	
Flt Permitted		0.85			0.80			0.94			0.92	
Satd. Flow (perm)		1535			1471			1684			1655	
Volume (vph)	44	108	41	71	143	32	25	118	47	58	196	81
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	117	45	77	155	35	27	128	51	63	213	88
RTOR Reduction (vph)	0	14	0	0	8	0	0	8	0	0	8	0
Lane Group Flow (vph)	0	196	0	0	259	0	0	198	0	0	356	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		22.5			22.5			59.5			59.5	
Effective Green, g (s)		22.5			22.5			59.5			59.5	
Actuated g/C Ratio		0.25			0.25			0.66			0.66	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		384			368			1113			1094	
v/s Ratio Prot												
v/s Ratio Perm		0.14			0.18			0.12			0.22	
v/c Ratio		0.51			0.70			0.18			0.33	
Uniform Delay, d1		29.0			30.7			5.9			6.6	
Progression Factor		0.49			1.00			1.84			0.20	
Incremental Delay, d2		0.9			6.0			0.3			0.8	
Delay (s)		15.3			36.7			11.1			2.1	
Level of Service		B			D			B			A	
Approach Delay (s)		15.3			36.7			11.1			2.1	
Approach LOS		B			D			B			A	
Intersection Summary												
HCM Average Control Delay		15.3			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.44										
Actuated Cycle Length (s)		90.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		53.3%			ICU Level of Service			A				
Analysis Period (min)		15										
c Critical Lane Group												























HCM Signalized Intersection Capacity Analysis
30: Lone Tree Way & Main Street

Cumulative +Project AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1779	1583		1788	1583	1770	3539	1583	1770	3412	
Flt Permitted		0.69	1.00		0.55	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1277	1583		1021	1583	1770	3539	1583	1770	3412	
Volume (vph)	188	11	323	55	11	6	307	559	25	6	691	218
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	204	12	351	60	12	7	334	608	27	7	751	237
RTOR Reduction (vph)	0	0	278	0	0	6	0	0	9	0	30	0
Lane Group Flow (vph)	0	216	73	0	72	1	334	608	18	7	958	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		18.7	18.7		18.7	18.7	20.7	58.5	58.5	0.8	38.6	
Effective Green, g (s)		18.7	18.7		18.7	18.7	20.7	58.5	58.5	0.8	38.6	
Actuated g/C Ratio		0.21	0.21		0.21	0.21	0.23	0.65	0.65	0.01	0.43	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		265	329		212	329	407	2300	1029	16	1463	
v/s Ratio Prot							c0.19	0.17		0.00	c0.29	
v/s Ratio Perm		0.17	0.22		0.07	0.00			0.02			
v/c Ratio		0.82	0.22		0.34	0.00	0.82	0.26	0.02	0.44	0.66	
Uniform Delay, d1		34.0	29.6		30.4	28.3	32.9	6.7	5.6	44.4	20.4	
Progression Factor		1.00	1.00		1.00	1.00	0.62	0.87	0.63	0.88	0.80	
Incremental Delay, d2		17.3	0.3		1.0	0.0	11.6	0.3	0.0	17.1	2.2	
Delay (s)		51.3	29.9		31.3	28.3	32.1	6.0	3.5	56.1	18.6	
Level of Service		D	C		C	C	C	A	A	E	B	
Approach Delay (s)		38.1			31.1			15.0			18.8	
Approach LOS		D			C			B			B	
Intersection Summary												
HCM Average Control Delay			21.9				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			70.7%				ICU Level of Service		C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
31: Main Street & Sellers Avenue

Cumulative +Project AM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1837	1583		1825	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.90	1.00		0.86	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583		1676	1583		1600	
Volume (vph)	2	470	38	26	594	37	26	64	10	68	108	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	511	41	28	646	40	28	70	11	74	117	2
RTOR Reduction (vph)	0	0	23	0	0	22	0	0	7	0	1	0
Lane Group Flow (vph)	2	511	18	28	646	18	0	98	4	0	192	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2		2	6		
Actuated Green, G (s)	2.2	39.8	39.8	3.3	40.9	40.9		34.9	34.9		34.9	
Effective Green, g (s)	2.2	39.8	39.8	3.3	40.9	40.9		34.9	34.9		34.9	
Actuated g/C Ratio	0.02	0.44	0.44	0.04	0.45	0.45		0.39	0.39		0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	
Lane Grp Cap (vph)	43	824	700	65	847	719		650	614		620	
v/s Ratio Prot	0.00	c0.27		0.02	c0.35							
v/s Ratio Perm			0.03			0.03		0.06	0.01		c0.12	
v/c Ratio	0.05	0.62	0.03	0.43	0.76	0.03		0.15	0.01		0.31	
Uniform Delay, d1	42.9	19.3	14.2	42.4	20.5	13.5		17.9	16.9		19.2	
Progression Factor	0.65	0.46	0.00	1.00	1.00	1.00		1.00	1.00		0.87	
Incremental Delay, d2	0.4	1.2	0.0	4.5	4.1	0.0		0.5	0.0		1.2	
Delay (s)	28.4	10.1	0.1	47.0	24.6	13.6		18.4	16.9		17.9	
Level of Service	C	B	A	D	C	B		B	B		B	
Approach Delay (s)		9.4			24.9			18.3			17.9	
Approach LOS		A			C			B			B	
Intersection Summary												
HCM Average Control Delay			18.1			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			54.2%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 1: Main Street & SR160 SB Ramps

Cumulative +Project PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		0.97	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3501		3433	3539	1583		1793	1583	1770	1751	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.76	1.00	0.69	1.00	
Satd. Flow (perm)	1770	3501		3433	3539	1583		1409	1583	1288	1751	
Volume (vph)	30	1037	80	642	335	100	70	20	27	90	30	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	1127	87	698	364	109	76	22	29	98	33	22
RTOR Reduction (vph)	0	7	0	0	0	42	0	0	23	0	17	0
Lane Group Flow (vph)	33	1207	0	698	364	67	0	98	6	98	38	0
Turn Type	Prot			Prot		Perm	Perm		Perm	Perm		
Protected Phases	7	4		3	8			2				6
Permitted Phases						8	2		2		6	
Actuated Green, G (s)	3.0	35.2		23.2	55.4	55.4		19.6	19.6	19.6	19.6	
Effective Green, g (s)	3.0	35.2		23.2	55.4	55.4		19.6	19.6	19.6	19.6	
Actuated g/C Ratio	0.03	0.39		0.26	0.62	0.62		0.22	0.22	0.22	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	59	1369		885	2178	974		307	345	280	381	
v/s Ratio Prot	0.02	c0.35		c0.20	0.10							0.03
v/s Ratio Perm						0.07		0.07	0.02	c0.08		
v/c Ratio	0.56	0.88		0.79	0.17	0.07		0.32	0.02	0.35	0.10	
Uniform Delay, d1	42.8	25.5		31.1	7.4	6.9		29.6	27.6	29.8	28.1	
Progression Factor	1.00	1.00		0.82	0.86	0.85		1.00	1.00	1.00	1.00	
Incremental Delay, d2	11.0	7.0		4.7	0.0	0.0		2.7	0.1	3.4	0.5	
Delay (s)	53.9	32.5		30.1	6.4	6.0		32.3	27.7	33.2	28.7	
Level of Service	D	C		C	A	A		C	C	C	C	
Approach Delay (s)		33.0			20.5			31.3			31.6	
Approach LOS		C			C			C			C	
Intersection Summary												
HCM Average Control Delay			27.4				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			71.2%				ICU Level of Service		C			
Analysis Period (min)			15									
c	Critical Lane Group											

HCM Signalized Intersection Capacity Analysis
 2: Main Street & SR160 NB Ramps






























Cumulative +Project PM Volumes
 2/4/2010

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↓	↑↑↑	↓	↗↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1583	1770	5085	1770	2787
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1583	1770	5085	1770	2787
Volume (vph)	1044	20	15	937	40	465
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1135	22	16	1018	43	505
RTOR Reduction (vph)	0	10	0	0	0	376
Lane Group Flow (vph)	1135	12	16	1018	43	129
Turn Type		Perm	Prot			Over
Protected Phases	2		1	6	8	1
Permitted Phases		2				
Actuated Green, G (s)	49.9	49.9	23.0	76.9	5.1	23.0
Effective Green, g (s)	49.9	49.9	23.0	76.9	5.1	23.0
Actuated g/C Ratio	0.55	0.55	0.26	0.85	0.06	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2819	878	452	4345	100	712
v/s Ratio Prot	c0.22		0.01	0.20	c0.02	c0.18
v/s Ratio Perm		0.01				
v/c Ratio	0.40	0.01	0.04	0.23	0.43	0.18
Uniform Delay, d1	11.5	9.0	25.2	1.2	41.0	26.2
Progression Factor	0.10	0.06	0.71	0.60	1.00	1.00
Incremental Delay, d2	0.3	0.0	0.0	0.1	3.0	0.1
Delay (s)	1.4	0.5	17.9	0.8	44.0	26.3
Level of Service	A	A	B	A	D	C
Approach Delay (s)	1.4			1.1	27.7	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	6.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			
























HCM Signalized Intersection Capacity Analysis
3: Main Street & Empire Avenue

Cumulative +Project PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  		 				 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91		0.97	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.97	1.00
Satd. Flow (prot)	1770	5085	1583	3433	5072		3433	1863	1583		1808	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00		0.79	1.00
Satd. Flow (perm)	1770	5085	1583	3433	5072		3433	1863	1583		1474	1583
Volume (vph)	40	1710	540	350	1129	20	430	40	280	30	20	30
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	1859	587	380	1227	22	467	43	304	33	22	33
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	214	0	0	30
Lane Group Flow (vph)	43	1859	587	380	1247	0	467	43	90	0	55	3
Turn Type	Prot		Free	Prot			Prot		Perm	Perm		Perm
Protected Phases	5	2		1	6		3	8				4
Permitted Phases			Free						8	4		4
Actuated Green, G (s)	5.3	41.0	90.0	12.6	48.3		13.0	24.4	24.4		7.4	7.4
Effective Green, g (s)	5.3	41.0	90.0	12.6	48.3		13.0	24.4	24.4		7.4	7.4
Actuated g/C Ratio	0.06	0.46	1.00	0.14	0.54		0.14	0.27	0.27		0.08	0.08
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	104	2317	1583	481	2722		496	505	429		121	130
v/s Ratio Prot	0.02	c0.37		c0.11	0.25		c0.14	0.02				
v/s Ratio Perm			0.37						0.19		0.04	0.02
v/c Ratio	0.41	0.80	0.37	0.79	0.46		0.94	0.09	0.21		0.45	0.02
Uniform Delay, d1	40.9	21.0	0.0	37.4	12.8		38.1	24.5	25.4		39.4	38.0
Progression Factor	1.22	0.63	1.00	0.82	0.55		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.6	3.0	0.7	8.2	0.5		26.4	0.1	0.2		2.7	0.1
Delay (s)	52.6	16.1	0.7	39.0	7.5		64.5	24.5	25.6		42.1	38.0
Level of Service	D	B	A	D	A		E	C	C		D	D
Approach Delay (s)		13.1			14.9			47.9			40.6	
Approach LOS		B			B			D			D	
Intersection Summary												
HCM Average Control Delay			19.8			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			72.0%			ICU Level of Service		C				
Analysis Period (min)			15									
c Critical Lane Group												























HCM Signalized Intersection Capacity Analysis
4: Main Street & Vintage Parkway

Cumulative +Project PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96			0.95	1.00
Satd. Flow (prot)	1770	3535		1770	3509			1758			1776	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.81			0.72	1.00
Satd. Flow (perm)	1770	3535		1770	3509			1477			1338	1583
Volume (vph)	40	1201	9	12	947	58	18	1	3	96	3	43
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	1305	10	13	1029	63	20	1	3	104	3	47
RTOR Reduction (vph)	0	0	0	0	5	0	0	2	0	0	0	36
Lane Group Flow (vph)	43	1315	0	13	1087	0	0	22	0	0	107	11
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	9.7	56.0		1.5	47.8			20.5			20.5	20.5
Effective Green, g (s)	9.7	56.0		1.5	47.8			20.5			20.5	20.5
Actuated g/C Ratio	0.11	0.62		0.02	0.53			0.23			0.23	0.23
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	191	2200		30	1864			336			305	361
v/s Ratio Prot	0.02	c0.37		0.01	c0.31							
v/s Ratio Perm								0.02			c0.08	0.03
v/c Ratio	0.23	0.60		0.43	0.58			0.06			0.35	0.03
Uniform Delay, d1	36.7	10.2		43.8	14.3			27.2			29.2	27.0
Progression Factor	0.55	0.53		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.4	0.3		9.7	0.5			0.4			3.2	0.2
Delay (s)	20.8	5.7		53.6	14.8			27.6			32.3	27.2
Level of Service	C	A		D	B			C			C	C
Approach Delay (s)		6.2			15.3			27.6			30.7	
Approach LOS		A			B			C			C	
Intersection Summary												
HCM Average Control Delay			11.6			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			48.1%			ICU Level of Service					A	
Analysis Period (min)			15									
c Critical Lane Group												



















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative +Project PM Volumes
2/4/2010

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0				4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00				1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.94				0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00				0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1857		1770	1751				1797	
Flt Permitted	0.16	1.00	1.00	0.06	1.00		0.95	1.00				0.83	
Satd. Flow (perm)	293	1863	1583	107	1857		1770	1751				1519	
Volume (vph)	20	1092	130	60	898	20	140	60	40	30	40	10	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1187	141	65	976	22	152	65	43	33	43	11	
RTOR Reduction (vph)	0	0	38	0	1	0	0	26	0	0	5	0	
Lane Group Flow (vph)	22	1187	103	65	997	0	152	82	0	0	82	0	
Turn Type	Perm		Perm	Perm			Prot				Perm		
Protected Phases		2			6		3	8				4	
Permitted Phases	2		2	6							4		
Actuated Green, G (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1		
Effective Green, g (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1		
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.70		0.09	0.22			0.09		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0		
Lane Grp Cap (vph)	205	1302	1107	75	1298		159	387			138		
v/s Ratio Prot		c0.64			0.54		c0.09	0.06					
v/s Ratio Perm	0.08		0.09	0.61								c0.06	
v/c Ratio	0.11	0.91	0.09	0.87	0.77		0.96	0.21				0.59	
Uniform Delay, d1	4.9	12.5	4.8	11.5	9.8		45.3	31.8				43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00				1.00	
Incremental Delay, d2	1.1	11.1	0.2	60.4	2.8		57.8	0.3				6.6	
Delay (s)	6.0	23.6	5.0	71.8	12.6		103.1	32.1				50.3	
Level of Service	A	C	A	E	B		F	C				D	
Approach Delay (s)		21.4			16.2			73.6				50.3	
Approach LOS		C			B			E				D	
Intersection Summary													
HCM Average Control Delay			25.2				HCM Level of Service					C	
HCM Volume to Capacity ratio			0.89										
Actuated Cycle Length (s)			100.0				Sum of lost time (s)			12.0			
Intersection Capacity Utilization			78.6%				ICU Level of Service					D	
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative +Project PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.99			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)		3500			3536		1770	1583			1770	1583
Flt Permitted		0.95			0.85		0.76	1.00			0.75	1.00
Satd. Flow (perm)		3342			3019		1407	1583			1399	1583
Volume (vph)	1	1945	154	25	1480	0	29	0	9	4	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	2114	167	27	1609	0	32	0	10	4	0	3
RTOR Reduction (vph)	0	4	0	0	0	0	0	9	0	0	0	3
Lane Group Flow (vph)	0	2278	0	0	1636	0	32	1	0	0	4	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		73.5			73.5		8.5	8.5			8.5	8.5
Effective Green, g (s)		73.5			73.5		8.5	8.5			8.5	8.5
Actuated g/C Ratio		0.82			0.82		0.09	0.09			0.09	0.09
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2729			2466		133	150			132	150
v/s Ratio Prot							0.01					
v/s Ratio Perm		c0.68			0.54		c0.02				0.00	0.00
v/c Ratio		0.83			0.66		0.24	0.01			0.03	0.00
Uniform Delay, d1		4.8			3.3		37.8	36.9			37.0	36.9
Progression Factor		1.00			1.22		1.00	1.00			1.00	1.00
Incremental Delay, d2		2.3			0.3		4.2	0.1			0.1	0.0
Delay (s)		7.1			4.3		42.0	37.0			37.1	36.9
Level of Service		A			A		D	D			D	D
Approach Delay (s)		7.1			4.3		40.8				37.0	
Approach LOS		A			A		D				D	
Intersection Summary												
HCM Average Control Delay		6.4		HCM Level of Service				A				
HCM Volume to Capacity ratio		0.77										
Actuated Cycle Length (s)		90.0		Sum of lost time (s)				8.0				
Intersection Capacity Utilization		74.3%		ICU Level of Service				D				
Analysis Period (min)		15										
c Critical Lane Group												

















HCM Signalized Intersection Capacity Analysis
7: West Cypress Road & Ohara Avenue

Cumulative +Project PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1764		1770	1819		1770	1807		1770	1814	
Flt Permitted	0.21	1.00		0.19	1.00		0.30	1.00		0.50	1.00	
Satd. Flow (perm)	396	1764		346	1819		559	1807		926	1814	
Volume (vph)	100	237	130	75	296	55	70	280	69	92	520	110
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	258	141	82	322	60	76	304	75	100	565	120
RTOR Reduction (vph)	0	26	0	0	9	0	0	7	0	0	6	0
Lane Group Flow (vph)	109	373	0	82	373	0	76	372	0	100	679	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	23.2	23.2		23.2	23.2		58.8	58.8		58.8	58.8	
Effective Green, g (s)	23.2	23.2		23.2	23.2		58.8	58.8		58.8	58.8	
Actuated g/C Ratio	0.26	0.26		0.26	0.26		0.65	0.65		0.65	0.65	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	102	455		89	469		365	1181		605	1185	
v/s Ratio Prot		0.23			0.21			0.21			c0.38	
v/s Ratio Perm	c0.28			0.24			0.14			0.11		
v/c Ratio	1.07	0.82		0.92	0.80		0.21	0.31		0.17	0.57	
Uniform Delay, d1	33.4	31.4		32.5	31.2		6.3	6.8		6.1	8.6	
Progression Factor	1.00	1.00		1.00	1.00		0.65	0.57		1.00	1.00	
Incremental Delay, d2	108.8	11.0		69.6	9.1		1.0	0.6		0.6	2.0	
Delay (s)	142.2	42.5		102.1	40.2		5.1	4.4		6.7	10.7	
Level of Service	F	D		F	D		A	A		A	B	
Approach Delay (s)		63.9			51.2			4.6			10.1	
Approach LOS		E			D			A			B	
Intersection Summary												
HCM Average Control Delay			29.9			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			75.8%			ICU Level of Service					D	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 8: West Cypress Road & Rose Avenue

Cumulative +Project PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	3	366	31	63	434	34	28	133	73	28	135	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	398	34	68	472	37	30	145	79	30	147	27
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	435	577	254	204								
Volume Left (vph)	3	68	30	30								
Volume Right (vph)	34	37	79	27								
Hadj (s)	0.0	0.0	-0.1	0.0								
Departure Headway (s)	6.8	7.7	7.4	7.7								
Degree Utilization, x	0.82	1.24	0.52	0.44								
Capacity (veh/h)	435	473	458	438								
Control Delay (s)	15.6	45.4	12.4	12.2								
Approach Delay (s)	15.6	45.4	12.4	12.2								
Approach LOS	C	E	B	B								
Intersection Summary												
Delay			26.3									
HCM Level of Service			D									
Intersection Capacity Utilization			76.1%	ICU Level of Service	D							
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
 9: West Cypress Road & Main Street

Cumulative +Project PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	0.95	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3464		1770	1770	1504	1770	3539	1583	3433	3529	
Flt Permitted	0.26	1.00		0.23	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	478	3464		422	1770	1504	1770	3539	1583	3433	3529	
Volume (vph)	100	422	70	280	400	832	130	545	410	1060	1023	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	459	76	304	435	904	141	592	446	1152	1112	22
RTOR Reduction (vph)	0	15	0	0	0	24	0	0	139	0	2	0
Lane Group Flow (vph)	109	520	0	304	435	880	141	592	307	1152	1132	0
Turn Type	pm+pt			pm+pt		pm+ov	Prot		Perm		Prot	
Protected Phases	7	4		3	8	1	5	2			1	6
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	19.6	15.6		31.0	23.0	52.0	10.0	18.0	18.0	29.0	37.0	
Effective Green, g (s)	19.6	15.6		31.0	23.0	52.0	10.0	18.0	18.0	29.0	37.0	
Actuated g/C Ratio	0.22	0.17		0.34	0.26	0.58	0.11	0.20	0.20	0.32	0.41	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	162	600		316	452	936	197	708	317	1106	1451	
v/s Ratio Prot	0.03	0.15		c0.12	0.25	c0.31	0.08	0.17		c0.34	0.32	
v/s Ratio Perm	0.12			0.21		0.29			0.28			
v/c Ratio	0.67	0.87		0.96	0.96	0.94	0.72	0.84	0.97	1.04	0.78	
Uniform Delay, d1	41.2	36.2		33.1	33.1	17.6	38.6	34.6	35.7	30.5	23.0	
Progression Factor	1.00	1.00		0.68	0.58	0.76	0.91	0.82	0.70	1.00	0.80	
Incremental Delay, d2	10.5	12.5		35.6	28.7	14.2	6.6	6.5	30.1	32.9	2.6	
Delay (s)	51.7	48.7		58.3	47.9	27.5	41.6	34.8	54.9	63.4	21.1	
Level of Service	D	D		E	D	C	D	C	D	E	C	
Approach Delay (s)		49.2			38.6			43.2			42.4	
Approach LOS		D			D			D			D	
Intersection Summary												
HCM Average Control Delay			42.2				HCM Level of Service			D		
HCM Volume to Capacity ratio			1.06									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			102.2%				ICU Level of Service			G		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 10: East Cypress Road & Picasso Drive

Cumulative +Project PM Volumes
 2/4/2010



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↗		↙	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.87	
Flt Protected	0.95	1.00	1.00		1.00	
Satd. Flow (prot)	1770	3539	3537		1620	
Flt Permitted	0.95	1.00	1.00		1.00	
Satd. Flow (perm)	1770	3539	3537		1620	
Volume (vph)	101	1791	1404	5	4	70
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	110	1947	1526	5	4	76
RTOR Reduction (vph)	0	0	0	0	71	0
Lane Group Flow (vph)	110	1947	1531	0	9	0
Turn Type	Prot					
Protected Phases	7	4	8		6	
Permitted Phases						
Actuated Green, G (s)	9.6	76.1	62.5		5.9	
Effective Green, g (s)	9.6	76.1	62.5		5.9	
Actuated g/C Ratio	0.11	0.85	0.69		0.07	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	189	2992	2456		106	
v/s Ratio Prot	0.06	c0.55	0.43		c0.05	
v/s Ratio Perm						
v/c Ratio	0.58	0.65	0.62		0.08	
Uniform Delay, d1	38.3	2.4	7.4		39.5	
Progression Factor	1.22	0.26	0.52		1.00	
Incremental Delay, d2	1.2	0.1	0.4		1.6	
Delay (s)	47.8	0.8	4.3		41.1	
Level of Service	D	A	A		D	
Approach Delay (s)		3.3	4.3		41.1	
Approach LOS		A	A		D	
Intersection Summary						
HCM Average Control Delay			4.5		HCM Level of Service	A
HCM Volume to Capacity ratio			0.66			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			60.7%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						





















HCM Signalized Intersection Capacity Analysis
 11: East Cypress Road & Frank Hengel Way

Cumulative +Project PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96			0.97	1.00
Satd. Flow (prot)	1770	3523		1770	3539	1583		1768			1799	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.77			0.85	1.00
Satd. Flow (perm)	1770	3523		1770	3539	1583		1427			1587	1583
Volume (vph)	9	1847	58	6	1436	2	39	2	3	5	2	14
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	2008	63	7	1561	2	42	2	3	5	2	15
RTOR Reduction (vph)	0	1	0	0	0	0	0	3	0	0	0	14
Lane Group Flow (vph)	10	2070	0	7	1561	2	0	44	0	0	7	1
Turn Type	Prot			Prot		Perm	Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		6
Actuated Green, G (s)	1.5	71.7		1.4	71.6	71.6		4.9			4.9	4.9
Effective Green, g (s)	1.5	71.7		1.4	71.6	71.6		4.9			4.9	4.9
Actuated g/C Ratio	0.02	0.80		0.02	0.80	0.80		0.05			0.05	0.05
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	3.0
Lane Grp Cap (vph)	30	2807		28	2815	1259		78			86	86
v/s Ratio Prot	c0.01	c0.59		0.00	0.44							
v/s Ratio Perm						0.00		c0.03			0.00	0.01
v/c Ratio	0.33	0.74		0.25	0.55	0.00		0.57			0.08	0.01
Uniform Delay, d1	43.8	4.5		43.8	3.4	1.9		41.5			40.4	40.3
Progression Factor	0.84	0.88		1.39	0.25	0.00		1.00			1.00	1.00
Incremental Delay, d2	5.1	0.8		3.5	0.2	0.0		26.5			1.8	0.2
Delay (s)	42.1	4.8		64.3	1.0	0.0		68.0			42.3	40.5
Level of Service	D	A		E	A	A		E			D	D
Approach Delay (s)		5.0			1.3			68.0			41.0	
Approach LOS		A			A			E			D	
Intersection Summary												
HCM Average Control Delay			4.4				HCM Level of Service				A	
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			68.7%				ICU Level of Service				C	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 12: East Cypress Road & Machado Lane

Cumulative +Project PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00	1.00	
Frt	1.00	1.00			1.00	0.85				1.00	0.85	
Flt Protected	0.95	1.00			1.00	1.00				0.95	1.00	
Satd. Flow (prot)	1770	3539			3539	1583				1770	1583	
Flt Permitted	0.95	1.00			1.00	1.00				0.76	1.00	
Satd. Flow (perm)	1770	3539			3539	1583				1410	1583	
Volume (vph)	278	1609	0	0	1233	97	0	0	0	78	0	241
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	302	1749	0	0	1340	105	0	0	0	85	0	262
RTOR Reduction (vph)	0	0	0	0	0	49	0	0	0	0	229	0
Lane Group Flow (vph)	302	1749	0	0	1340	56	0	0	0	85	33	0
Turn Type	Prot			Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases						8	2			6		
Actuated Green, G (s)	19.0	70.8			47.8	47.8				11.2	11.2	
Effective Green, g (s)	19.0	70.8			47.8	47.8				11.2	11.2	
Actuated g/C Ratio	0.21	0.79			0.53	0.53				0.12	0.12	
Clearance Time (s)	4.0	4.0			4.0	4.0				4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	
Lane Grp Cap (vph)	374	2784			1880	841				175	197	
v/s Ratio Prot	c0.17	0.49			c0.38						c0.17	
v/s Ratio Perm						0.07				0.06		
v/c Ratio	0.81	0.63			0.71	0.07				0.49	0.17	
Uniform Delay, d1	33.8	4.0			15.9	10.3				36.7	35.2	
Progression Factor	1.10	1.06			0.27	0.07				1.00	1.00	
Incremental Delay, d2	8.4	0.3			0.9	0.0				9.3	1.8	
Delay (s)	45.6	4.6			5.2	0.8				46.1	37.0	
Level of Service	D	A			A	A				D	D	
Approach Delay (s)		10.6			4.9			0.0			39.2	
Approach LOS		B			A			A			D	
Intersection Summary												
HCM Average Control Delay			11.1				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			74.4%				ICU Level of Service		D			
Analysis Period (min)			15									
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
 13: East Cypress Road & Project Driveway

Cumulative +Project PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0				4.0	4.0	4.0
Lane Util. Factor	1.00	0.95			0.95	1.00				1.00		1.00
Frt	1.00	1.00			1.00	0.85				1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (prot)	1770	3539			3539	1583				1770		1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95		1.00
Satd. Flow (perm)	1770	3539			3539	1583				1770		1583
Volume (vph)	223	1477	0	0	1185	118	0	0	0	91	0	193
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	242	1605	0	0	1288	128	0	0	0	99	0	210
RTOR Reduction (vph)	0	0	0	0	0	63	0	0	0	0	0	170
Lane Group Flow (vph)	242	1605	0	0	1288	65	0	0	0	99	0	40
Turn Type	Prot				Perm				custom		custom	
Protected Phases	7	4			8							
Permitted Phases						8				6		6
Actuated Green, G (s)	15.4	65.0			45.6	45.6				17.0		17.0
Effective Green, g (s)	15.4	65.0			45.6	45.6				17.0		17.0
Actuated g/C Ratio	0.17	0.72			0.51	0.51				0.19		0.19
Clearance Time (s)	4.0	4.0			4.0	4.0				4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0		3.0
Lane Grp Cap (vph)	303	2556			1793	802				334		299
v/s Ratio Prot	c0.14	0.45			c0.36							
v/s Ratio Perm						0.08				0.06		0.13
v/c Ratio	0.80	0.63			0.72	0.08				0.30		0.13
Uniform Delay, d1	35.8	6.4			17.2	11.4				31.4		30.4
Progression Factor	1.27	0.06			1.00	1.00				1.00		1.00
Incremental Delay, d2	11.1	0.4			1.4	0.0				2.3		0.9
Delay (s)	56.6	0.8			18.6	11.5				33.6		31.3
Level of Service	E	A			B	B				C		C
Approach Delay (s)		8.1			18.0		0.0				32.0	
Approach LOS		A			B		A				C	
Intersection Summary												
HCM Average Control Delay			14.1		HCM Level of Service					B		
HCM Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					12.0		
Intersection Capacity Utilization			60.2%		ICU Level of Service					B		
Analysis Period (min)			15									
c Critical Lane Group												




















HCM Signalized Intersection Capacity Analysis
 14: East Cypress Road & Sellers Avenue

Cumulative +Project PM Volumes
 2/4/2010

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95		1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	3539	1583	3433	3522		1770	1863	1583	1770	1863	1583	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1770	3539	1583	3433	3522		1770	1863	1583	1770	1863	1583	
Volume (vph)	201	1185	219	546	899	30	244	221	938	24	170	180	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	218	1288	238	593	977	33	265	240	1020	26	185	196	
RTOR Reduction (vph)	0	0	139	0	2	0	0	0	0	0	0	167	
Lane Group Flow (vph)	218	1288	99	593	1008	0	265	240	1020	26	185	29	
Turn Type	Prot		Perm	Prot			Prot		Free	Prot		Perm	
Protected Phases	7	4		3	8		5	2		1		6	
Permitted Phases			4						Free			6	
Actuated Green, G (s)	15.0	36.0	36.0	17.0	38.0		16.4	28.6	100.0	2.4	14.6	14.6	
Effective Green, g (s)	15.0	36.0	36.0	17.0	38.0		16.4	28.6	100.0	2.4	14.6	14.6	
Actuated g/C Ratio	0.15	0.36	0.36	0.17	0.38		0.16	0.29	1.00	0.02	0.15	0.15	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	266	1274	570	584	1338		290	533	1583	42	272	231	
v/s Ratio Prot	0.12	c0.36		c0.17	0.29		c0.15	0.13		0.01	0.10		
v/s Ratio Perm			0.15						0.64			0.12	
v/c Ratio	0.82	1.01	0.17	1.02	0.75		0.91	0.45	0.64	0.62	0.68	0.12	
Uniform Delay, d1	41.2	32.0	21.8	41.5	26.9		41.1	29.3	0.0	48.3	40.5	37.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	17.6	27.9	0.1	41.2	2.4		31.2	2.7	2.0	24.2	12.9	1.1	
Delay (s)	58.8	59.9	22.0	82.7	29.4		72.3	32.0	2.0	72.5	53.4	38.2	
Level of Service	E	E	C	F	C		E	C	A	E	D	D	
Approach Delay (s)		54.6			49.1			19.0			47.3		
Approach LOS		D			D			B			D		
Intersection Summary													
HCM Average Control Delay			42.1			HCM Level of Service							D
HCM Volume to Capacity ratio			0.93										
Actuated Cycle Length (s)			100.0			Sum of lost time (s)							12.0
Intersection Capacity Utilization			84.1%			ICU Level of Service							E
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis
 15: East Cypress Road &

Cumulative +Project PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	1.00		1.00	0.99			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97			0.96	1.00
Satd. Flow (prot)	1770	3533		1770	3521			1751			1791	1583
Flt Permitted	0.95	1.00		0.95	1.00			0.80			0.80	1.00
Satd. Flow (perm)	1770	3533		1770	3521			1450			1486	1583
Volume (vph)	240	1879	23	8	1322	46	40	6	12	18	5	134
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	261	2042	25	9	1437	50	43	7	13	20	5	146
RTOR Reduction (vph)	0	1	0	0	2	0	0	11	0	0	0	125
Lane Group Flow (vph)	261	2066	0	9	1485	0	0	52	0	0	25	21
Turn Type	Prot			Prot			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	6
Permitted Phases							2			6		6
Actuated Green, G (s)	15.9	64.4		0.8	49.3			12.8			12.8	12.8
Effective Green, g (s)	15.9	64.4		0.8	49.3			12.8			12.8	12.8
Actuated g/C Ratio	0.18	0.72		0.01	0.55			0.14			0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	313	2528		16	1929			206			211	225
v/s Ratio Prot	0.15	c0.59		0.01	c0.42							
v/s Ratio Perm								0.04			0.02	0.09
v/c Ratio	0.83	0.82		0.56	0.77			0.25			0.12	0.09
Uniform Delay, d1	35.8	8.8		44.4	15.9			34.3			33.7	33.6
Progression Factor	1.00	1.00		0.86	0.79			1.00			1.00	1.00
Incremental Delay, d2	17.1	2.2		34.5	1.7			2.9			1.1	0.8
Delay (s)	52.9	10.9		72.8	14.2			37.3			34.8	34.4
Level of Service	D	B		E	B			D			C	C
Approach Delay (s)		15.6			14.6			37.3			34.4	
Approach LOS		B			B			D			C	
Intersection Summary												
HCM Average Control Delay			16.4			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			75.9%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 16: East Cypress Road & Knightsen Avenue

Cumulative +Project PM Volumes
 2/4/2010

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.06	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	109	3539	1770	1583
Volume (vph)	1921	114	27	1264	120	67
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2088	124	29	1374	130	73
RTOR Reduction (vph)	0	27	0	0	0	18
Lane Group Flow (vph)	2088	97	29	1374	130	55
Turn Type		Perm	Perm			Perm
Protected Phases	4			8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	70.3	70.3	70.3	70.3	11.7	11.7
Effective Green, g (s)	70.3	70.3	70.3	70.3	11.7	11.7
Actuated g/C Ratio	0.78	0.78	0.78	0.78	0.13	0.13
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2764	1236	85	2764	230	206
v/s Ratio Prot	c0.59			0.39	c0.07	
v/s Ratio Perm		0.08	0.27			0.05
v/c Ratio	0.76	0.08	0.34	0.50	0.57	0.27
Uniform Delay, d1	5.3	2.3	2.9	3.5	36.8	35.3
Progression Factor	0.20	0.01	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.0	2.4	0.1	9.7	3.1
Delay (s)	1.8	0.1	5.3	3.7	46.5	38.4
Level of Service	A	A	A	A	D	D
Approach Delay (s)	1.7			3.7	43.6	
Approach LOS	A			A	D	
Intersection Summary						
HCM Average Control Delay			4.7		HCM Level of Service	A
HCM Volume to Capacity ratio			0.73			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			66.4%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
 17: East Cypress Road & Jersey Island Road

Cumulative +Project PM Volumes
 2/4/2010



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑	↑↑		↖	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.95		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3516		1770	1583
Flt Permitted	0.19	1.00	1.00		0.95	1.00
Satd. Flow (perm)	352	3539	3516		1770	1583
Volume (vph)	246	1763	1162	53	45	167
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	267	1916	1263	58	49	182
RTOR Reduction (vph)	0	0	2	0	0	121
Lane Group Flow (vph)	267	1916	1319	0	49	61
Turn Type	Perm				Perm	
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	99.2	99.2	99.2		12.8	12.8
Effective Green, g (s)	99.2	99.2	99.2		12.8	12.8
Actuated g/C Ratio	0.83	0.83	0.83		0.11	0.11
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	291	2926	2907		189	169
v/s Ratio Prot		0.54	0.38		0.03	
v/s Ratio Perm	c0.76					0.11
v/c Ratio	0.92	0.65	0.45		0.26	0.36
Uniform Delay, d1	7.5	3.9	2.9		49.2	49.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	31.7	0.5	0.1		3.3	5.8
Delay (s)	39.2	4.5	3.0		52.5	55.6
Level of Service	D	A	A		D	E
Approach Delay (s)		8.7	3.0		55.0	
Approach LOS		A	A		D	

Intersection Summary

HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			













HCM Signalized Intersection Capacity Analysis
18: East Cypress Road & Bethel Island Road

Cumulative +Project PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	1863	1583	1770	1863	2787
Volume (vph)	800	613	413	161	428	55	295	352	170	69	230	516
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	870	666	449	175	465	60	321	383	185	75	250	561
RTOR Reduction (vph)	0	0	316	0	0	50	0	0	146	0	0	449
Lane Group Flow (vph)	870	666	133	175	465	10	321	383	39	75	250	112
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	23.0	26.6	26.6	11.5	15.1	15.1	17.9	19.0	19.0	16.9	18.0	18.0
Effective Green, g (s)	23.0	26.6	26.6	11.5	15.1	15.1	17.9	19.0	19.0	16.9	18.0	18.0
Actuated g/C Ratio	0.26	0.30	0.30	0.13	0.17	0.17	0.20	0.21	0.21	0.19	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	877	1046	468	226	594	266	352	393	334	332	373	557
v/s Ratio Prot	c0.25	0.19		0.10	0.13		c0.18	c0.21		0.04	0.13	
v/s Ratio Perm			0.28			0.04			0.12			0.20
v/c Ratio	0.99	0.64	0.28	0.77	0.78	0.04	0.91	0.97	0.12	0.23	0.67	0.20
Uniform Delay, d1	33.4	27.5	24.4	38.0	35.9	31.4	35.3	35.3	28.7	31.0	33.3	30.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	28.3	1.3	0.3	15.2	6.7	0.1	27.0	39.5	0.7	1.6	9.2	0.8
Delay (s)	61.7	28.8	24.7	53.2	42.5	31.4	62.2	74.7	29.4	32.6	42.5	30.8
Level of Service	E	C	C	D	D	C	E	E	C	C	D	C
Approach Delay (s)		42.3			44.2			60.8			34.3	
Approach LOS		D			D			E			C	
Intersection Summary												
HCM Average Control Delay			44.7			HCM Level of Service			D			
HCM Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)			8.0					
Intersection Capacity Utilization			76.4%	ICU Level of Service			D					
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 19: Laurel Road & SR4 SB Ramps

Cumulative +Project PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑				↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0				4.0	4.0	4.0
Lane Util. Factor		0.95			0.95	1.00				0.95	0.95	1.00
Frt		0.99			1.00	0.85				1.00	1.00	0.85
Flt Protected		1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)		3516			3539	1583				1681	1681	1583
Flt Permitted		1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)		3516			3539	1583				1681	1681	1583
Volume (vph)	0	892	41	0	595	486	0	0	0	840	0	605
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	970	45	0	647	528	0	0	0	913	0	658
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	0	45
Lane Group Flow (vph)	0	1011	0	0	647	528	0	0	0	457	456	613
Turn Type						Free				Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases						Free						6
Actuated Green, G (s)		30.9			30.9	90.0				51.1	51.1	51.1
Effective Green, g (s)		30.9			30.9	90.0				51.1	51.1	51.1
Actuated g/C Ratio		0.34			0.34	1.00				0.57	0.57	0.57
Clearance Time (s)		4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1207			1215	1583				954	954	899
v/s Ratio Prot		c0.29			0.18					0.27	0.27	
v/s Ratio Perm						0.33						0.42
v/c Ratio		0.84			0.53	0.33				0.48	0.48	0.68
Uniform Delay, d1		27.2			23.7	0.0				11.5	11.5	13.7
Progression Factor		1.00			0.29	1.00				1.00	1.00	1.00
Incremental Delay, d2		5.2			0.3	0.4				0.4	0.4	4.2
Delay (s)		32.5			7.1	0.4				11.9	11.9	17.9
Level of Service		C			A	A				B	B	B
Approach Delay (s)		32.5			4.1			0.0			14.4	
Approach LOS		C			A			A			B	
Intersection Summary												
HCM Average Control Delay			16.1				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			60.6%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 20: Laurel Road & SR4 NB Ramps

Cumulative +Project PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		1770	1583			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1770	3539			3539	1583		1770	1583			
Volume (vph)	226	1707	0	0	952	836	92	0	399	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	246	1855	0	0	1035	909	100	0	434	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	9	0	0	0
Lane Group Flow (vph)	246	1855	0	0	1035	909	0	100	425	0	0	0
Turn Type	Prot						Free	Perm	Perm			
Protected Phases	7	4					8		2			
Permitted Phases							Free	2	2			
Actuated Green, G (s)	15.2	52.0					32.8	90.0	30.0	30.0		
Effective Green, g (s)	15.2	52.0					32.8	90.0	30.0	30.0		
Actuated g/C Ratio	0.17	0.58					0.36	1.00	0.33	0.33		
Clearance Time (s)	4.0	4.0					4.0		4.0	4.0		
Vehicle Extension (s)	3.0	3.0					3.0		3.0	3.0		
Lane Grp Cap (vph)	299	2045					1290	1583	590	528		
v/s Ratio Prot	0.14	c0.52					0.29					
v/s Ratio Perm							0.57		0.06	0.27		
v/c Ratio	0.82	0.91					0.80	0.57	0.17	0.81		
Uniform Delay, d1	36.1	16.9					25.7	0.0	21.2	27.3		
Progression Factor	1.11	0.84					1.00	1.00	1.00	1.00		
Incremental Delay, d2	14.0	5.3					3.7	1.5	0.6	12.4		
Delay (s)	53.9	19.4					29.4	1.5	21.8	39.7		
Level of Service	D	B					C	A	C	D		
Approach Delay (s)	23.5						16.4		36.4	0.0		
Approach LOS	C						B		D	A		
Intersection Summary												
HCM Average Control Delay			21.9					HCM Level of Service		C		
HCM Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			90.0					Sum of lost time (s)		8.0		
Intersection Capacity Utilization			78.6%					ICU Level of Service		D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Cumulative +Project PM Volumes
2/4/2010



























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3394		1770	3285	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3394		1770	3285	
Volume (vph)	460	1529	310	147	1148	120	160	430	162	180	360	330
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	500	1662	337	160	1248	130	174	467	176	196	391	359
RTOR Reduction (vph)	0	0	128	0	0	65	0	33	0	0	138	0
Lane Group Flow (vph)	500	1662	209	160	1248	65	174	610	0	196	612	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	31.0	58.5	58.5	11.5	39.0	39.0	11.0	21.0		13.0	23.0	
Effective Green, g (s)	31.0	58.5	58.5	11.5	39.0	39.0	11.0	21.0		13.0	23.0	
Actuated g/C Ratio	0.26	0.49	0.49	0.10	0.32	0.32	0.09	0.18		0.11	0.19	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	457	1725	772	170	1150	514	162	594		192	630	
v/s Ratio Prot	c0.28	0.47		0.09	c0.35		0.10	0.19		c0.11	c0.23	
v/s Ratio Perm			0.21			0.08						
v/c Ratio	1.09	0.96	0.27	0.94	1.09	0.13	1.07	1.03		1.02	0.97	
Uniform Delay, d1	44.5	29.7	18.2	53.9	40.5	28.5	54.5	49.5		53.5	48.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	70.0	13.9	0.2	51.8	52.8	0.1	91.8	44.0		70.5	29.4	
Delay (s)	114.5	43.7	18.3	105.7	93.3	28.6	146.3	93.5		124.0	77.6	
Level of Service	F	D	B	F	F	C	F	F		F	E	
Approach Delay (s)		54.4			89.1			104.7			87.2	
Approach LOS		D			F			F			F	

Intersection Summary

HCM Average Control Delay	76.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 22: Laurel Road & Ohara Avenue

Cumulative +Project PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3419		1770	3386	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3419		1770	3386	
Volume (vph)	190	1283	310	106	907	210	220	441	129	110	490	200
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	1395	337	115	986	228	239	479	140	120	533	217
RTOR Reduction (vph)	0	0	202	0	0	155	0	30	0	0	49	0
Lane Group Flow (vph)	207	1395	135	115	986	73	239	589	0	120	701	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	13.3	36.0	36.0	6.0	28.7	28.7	13.0	23.3		8.7	19.0	
Effective Green, g (s)	13.3	36.0	36.0	6.0	28.7	28.7	13.0	23.3		8.7	19.0	
Actuated g/C Ratio	0.15	0.40	0.40	0.07	0.32	0.32	0.14	0.26		0.10	0.21	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	262	1416	633	118	1129	505	256	885		171	715	
v/s Ratio Prot	0.12	c0.39		0.06	c0.28		c0.14	0.18		0.07	c0.22	
v/s Ratio Perm			0.21			0.14						
v/c Ratio	0.79	0.99	0.21	0.97	0.87	0.14	0.93	0.67		0.70	0.98	
Uniform Delay, d1	37.0	26.7	17.7	41.9	28.9	21.9	38.1	29.9		39.4	35.3	
Progression Factor	1.00	1.00	1.00	1.17	0.59	0.49	1.00	1.00		0.99	0.98	
Incremental Delay, d2	14.9	20.3	0.2	72.1	7.3	0.1	38.4	4.0		10.9	27.2	
Delay (s)	51.9	47.0	17.9	121.2	24.3	10.8	76.5	33.8		49.7	61.7	
Level of Service	D	D	B	F	C	B	E	C		D	E	
Approach Delay (s)		42.5			30.4			45.7			60.0	
Approach LOS		D			C			D			E	
Intersection Summary												
HCM Average Control Delay			42.9				HCM Level of Service				D	
HCM Volume to Capacity ratio			1.00									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				16.0	
Intersection Capacity Utilization			86.8%				ICU Level of Service				E	
Analysis Period (min)			15									
c Critical Lane Group												





























HCM Signalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Cumulative +Project PM Volumes
 2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1770	3537		1770	3526		1770	1730			1810	1583
Flt Permitted	0.95	1.00		0.17	1.00		0.68	1.00			0.80	1.00
Satd. Flow (perm)	1770	3537		309	3526		1275	1730			1490	1583
Volume (vph)	101	1415	6	29	895	22	5	18	17	50	35	161
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	110	1538	7	32	973	24	5	20	18	54	38	175
RTOR Reduction (vph)	0	0	0	0	1	0	0	16	0	0	0	152
Lane Group Flow (vph)	110	1545	0	32	996	0	5	22	0	0	92	23
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases				8			2			6		6
Actuated Green, G (s)	8.6	70.3		57.7	57.7		11.7	11.7			11.7	11.7
Effective Green, g (s)	8.6	70.3		57.7	57.7		11.7	11.7			11.7	11.7
Actuated g/C Ratio	0.10	0.78		0.64	0.64		0.13	0.13			0.13	0.13
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	169	2763		198	2261		166	225			194	206
v/s Ratio Prot	0.06	c0.44			0.28			0.02				
v/s Ratio Perm				0.10			0.00				0.06	0.11
v/c Ratio	0.65	0.56		0.16	0.44		0.03	0.10			0.47	0.11
Uniform Delay, d1	39.3	3.8		6.5	8.1		34.2	34.5			36.3	34.6
Progression Factor	1.35	0.22		0.15	0.17		0.74	0.73			1.00	1.00
Incremental Delay, d2	3.1	0.1		0.2	0.1		0.3	0.8			8.1	1.1
Delay (s)	56.2	0.9		1.2	1.4		25.6	25.9			44.4	35.6
Level of Service	E	A		A	A		C	C			D	D
Approach Delay (s)		4.6			1.4			25.9			38.7	
Approach LOS		A			A			C			D	
Intersection Summary												
HCM Average Control Delay			6.9			HCM Level of Service				A		
HCM Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			8.0			
Intersection Capacity Utilization			63.9%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 24: Laurel Road & Main Street

Cumulative +Project PM Volumes
 2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 	 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3414		1770	3539	1583	1770	3539	1583	3433	3469	
Flt Permitted	0.21	1.00		0.25	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	400	3414		469	3539	1583	1770	3539	1583	3433	3469	
Volume (vph)	405	748	230	188	509	310	210	773	375	480	861	132
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	440	813	250	204	553	337	228	840	408	522	936	143
RTOR Reduction (vph)	0	32	0	0	0	277	0	0	137	0	14	0
Lane Group Flow (vph)	440	1031	0	204	553	60	228	840	271	522	1065	0
Turn Type	pm+pt			pm+pt			Perm	Prot		Perm	Prot	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8			2			
Actuated Green, G (s)	38.0	27.0		22.9	15.9	15.9	12.0	26.0	26.0	14.0	28.0	
Effective Green, g (s)	38.0	27.0		22.9	15.9	15.9	12.0	26.0	26.0	14.0	28.0	
Actuated g/C Ratio	0.42	0.30		0.25	0.18	0.18	0.13	0.29	0.29	0.16	0.31	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	444	1024		221	625	280	236	1022	457	534	1079	
v/s Ratio Prot	c0.20	c0.31		0.07	0.16		0.13	0.24		0.15	c0.31	
v/s Ratio Perm	0.22			0.16		0.21			0.26			
v/c Ratio	0.99	1.01		0.92	0.88	0.21	0.97	0.82	0.59	0.98	0.99	
Uniform Delay, d1	30.3	31.5		39.8	36.2	31.7	38.8	29.8	27.5	37.8	30.8	
Progression Factor	0.58	0.48		0.84	0.75	0.51	0.93	0.91	0.80	0.79	0.52	
Incremental Delay, d2	36.8	27.4		26.5	8.4	0.2	45.8	6.7	5.0	25.0	18.8	
Delay (s)	54.5	42.6		60.1	35.5	16.3	81.7	33.8	26.9	54.8	34.8	
Level of Service	D	D		E	D	B	F	C	C	D	C	
Approach Delay (s)		46.0			34.2			39.3			41.3	
Approach LOS		D			C			D			D	
Intersection Summary												
HCM Average Control Delay			40.7				HCM Level of Service			D		
HCM Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			91.4%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
25: Laurel Road & Sellers Avenue

Cumulative +Project PM Volumes
2/4/2010
























Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	1.00	0.95	1.00	0.88
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1770	3539	1863	2787
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	1770	3539	1863	2787
Volume (vph)	1360	180	440	172	136	760
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1478	196	478	187	148	826
RTOR Reduction (vph)	0	108	0	0	0	703
Lane Group Flow (vph)	1478	88	478	187	148	123
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Actuated Green, G (s)	40.6	40.6	24.0	41.4	13.4	13.4
Effective Green, g (s)	40.6	40.6	24.0	41.4	13.4	13.4
Actuated g/C Ratio	0.45	0.45	0.27	0.46	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1549	714	472	1628	277	415
v/s Ratio Prot	c0.43		c0.27	0.05	0.08	
v/s Ratio Perm		0.12				0.30
v/c Ratio	0.95	0.12	1.01	0.11	0.53	0.30
Uniform Delay, d1	23.8	14.4	33.0	13.9	35.4	34.1
Progression Factor	0.68	0.57	0.99	1.20	1.00	1.00
Incremental Delay, d2	6.4	0.0	41.7	0.1	7.2	1.8
Delay (s)	22.7	8.2	74.3	16.8	42.6	35.9
Level of Service	C	A	E	B	D	D
Approach Delay (s)	21.0			58.2	36.9	
Approach LOS	C			E	D	

Intersection Summary

HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
26: Malicoat Avenue & Main Street

Cumulative +Project PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.87		1.00	0.86		1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1621		1770	1609		1770	3534		1770	3525	
Flt Permitted	0.87	1.00		0.87	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1620	1621		1620	1609		1770	3534		1770	3525	
Volume (vph)	18	2	12	2	1	9	11	1331	13	11	1235	33
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	2	13	2	1	10	12	1447	14	12	1342	36
RTOR Reduction (vph)	0	12	0	0	9	0	0	0	0	0	1	0
Lane Group Flow (vph)	20	3	0	2	2	0	12	1461	0	12	1377	0
Turn Type	Perm		Perm			Prot			Prot			
Protected Phases	4		8			5			2			6
Permitted Phases	4		8									
Actuated Green, G (s)	4.6	4.6		4.6	4.6		1.5	71.9		1.5	71.9	
Effective Green, g (s)	4.6	4.6		4.6	4.6		1.5	71.9		1.5	71.9	
Actuated g/C Ratio	0.05	0.05		0.05	0.05		0.02	0.80		0.02	0.80	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	83	83		83	82		30	2823		30	2816	
v/s Ratio Prot		0.01			0.01		c0.01	c0.41		0.01	0.39	
v/s Ratio Perm	c0.01			0.00								
v/c Ratio	0.24	0.03		0.02	0.02		0.40	0.52		0.40	0.49	
Uniform Delay, d1	41.0	40.6		40.6	40.6		43.8	3.1		43.8	3.0	
Progression Factor	0.58	0.45		1.00	1.00		1.00	1.00		0.85	0.10	
Incremental Delay, d2	1.5	0.2		0.1	0.1		8.5	0.7		2.3	0.2	
Delay (s)	25.3	18.5		40.7	40.6		52.3	3.8		39.6	0.5	
Level of Service	C	B		D	D		D	A		D	A	
Approach Delay (s)		22.4			40.7			4.2			0.8	
Approach LOS		C			D			A			A	
Intersection Summary												
HCM Average Control Delay			3.0	HCM Level of Service				A				
HCM Volume to Capacity ratio			0.50									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			51.5%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
27: Brownstone Road & Main Street














Cumulative +Project PM Volumes
2/4/2010



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.92			1.00	0.99	
Flt Protected	0.98			1.00	1.00	
Satd. Flow (prot)	1677			3532	3520	
Flt Permitted	0.98			0.81	1.00	
Satd. Flow (perm)	1677			2877	3520	
Volume (vph)	32	50	58	1350	1176	45
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	54	63	1467	1278	49
RTOR Reduction (vph)	50	0	0	0	2	0
Lane Group Flow (vph)	39	0	0	1530	1325	0
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	6.5			75.5	75.5	
Effective Green, g (s)	6.5			75.5	75.5	
Actuated g/C Ratio	0.07			0.84	0.84	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	121			2413	2953	
v/s Ratio Prot	c0.05				0.38	
v/s Ratio Perm				c0.53		
v/c Ratio	0.32			0.63	0.45	
Uniform Delay, d1	39.7			2.5	1.9	
Progression Factor	1.00			0.63	1.00	
Incremental Delay, d2	1.5			0.9	0.5	
Delay (s)	41.2			2.5	2.4	
Level of Service	D			A	A	
Approach Delay (s)	41.2			2.5	2.4	
Approach LOS	D			A	A	
Intersection Summary						
HCM Average Control Delay			3.6		HCM Level of Service	A
HCM Volume to Capacity ratio			0.64			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			87.8%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
28: Delta Road & Main Street

Cumulative +Project PM Volumes
2/4/2010

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3465		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3465		1770	3539
Volume (vph)	114	230	1177	190	234	1016
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	124	250	1279	207	254	1104
RTOR Reduction (vph)	0	218	13	0	0	0
Lane Group Flow (vph)	124	32	1473	0	254	1104
Turn Type	Perm		Prot			
Protected Phases	8		2		1	6
Permitted Phases	8					
Actuated Green, G (s)	11.4	11.4	50.7		15.9	70.6
Effective Green, g (s)	11.4	11.4	50.7		15.9	70.6
Actuated g/C Ratio	0.13	0.13	0.56		0.18	0.78
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	224	201	1952		313	2776
v/s Ratio Prot	0.07		c0.43		c0.14	0.31
v/s Ratio Perm		0.16				
v/c Ratio	0.55	0.16	0.75		0.81	0.40
Uniform Delay, d1	36.9	35.0	14.9		35.6	3.0
Progression Factor	1.12	1.88	0.56		0.97	0.54
Incremental Delay, d2	2.7	0.3	2.6		13.7	0.4
Delay (s)	44.2	66.2	10.9		48.2	2.0
Level of Service	D	E	B		D	A
Approach Delay (s)	58.9		10.9			10.7
Approach LOS	E		B			B
Intersection Summary						
HCM Average Control Delay			16.4	HCM Level of Service		B
HCM Volume to Capacity ratio			0.84			
Actuated Cycle Length (s)			90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization			67.9%	ICU Level of Service	C	
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
29: Delta Road & Sellers Avenue

Cumulative +Project PM Volumes
2/4/2010

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.99			0.97	
Flt Protected		0.98			1.00			0.99			0.99	
Satd. Flow (prot)		1781			1795			1820			1785	
Flt Permitted		0.63			0.94			0.86			0.89	
Satd. Flow (perm)		1155			1702			1581			1593	
Volume (vph)	193	145	61	25	170	60	80	294	42	55	220	95
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	210	158	66	27	185	65	87	320	46	60	239	103
RTOR Reduction (vph)	0	9	0	0	14	0	0	4	0	0	11	0
Lane Group Flow (vph)	0	425	0	0	263	0	0	449	0	0	391	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		33.7			33.7			48.3			48.3	
Effective Green, g (s)		33.7			33.7			48.3			48.3	
Actuated g/C Ratio		0.37			0.37			0.54			0.54	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		432			637			848			855	
v/s Ratio Prot												
v/s Ratio Perm		c0.38			0.16			c0.29			0.25	
v/c Ratio		0.98			0.41			0.53			0.46	
Uniform Delay, d1		27.9			20.8			13.5			12.8	
Progression Factor		1.16			1.00			0.34			0.48	
Incremental Delay, d2		30.2			0.4			2.1			1.7	
Delay (s)		62.5			21.3			6.7			7.8	
Level of Service		E			C			A			A	
Approach Delay (s)		62.5			21.3			6.7			7.8	
Approach LOS		E			C			A			A	

Intersection Summary

HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
30: Lone Tree Way & Main Street

Cumulative +Project PM Volumes
2/4/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.96	1.00		0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1785	1583		1803	1583	1770	3539	1583	1770	3430	
Flt Permitted		0.72	1.00		0.62	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1334	1583		1157	1583	1770	3539	1583	1770	3430	
Volume (vph)	240	37	430	33	17	16	357	855	27	16	843	217
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	261	40	467	36	18	17	388	929	29	17	916	236
RTOR Reduction (vph)	0	0	352	0	0	13	0	0	12	0	25	0
Lane Group Flow (vph)	0	301	115	0	54	4	388	929	17	17	1127	0
Turn Type	Perm		Perm	Perm		Perm	Prot		Perm	Prot		
Protected Phases		4		8		8	5	2		1	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)		22.1	22.1		22.1	22.1	21.3	54.3	54.3	1.6	34.6	
Effective Green, g (s)		22.1	22.1		22.1	22.1	21.3	54.3	54.3	1.6	34.6	
Actuated g/C Ratio		0.25	0.25		0.25	0.25	0.24	0.60	0.60	0.02	0.38	
Clearance Time (s)		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		328	389		284	389	419	2135	955	31	1319	
v/s Ratio Prot							c0.22	0.26		0.01	c0.34	
v/s Ratio Perm		0.23	0.29		0.05	0.01			0.02			
v/c Ratio		0.92	0.29		0.19	0.01	0.93	0.44	0.02	0.55	0.85	
Uniform Delay, d1		33.1	27.6		26.9	25.7	33.6	9.6	7.2	43.8	25.4	
Progression Factor		1.00	1.00		1.00	1.00	0.79	0.71	0.33	0.87	0.82	
Incremental Delay, d2		29.3	0.4		0.3	0.0	24.4	0.6	0.0	17.2	6.8	
Delay (s)		62.3	28.0		27.2	25.7	50.9	7.4	2.4	55.2	27.6	
Level of Service		E	C		C	C	D	A	A	E	C	
Approach Delay (s)		41.5			26.8			19.8			28.0	
Approach LOS		D			C			B			C	
Intersection Summary												
HCM Average Control Delay			27.8				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				12.0	
Intersection Capacity Utilization			81.9%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
31: Main Street & Sellers Avenue

Cumulative +Project PM Volumes
2/4/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583		1850	1583		1816	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.92	1.00		0.33	
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583		1717	1583		615	
Volume (vph)	11	873	37	19	727	171	47	304	24	122	132	4
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	12	949	40	21	790	186	51	330	26	133	143	4
RTOR Reduction (vph)	0	0	16	0	0	80	0	0	0	0	1	0
Lane Group Flow (vph)	12	949	24	21	790	106	0	381	26	0	279	0
Turn Type	Prot		Perm	Prot		Perm	Perm		Free		Perm	
Protected Phases	7	4		3	8			2				6
Permitted Phases			4			8	2		Free		6	
Actuated Green, G (s)	0.8	50.6	50.6	1.6	51.4	51.4		25.8	90.0		25.8	
Effective Green, g (s)	0.8	50.6	50.6	1.6	51.4	51.4		25.8	90.0		25.8	
Actuated g/C Ratio	0.01	0.56	0.56	0.02	0.57	0.57		0.29	1.00		0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	16	1047	890	31	1064	904		492	1583		176	
v/s Ratio Prot	0.01	c0.51		0.01	c0.42							
v/s Ratio Perm			0.03			0.12		0.22	0.02		c0.46	
v/c Ratio	0.75	0.91	0.03	0.68	0.74	0.12		0.77	0.02		1.59	
Uniform Delay, d1	44.5	17.6	8.8	43.9	14.4	8.9		29.4	0.0		32.1	
Progression Factor	0.72	0.42	0.05	1.00	1.00	1.00		1.00	1.00		1.21	
Incremental Delay, d2	76.6	7.4	0.0	45.6	2.8	0.1		11.3	0.0		286.4	
Delay (s)	108.6	14.9	0.4	89.6	17.2	8.9		40.7	0.0		325.4	
Level of Service	F	B	A	F	B	A		D	A		F	
Approach Delay (s)		15.4			17.2			38.1			325.4	
Approach LOS		B			B			D			F	
Intersection Summary												
HCM Average Control Delay			51.8				HCM Level of Service				D	
HCM Volume to Capacity ratio			1.14									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			88.5%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

**Table A-4
Trip Generation for the Emerson Project Alternatives**

Number of Vehicle Trips							
Alternative	Daily Trips	AM Peak Hour (8:00-9:00 AM)			PM Peak Hour (5:00-6:00 PM)		
		In	Out	Total	In	Out	Total
Proposed Emerson Project (578 homes + 278,046 sq. ft. of commercial)	16,085	378	527	905	848	736	1,584
Min. Density Clustered Development Alt. (564 homes + 50,000 sq. ft. of commercial)	5,752	123	319	442	382	256	638
All-Residential Alt. (585 homes + 278 apartments)	6,114	134	429	563	436	251	687
On-Site School Alt. (522 homes + 278,046 sq. ft. commercial + 580 student elementary school)	16,249	461	573	1,034	849	749	1,598
Apartment Alt. (578 homes + 280 apartments + 122,967 sq. ft. of commercial)	12,536	281	536	817	745	564	1,309

TABLE A-5
ALTERNATIVE 1
Minimum Density Clustered Development Alternative
(564 homes + 50,000 sq. ft. of commercial)

BASELINE + PROJECT CONDITIONS							
INTERSECTION	CONTROL	PEAK HOUR	PROPOSED PROJECT		MINIMUM DENSITY ALTERNATIVE		
			MEASURE (sec/veh)	LOS	MEASURE (sec/veh)	LOS	
6	MAIN STREET (SR-4) AT ROSE AVENUE	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
23	LAUREL DRIVE AT ROSE AVENUE	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
27	MAIN STREET (SR-4) AT BROWNSTONE ROAD	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
28	MAIN STREET (SR-4) AT DELTA ROAD	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
CUMULATIVE + PROJECT CONDITIONS							
21	LAUREL ROAD AT EMPIRE AVENUE	Traffic Signal	AM	23.5 sec	C	23.3 sec	C
			PM	76.1 sec	E	68.1 sec	E

TABLE A-6
ALTERNATIVE 2
All Residential Development Alternative
(585 homes + 278 apartments)

BASELINE + PROJECT CONDITIONS							
INTERSECTION	CONTROL	PEAK HOUR	PROPOSED PROJECT		ALL RESIDENTIAL ALTERNATIVE		
			MEASURE (sec/veh)	LOS	MEASURE (sec/veh)	LOS	
6	MAIN STREET (SR-4) AT ROSE AVENUE	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
23	LAUREL DRIVE AT ROSE AVENUE	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
27	MAIN STREET (SR-4) AT BROWNSTONE ROAD	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
28	MAIN STREET (SR-4) AT DELTA ROAD	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
CUMULATIVE + PROJECT CONDITIONS							
21	LAUREL ROAD AT EMPIRE AVENUE	Traffic Signal	AM	23.5 sec	C	23.4 sec	C
			PM	76.1 sec	E	67.9 sec	E

TABLE A-7
ALTERNATIVE 3
On-Site School Alternative
(522 homes + 278,000 sq. ft. of commercial + 580 student school)

BASELINE + PROJECT CONDITIONS							
INTERSECTION	CONTROL	PEAK HOUR	PROPOSED PROJECT		ON-SITE SCHOOL ALTERNATIVE		
			MEASURE (sec/veh)	LOS	MEASURE (sec/veh)	LOS	
6	MAIN STREET (SR-4) AT ROSE AVENUE	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
23	LAUREL DRIVE AT ROSE AVENUE	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
27	MAIN STREET (SR-4) AT BROWNSTONE ROAD	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
28	MAIN STREET (SR-4) AT DELTA ROAD	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
CUMULATIVE + PROJECT CONDITIONS							
21	LAUREL ROAD AT EMPIRE AVENUE	Traffic Signal	AM	23.5 sec	C	23.6 sec	C
			PM	76.1 sec	E	73.0 sec	E

TABLE A-8
ALTERNATIVE 4
Apartment Alternative
(578 homes + 280 apartments 123,000 sq. ft. of commercial)

BASELINE + PROJECT CONDITIONS							
INTERSECTION	CONTROL	PEAK HOUR	PROPOSED PROJECT		APARTMENT ALTERNATIVE		
			MEASURE (sec/veh)	LOS	MEASURE (sec/veh)	LOS	
6	MAIN STREET (SR-4) AT ROSE AVENUE	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
23	LAUREL DRIVE AT ROSE AVENUE	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
27	MAIN STREET (SR-4) AT BROWNSTONE ROAD	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
28	MAIN STREET (SR-4) AT DELTA ROAD	Stop Sign	AM	>50 sec	F	>50 sec	F
			PM	>50 sec	F	>50 sec	F
CUMULATIVE + PROJECT CONDITIONS							
21	LAUREL ROAD AT EMPIRE AVENUE	Traffic Signal	AM	23.5 sec	C	23.4 sec	F
			PM	76.1 sec	E	76.2 sec	E

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background +Project AM Volumes
2/18/2010
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↗		↖	↗			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1678	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.90	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1546	
Volume (vph)	1	751	47	17	966	1	53	1	21	2	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	816	51	18	1050	1	58	1	23	2	0	3
RTOR Reduction (vph)	0	0	19	0	0	0	0	17	0	0	3	0
Lane Group Flow (vph)	1	816	32	18	1051	0	58	7	0	0	2	0
Turn Type	Prot		Perm		Prot		Prot		Perm			
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4							6		
Actuated Green, G (s)	0.8	71.3	71.3	3.4	73.9		26.2	33.3			3.1	
Effective Green, g (s)	0.8	71.3	71.3	3.4	73.9		26.2	33.3			3.1	
Actuated g/C Ratio	0.01	0.59	0.59	0.03	0.62		0.22	0.28			0.03	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	12	1107	941	50	1147		386	443			40	
v/s Ratio Prot	0.00	c0.44		0.01	c0.56		c0.03	0.02				
v/s Ratio Perm			0.03								c0.00	
v/c Ratio	0.08	0.74	0.03	0.36	0.92		0.15	0.02			0.05	
Uniform Delay, d1	59.2	17.6	10.1	57.2	20.3		37.9	31.5			57.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	3.0	2.6	0.0	4.4	11.3		0.8	0.1			0.5	
Delay (s)	62.2	20.2	10.1	61.6	31.6		38.7	31.5			57.6	
Level of Service	E	C	B	E	C		D	C			E	
Approach Delay (s)		19.6			32.1			36.6			57.6	
Approach LOS		B			C			D			E	

Intersection Summary

HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



























HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background +Project AM Volumes
2/18/2010

																		
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR						
Lane Configurations																		
Sign Control	Free		Free				Stop				Stop							
Grade	0%		0%				0%				0%							
Volume (veh/h)	2	785	82	7	1130	1	33	0	11	1	1	2						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92						
Hourly flow rate (vph)	2	853	89	8	1228	1	36	0	12	1	1	2						
Pedestrians																		
Lane Width (ft)																		
Walking Speed (ft/s)																		
Percent Blockage																		
Right turn flare (veh)																		
Median type							None			None								
Median storage (veh)																		
Upstream signal (ft)	1040																	
pX, platoon unblocked																		
vC, conflicting volume	1229		942				2148		2147		898		2113		2190		1228	
vC1, stage 1 conf vol																		
vC2, stage 2 conf vol																		
vCu, unblocked vol	1229		942				2148		2147		898		2113		2190		1228	
tC, single (s)	4.1		4.1				7.1		6.5		6.2		7.1		6.5		6.2	
tC, 2 stage (s)																		
tF (s)	2.2		2.2				3.5		4.0		3.3		3.5		4.0		3.3	
p0 queue free %	100		99				0		100		96		97		98		99	
cM capacity (veh/h)	567		728				34		48		338		35		45		217	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2									
Volume Total	2	942	8	1228	1	36	12	2	2									
Volume Left	2	0	8	0	0	36	0	1	0									
Volume Right	0	89	0	0	1	0	12	0	2									
cSH	567	1700	728	1700	1700	34	338	40	217									
Volume to Capacity	0.00	0.55	0.01	0.72	0.00	1.07	0.04	0.06	0.01									
Queue Length (ft)	0	0	1	0	0	95	3	4	1									
Control Delay (s)	11.4	0.0	10.0	0.0	0.0	354.7	16.0	101.4	21.8									
Lane LOS	B		A				F		C		F		C					
Approach Delay (s)	0.0		0.1				270.1		61.6									
Approach LOS							F		F									
Intersection Summary																		
Average Delay			5.9															
Intersection Capacity Utilization			76.1%		ICU Level of Service				D									
Analysis Period (min)			15															

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Background +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3464		1770	3304	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.50	1.00		0.50	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	939	3464		931	3304	
Volume (vph)	205	392	187	109	771	91	167	286	47	47	182	145
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	426	203	118	838	99	182	311	51	51	198	158
RTOR Reduction (vph)	0	0	127	0	0	70	0	14	0	0	95	0
Lane Group Flow (vph)	223	426	76	118	838	29	182	348	0	51	261	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	15.9	33.6	33.6	8.6	26.3	26.3	35.8	35.8		35.8	35.8	
Effective Green, g (s)	15.9	33.6	33.6	8.6	26.3	26.3	35.8	35.8		35.8	35.8	
Actuated g/C Ratio	0.18	0.37	0.37	0.10	0.29	0.29	0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	313	1321	591	169	1034	463	374	1378		370	1314	
v/s Ratio Prot	c0.13	0.12		0.07	c0.24			0.10			0.11	
v/s Ratio Perm			0.13			0.06	c0.19			0.05		
v/c Ratio	0.71	0.32	0.13	0.70	0.81	0.06	0.49	0.25		0.14	0.20	
Uniform Delay, d1	34.9	20.1	18.6	39.4	29.5	23.0	20.2	18.1		17.3	17.7	
Progression Factor	0.76	0.85	0.47	0.99	0.43	0.25	1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.4	0.1	0.1	10.2	4.2	0.0	4.5	0.4		0.8	0.3	
Delay (s)	34.0	17.2	8.8	49.1	16.8	5.7	24.7	18.6		18.0	18.1	
Level of Service	C	B	A	D	B	A	C	B		B	B	
Approach Delay (s)		19.6			19.4			20.6			18.1	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay			19.5				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			64.9%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
23: Laurel Road & Rose Avenue

Background +Project AM Volumes
2/18/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	139	430	0	2	686	26	0	1	2	13	1	236
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	151	467	0	2	746	28	0	1	2	14	1	257
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked	0.92			0.81			0.85	0.85	0.81	0.85	0.85	0.92
vC, conflicting volume	774			467			1791	1548	467	1536	1534	760
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	753			340			1784	1498	340	1485	1481	738
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	81			100			100	99	100	81	99	33
cM capacity (veh/h)	785			984			15	84	567	73	86	383

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	618	776	3	272
Volume Left	151	2	0	14
Volume Right	0	28	2	257
cSH	785	984	194	310
Volume to Capacity	0.19	0.00	0.02	0.88
Queue Length (ft)	18	0	1	199
Control Delay (s)	4.7	0.1	23.9	61.7
Lane LOS	A	A	C	F
Approach Delay (s)	4.7	0.1	23.9	61.7
Approach LOS			C	F

Intersection Summary			
Average Delay		11.9	
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free		Free	Free
Grade	0%		0%			0%
Volume (veh/h)	104	174	480	54	166	709
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	113	189	522	59	180	771
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1683	551			580	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1683	551			580	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	65			82	
cM capacity (veh/h)	85	534			994	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	302	580	180	771
Volume Left	113	0	180	0
Volume Right	189	59	0	0
cSH	179	1700	994	1700
Volume to Capacity	1.69	0.34	0.18	0.45
Queue Length (ft)	520	0	17	0
Control Delay (s)	376.8	0.0	9.4	0.0
Lane LOS	F		A	
Approach Delay (s)	376.8	0.0	1.8	
Approach LOS	F			

Intersection Summary			
Average Delay		63.0	
Intersection Capacity Utilization		64.2%	ICU Level of Service C
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background +Project PM Volumes
2/18/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1722	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1779	
Volume (vph)	2	1169	161	30	716	1	135	2	42	2	0	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1271	175	33	778	1	147	2	46	2	0	1
RTOR Reduction (vph)	0	0	34	0	0	0	0	36	0	0	1	0
Lane Group Flow (vph)	2	1271	141	33	779	0	147	12	0	0	2	0
Turn Type	Prot		Perm		Prot		Prot				Perm	
Protected Phases	7	4		3	8		5	2				6
Permitted Phases			4							6		
Actuated Green, G (s)	4.0	101.6	101.6	3.2	100.8		26.2	33.2			3.0	
Effective Green, g (s)	4.0	101.6	101.6	3.2	100.8		26.2	33.2			3.0	
Actuated g/C Ratio	0.03	0.68	0.68	0.02	0.67		0.17	0.22			0.02	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	47	1262	1072	38	1251		309	353			36	
v/s Ratio Prot	0.00	c0.68		0.02	c0.42		c0.08	c0.03				
v/s Ratio Perm			0.11								0.00	
v/c Ratio	0.04	1.01	0.13	0.87	0.62		0.48	0.03			0.06	
Uniform Delay, d1	71.1	24.2	8.6	73.2	13.9		55.7	45.8			72.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.4	27.1	0.1	93.8	1.0		5.2	0.2			0.7	
Delay (s)	71.5	51.3	8.6	167.0	14.8		60.9	46.0			72.8	
Level of Service	E	D	A	F	B		E	D			E	
Approach Delay (s)		46.2			21.0		57.2				72.8	
Approach LOS		D			C		E				E	

Intersection Summary

HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



























HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background +Project PM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	1	1218	145	7	1147	0	29	0	7	4	0	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1324	158	8	1247	0	32	0	8	4	0	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	1040											
pX, platoon unblocked												
vC, conflicting volume	1247		1482			2670		2667	1403	2596	2746	1247
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1247		1482			2670		2667	1403	2596	2746	1247
tC, single (s)	4.1		4.1			7.1		6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2		2.2			3.5		4.0	3.3	3.5	4.0	3.3
p0 queue free %	100		98			0		100	96	72	100	98
cM capacity (veh/h)	558		454			14		22	171	16	20	212
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	1	1482	8	1247	0	32	8	4	3			
Volume Left	1	0	8	0	0	32	0	4	0			
Volume Right	0	158	0	0	0	0	8	0	3			
cSH	558	1700	454	1700	1700	14	171	16	212			
Volume to Capacity	0.00	0.87	0.02	0.73	0.00	2.21	0.04	0.28	0.02			
Queue Length (ft)	0	0	1	0	0	117	3	19	1			
Control Delay (s)	11.5	0.0	13.1	0.0	0.0	1102.9	27.0	307.3	22.3			
Lane LOS	B		B			F	D	F	C			
Approach Delay (s)	0.0		0.1			893.7		185.2				
Approach LOS						F		F				
Intersection Summary												
Average Delay			13.1									
Intersection Capacity Utilization			89.6%			ICU Level of Service			E			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Background +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3417		1770	3293	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.40	1.00		0.46	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	750	3417		866	3293	
Volume (vph)	353	816	225	134	473	64	125	273	82	83	229	199
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	384	887	245	146	514	70	136	297	89	90	249	216
RTOR Reduction (vph)	0	0	145	0	0	56	0	30	0	0	141	0
Lane Group Flow (vph)	384	887	100	146	514	14	136	356	0	90	324	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	28.9	36.6	36.6	10.3	18.0	18.0	31.1	31.1		31.1	31.1	
Effective Green, g (s)	28.9	36.6	36.6	10.3	18.0	18.0	31.1	31.1		31.1	31.1	
Actuated g/C Ratio	0.32	0.41	0.41	0.11	0.20	0.20	0.35	0.35		0.35	0.35	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	568	1439	644	203	708	317	259	1181		299	1138	
v/s Ratio Prot	c0.22	0.25		0.08	c0.15			0.11			0.14	
v/s Ratio Perm			0.15			0.04	c0.18			0.10		
v/c Ratio	0.68	0.62	0.15	0.72	0.73	0.04	0.53	0.30		0.30	0.28	
Uniform Delay, d1	26.5	21.1	16.9	38.5	33.7	29.1	23.5	21.5		21.5	21.4	
Progression Factor	0.63	0.61	0.08	0.36	0.35	0.23	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	0.6	0.1	10.9	3.5	0.1	7.4	0.7		2.6	0.6	
Delay (s)	18.9	13.4	1.4	24.6	15.2	6.6	31.0	22.2		24.1	22.0	
Level of Service	B	B	A	C	B	A	C	C		C	C	
Approach Delay (s)		12.8			16.2			24.5			22.3	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM Average Control Delay			17.0				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			65.6%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Background +Project PM Volumes
 2/18/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	192	752	1	0	468	11	1	0	0	7	0	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	209	817	1	0	509	12	1	0	0	8	0	135
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked				0.64			0.64	0.64	0.64	0.64	0.64	
vC, conflicting volume	521			818			1885	1756	818	1750	1751	515
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	521			716			2383	2182	715	2173	2173	515
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	80			100			89	100	100	58	100	76
cM capacity (veh/h)	1046			566			10	24	275	18	24	560

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1027	521	1	142
Volume Left	209	0	1	8
Volume Right	1	12	0	135
cSH	1046	566	10	216
Volume to Capacity	0.20	0.00	0.11	0.66
Queue Length (ft)	19	0	7	101
Control Delay (s)	4.7	0.0	416.8	49.0
Lane LOS	A		F	E
Approach Delay (s)	4.7	0.0	416.8	49.0
Approach LOS			F	E

Intersection Summary			
Average Delay		7.3	
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)		15	























Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free		Free	Free
Grade	0%		0%			0%
Volume (veh/h)	77	93	804	136	91	594
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	84	101	874	148	99	646
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1791	948			1022	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1791	948			1022	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	68			85	
cM capacity (veh/h)	76	316			679	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	185	1022	99	646
Volume Left	84	0	99	0
Volume Right	101	148	0	0
cSH	130	1700	679	1700
Volume to Capacity	1.42	0.60	0.15	0.38
Queue Length (ft)	311	0	13	0
Control Delay (s)	291.2	0.0	11.2	0.0
Lane LOS	F		B	
Approach Delay (s)	291.2	0.0	1.5	
Approach LOS	F			

Intersection Summary			
Average Delay		28.1	
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)		15	



















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.91			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1856		1770	1695			1813	
Flt Permitted	0.18	1.00	1.00	0.35	1.00		0.95	1.00			0.97	
Satd. Flow (perm)	337	1863	1583	650	1856		1770	1695			1767	
Volume (vph)	10	549	80	40	792	20	110	40	60	10	90	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	597	87	43	861	22	120	43	65	11	98	22
RTOR Reduction (vph)	0	0	31	0	1	0	0	48	0	0	9	0
Lane Group Flow (vph)	11	597	56	43	882	0	120	60	0	0	122	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0			11.3	
Effective Green, g (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0			11.3	
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.64		0.10	0.27			0.13	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	217	1201	1020	419	1196		171	452			222	
v/s Ratio Prot		0.32			c0.48		c0.07	0.06				
v/s Ratio Perm	0.03		0.05	0.07							c0.07	
v/c Ratio	0.05	0.50	0.05	0.10	0.74		0.70	0.13			0.55	
Uniform Delay, d1	5.9	8.4	5.9	6.1	10.8		39.4	25.1			37.0	
Progression Factor	0.33	0.40	0.14	1.20	0.86		0.92	1.23			1.00	
Incremental Delay, d2	0.4	1.4	0.1	0.1	1.7		11.8	0.1			2.9	
Delay (s)	2.4	4.8	0.9	7.4	11.1		48.0	30.9			39.9	
Level of Service	A	A	A	A	B		D	C			D	
Approach Delay (s)		4.3			10.9			39.9			39.9	
Approach LOS		A			B			D			D	
Intersection Summary												
HCM Average Control Delay			13.8				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			62.7%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												





























HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.98			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)		3480			3523		1770	1583			1817	1583
Flt Permitted		0.95			0.75		0.76	1.00			0.93	1.00
Satd. Flow (perm)		3317			2642		1409	1583			1726	1583
Volume (vph)	2	734	92	120	1206	1	41	0	61	1	1	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	798	100	130	1311	1	45	0	66	1	1	2
RTOR Reduction (vph)	0	9	0	0	0	0	0	56	0	0	0	2
Lane Group Flow (vph)	0	891	0	0	1442	0	45	10	0	0	2	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		68.7			68.7		13.3	13.3			13.3	13.3
Effective Green, g (s)		68.7			68.7		13.3	13.3			13.3	13.3
Actuated g/C Ratio		0.76			0.76		0.15	0.15			0.15	0.15
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2532			2017		208	234			255	234
v/s Ratio Prot							c0.04					
v/s Ratio Perm		0.27			c0.55		0.03				0.00	0.00
v/c Ratio		0.35			0.71		0.22	0.04			0.01	0.00
Uniform Delay, d1		3.4			5.5		33.8	32.9			32.7	32.7
Progression Factor		0.54			1.13		1.00	1.00			1.00	1.00
Incremental Delay, d2		0.1			0.3		2.4	0.3			0.0	0.0
Delay (s)		1.9			6.6		36.1	33.2			32.7	32.7
Level of Service		A			A		D	C			C	C
Approach Delay (s)		1.9			6.6			34.4			32.7	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay			6.2				HCM Level of Service				A	
HCM Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			79.1%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												





















HCM Signalized Intersection Capacity Analysis
 21: Laurel Road & Empire Avenue

Cumulative +Project AM Volumes
 2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3479		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3479		1770	3539	1583
Volume (vph)	220	731	202	116	1164	260	180	450	57	50	220	320
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	795	220	126	1265	283	196	489	62	54	239	348
RTOR Reduction (vph)	0	0	138	0	0	161	0	11	0	0	0	184
Lane Group Flow (vph)	239	795	82	126	1265	122	196	540	0	54	239	164
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases			4			8						6
Actuated Green, G (s)	8.2	33.5	33.5	12.9	38.2	38.2	13.2	22.0		5.6	14.4	14.4
Effective Green, g (s)	8.2	33.5	33.5	12.9	38.2	38.2	13.2	22.0		5.6	14.4	14.4
Actuated g/C Ratio	0.09	0.37	0.37	0.14	0.42	0.42	0.15	0.24		0.06	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	313	1317	589	254	1502	672	260	850		110	566	253
v/s Ratio Prot	c0.07	0.22		0.07	c0.36		c0.11	c0.16		0.03	0.07	
v/s Ratio Perm			0.14			0.18						0.22
v/c Ratio	0.76	0.60	0.14	0.50	0.84	0.18	0.75	0.64		0.49	0.42	0.65
Uniform Delay, d1	40.0	22.9	18.7	35.6	23.2	16.1	36.8	30.4		40.8	34.1	35.4
Progression Factor	1.25	0.77	0.84	0.47	0.25	0.07	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.1	0.7	0.1	0.6	2.0	0.1	11.7	3.6		3.4	2.3	12.2
Delay (s)	59.0	18.4	15.9	17.3	7.9	1.3	48.5	34.0		44.2	36.4	47.6
Level of Service	E	B	B	B	A	A	D	C		D	D	D
Approach Delay (s)		25.7			7.5			37.8			43.1	
Approach LOS		C			A			D			D	
Intersection Summary												
HCM Average Control Delay			23.3	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			72.0%	ICU Level of Service				C				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
23: Laurel Road & Rose Avenue

Cumulative +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	3525		1770	3536		1770	1706			1785	1583
Flt Permitted	0.95	1.00		0.43	1.00		0.43	1.00			0.74	1.00
Satd. Flow (perm)	1770	3525		808	3536		799	1706			1381	1583
Volume (vph)	169	518	15	23	1447	10	10	6	8	172	25	63
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	184	563	16	25	1573	11	11	7	9	187	27	68
RTOR Reduction (vph)	0	2	0	0	0	0	0	7	0	0	0	54
Lane Group Flow (vph)	184	577	0	25	1584	0	11	9	0	0	214	14
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases				8			2			6		6
Actuated Green, G (s)	12.8	63.8		47.0	47.0		18.2	18.2			18.2	18.2
Effective Green, g (s)	12.8	63.8		47.0	47.0		18.2	18.2			18.2	18.2
Actuated g/C Ratio	0.14	0.71		0.52	0.52		0.20	0.20			0.20	0.20
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	252	2499		422	1847		162	345			279	320
v/s Ratio Prot	c0.10	0.16			c0.45			0.01				
v/s Ratio Perm				0.03			0.01				c0.15	0.04
v/c Ratio	0.73	0.23		0.06	0.86		0.07	0.03			0.77	0.04
Uniform Delay, d1	36.9	4.6		10.6	18.6		29.0	28.8			33.9	28.9
Progression Factor	1.02	0.04		0.58	0.55		0.78	0.74			1.00	1.00
Incremental Delay, d2	8.0	0.0		0.0	1.4		0.7	0.1			18.1	0.3
Delay (s)	45.6	0.2		6.2	11.7		23.3	21.3			52.0	29.1
Level of Service	D	A		A	B		C	C			D	C
Approach Delay (s)		11.2			11.6			22.1			46.5	
Approach LOS		B			B			C			D	
Intersection Summary												
HCM Average Control Delay			15.2			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			77.2%			ICU Level of Service					D	
Analysis Period (min)			15									
c Critical Lane Group												
























Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↶	↶↷		↶	↶↷
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3490		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3490		1770	3539
Volume (vph)	123	247	742	76	226	920
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	134	268	807	83	246	1000
RTOR Reduction (vph)	0	237	6	0	0	0
Lane Group Flow (vph)	134	31	884	0	246	1000
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	10.5	10.5	50.2		17.3	71.5
Effective Green, g (s)	10.5	10.5	50.2		17.3	71.5
Actuated g/C Ratio	0.12	0.12	0.56		0.19	0.79
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	207	185	1947		340	2812
v/s Ratio Prot	0.08		c0.26		c0.14	0.28
v/s Ratio Perm		0.17				
v/c Ratio	0.65	0.17	0.45		0.72	0.36
Uniform Delay, d1	38.0	35.8	11.8		34.1	2.7
Progression Factor	1.18	2.15	0.53		1.02	0.60
Incremental Delay, d2	6.7	0.4	0.7		7.1	0.3
Delay (s)	51.4	77.5	7.0		41.9	1.9
Level of Service	D	E	A		D	A
Approach Delay (s)	68.8		7.0			9.8
Approach LOS	E		A			A

Intersection Summary

HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.94			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1856		1770	1751			1797	
Flt Permitted	0.22	1.00	1.00	0.11	1.00		0.95	1.00			0.83	
Satd. Flow (perm)	401	1863	1583	203	1856		1770	1751			1519	
Volume (vph)	20	1004	130	60	794	20	140	60	40	30	40	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1091	141	65	863	22	152	65	43	33	43	11
RTOR Reduction (vph)	0	0	42	0	1	0	0	26	0	0	5	0
Lane Group Flow (vph)	22	1091	99	65	884	0	152	82	0	0	82	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1	
Effective Green, g (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1	
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.70		0.09	0.22			0.09	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	280	1302	1107	142	1297		159	387			138	
v/s Ratio Prot		c0.59			0.48		c0.09	0.06				
v/s Ratio Perm	0.05		0.09	0.32							c0.06	
v/c Ratio	0.08	0.84	0.09	0.46	0.68		0.96	0.21			0.59	
Uniform Delay, d1	4.8	10.9	4.8	6.7	8.7		45.3	31.8			43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.5	6.6	0.2	2.3	1.5		57.8	0.3			6.6	
Delay (s)	5.3	17.5	5.0	9.0	10.2		103.1	32.1			50.3	
Level of Service	A	B	A	A	B		F	C			D	
Approach Delay (s)		15.9			10.1			73.6			50.3	
Approach LOS		B			B			E			D	
Intersection Summary												
HCM Average Control Delay			20.8				HCM Level of Service				C	
HCM Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			73.9%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												



























HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.99			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)		3497			3536		1770	1583			1770	1583
Flt Permitted		0.95			0.86		0.76	1.00			0.75	1.00
Satd. Flow (perm)		3339			3030		1407	1583			1399	1583
Volume (vph)	1	1797	154	25	1305	0	29	0	9	4	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1953	167	27	1418	0	32	0	10	4	0	3
RTOR Reduction (vph)	0	6	0	0	0	0	0	9	0	0	0	3
Lane Group Flow (vph)	0	2115	0	0	1445	0	32	1	0	0	4	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		69.5			69.5		12.5	12.5			12.5	12.5
Effective Green, g (s)		69.5			69.5		12.5	12.5			12.5	12.5
Actuated g/C Ratio		0.77			0.77		0.14	0.14			0.14	0.14
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2578			2340		195	220			194	220
v/s Ratio Prot							0.01					
v/s Ratio Perm		c0.64			0.48		c0.02				0.00	0.00
v/c Ratio		0.82			0.62		0.16	0.01			0.02	0.00
Uniform Delay, d1		6.4			4.5		34.1	33.4			33.5	33.4
Progression Factor		1.00			1.28		1.00	1.00			1.00	1.00
Incremental Delay, d2		2.2			0.3		1.8	0.1			0.0	0.0
Delay (s)		8.6			6.0		35.9	33.4			33.5	33.4
Level of Service		A			A		D	C			C	C
Approach Delay (s)		8.6			6.0		35.4				33.5	
Approach LOS		A			A		D				C	
Intersection Summary												
HCM Average Control Delay		7.9		HCM Level of Service				A				
HCM Volume to Capacity ratio		0.72										
Actuated Cycle Length (s)		90.0		Sum of lost time (s)				8.0				
Intersection Capacity Utilization		70.2%		ICU Level of Service				C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 21: Laurel Road & Empire Avenue

Cumulative +Project PM Volumes
 2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3408		1770	3285	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3408		1770	3285	
Volume (vph)	460	1463	310	123	1070	120	160	430	142	180	360	330
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	500	1590	337	134	1163	130	174	467	154	196	391	359
RTOR Reduction (vph)	0	0	136	0	0	70	0	26	0	0	138	0
Lane Group Flow (vph)	500	1590	201	134	1163	60	174	595	0	196	612	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	31.0	57.7	57.7	12.3	39.0	39.0	11.0	21.0		13.0	23.0	
Effective Green, g (s)	31.0	57.7	57.7	12.3	39.0	39.0	11.0	21.0		13.0	23.0	
Actuated g/C Ratio	0.26	0.48	0.48	0.10	0.32	0.32	0.09	0.18		0.11	0.19	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	457	1702	761	181	1150	514	162	596		192	630	
v/s Ratio Prot	c0.28	0.45		0.08	c0.33		0.10	0.18		c0.11	c0.23	
v/s Ratio Perm			0.21			0.08						
v/c Ratio	1.09	0.93	0.26	0.74	1.01	0.12	1.07	1.00		1.02	0.97	
Uniform Delay, d1	44.5	29.4	18.5	52.3	40.5	28.4	54.5	49.5		53.5	48.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	70.0	10.0	0.2	15.0	29.4	0.1	91.8	36.3		70.5	29.4	
Delay (s)	114.5	39.3	18.7	67.3	69.9	28.5	146.3	85.8		124.0	77.6	
Level of Service	F	D	B	E	E	C	F	F		F	E	
Approach Delay (s)		52.0			65.8			99.0			87.2	
Approach LOS		D			E			F			F	
Intersection Summary												
HCM Average Control Delay			68.1			HCM Level of Service		E				
HCM Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			97.8%			ICU Level of Service		F				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Cumulative +Project PM Volumes
 2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1770	3537		1770	3525		1770	1730			1810	1583
Flt Permitted	0.95	1.00		0.18	1.00		0.69	1.00			0.80	1.00
Satd. Flow (perm)	1770	3537		328	3525		1279	1730			1497	1583
Volume (vph)	72	1357	6	29	827	22	5	18	17	50	35	127
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	78	1475	7	32	899	24	5	20	18	54	38	138
RTOR Reduction (vph)	0	0	0	0	1	0	0	16	0	0	0	119
Lane Group Flow (vph)	78	1482	0	32	922	0	5	22	0	0	92	19
Turn Type	Prot		Perm			Perm			Perm			Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases				8			2			6		6
Actuated Green, G (s)	7.3	69.7		58.4	58.4		12.3	12.3			12.3	12.3
Effective Green, g (s)	7.3	69.7		58.4	58.4		12.3	12.3			12.3	12.3
Actuated g/C Ratio	0.08	0.77		0.65	0.65		0.14	0.14			0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	144	2739		213	2287		175	236			205	216
v/s Ratio Prot	0.04	c0.42			0.26			0.02				
v/s Ratio Perm				0.10			0.00				0.06	0.09
v/c Ratio	0.54	0.54		0.15	0.40		0.03	0.10			0.45	0.09
Uniform Delay, d1	39.7	3.9		6.1	7.5		33.7	34.0			35.7	33.9
Progression Factor	1.39	0.18		0.12	0.23		0.77	0.77			1.00	1.00
Incremental Delay, d2	1.9	0.1		0.2	0.1		0.3	0.8			7.0	0.8
Delay (s)	57.0	0.8		0.9	1.8		26.1	26.8			42.7	34.7
Level of Service	E	A		A	A		C	C			D	C
Approach Delay (s)		3.6			1.8			26.7			37.9	
Approach LOS		A			A			C			D	
Intersection Summary												
HCM Average Control Delay			6.2	HCM Level of Service				A				
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				8.0				
Intersection Capacity Utilization			62.3%	ICU Level of Service				B				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
28: Delta Road & Main Street

Cumulative +Project PM Volumes
2/18/2010



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷	↕	↷	↶	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3466		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3466		1770	3539
Volume (vph)	101	230	1122	179	234	951
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	110	250	1220	195	254	1034
RTOR Reduction (vph)	0	219	12	0	0	0
Lane Group Flow (vph)	110	31	1403	0	254	1034
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	11.0	11.0	51.1		15.9	71.0
Effective Green, g (s)	11.0	11.0	51.1		15.9	71.0
Actuated g/C Ratio	0.12	0.12	0.57		0.18	0.79
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	216	193	1968		313	2792
v/s Ratio Prot	0.06		c0.41		c0.14	0.29
v/s Ratio Perm		0.16				
v/c Ratio	0.51	0.16	0.71		0.81	0.37
Uniform Delay, d1	37.0	35.4	14.1		35.6	2.8
Progression Factor	1.12	1.95	0.57		1.00	0.65
Incremental Delay, d2	1.8	0.4	2.1		13.9	0.4
Delay (s)	43.2	69.3	10.2		49.5	2.2
Level of Service	D	E	B		D	A
Approach Delay (s)	61.3		10.2			11.5
Approach LOS	E		B			B

Intersection Summary

HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			






















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background +Project AM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1678	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.87	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1491	
Volume (vph)	1	748	47	17	943	1	53	1	21	2	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	813	51	18	1025	1	58	1	23	2	0	3
RTOR Reduction (vph)	0	0	20	0	0	0	0	16	0	0	3	0
Lane Group Flow (vph)	1	813	31	18	1026	0	58	8	0	0	2	0
Turn Type	Prot		Perm	Prot			Prot			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4							6		
Actuated Green, G (s)	0.8	69.2	69.2	3.4	71.8		26.2	35.4			5.2	
Effective Green, g (s)	0.8	69.2	69.2	3.4	71.8		26.2	35.4			5.2	
Actuated g/C Ratio	0.01	0.58	0.58	0.03	0.60		0.22	0.29			0.04	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	12	1074	913	50	1114		386	471			65	
v/s Ratio Prot	0.00	c0.44		0.01	c0.55		c0.03	0.02				
v/s Ratio Perm			0.03								c0.00	
v/c Ratio	0.08	0.76	0.03	0.36	0.92		0.15	0.02			0.03	
Uniform Delay, d1	59.2	19.1	11.0	57.2	21.6		37.9	30.0			55.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	3.0	3.1	0.0	4.4	12.2		0.8	0.1			0.2	
Delay (s)	62.2	22.2	11.0	61.6	33.8		38.7	30.0			55.2	
Level of Service	E	C	B	E	C		D	C			E	
Approach Delay (s)		21.6			34.3			36.2			55.2	
Approach LOS		C			C			D			E	
Intersection Summary												
HCM Average Control Delay			28.9			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			16.0			
Intersection Capacity Utilization			62.7%			ICU Level of Service					B	
Analysis Period (min)			15									
c Critical Lane Group												




























HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Free		Free		Stop		Stop					
Grade	0%		0%		0%		0%					
Volume (veh/h)	2	781	82	7	1091	1	33	0	11	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	849	89	8	1186	1	36	0	12	1	1	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	1040											
pX, platoon unblocked												
vC, conflicting volume	1187			938			2102	2100	893	2066	2143	1186
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1187			938			2102	2100	893	2066	2143	1186
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			1	100	96	97	98	99
cM capacity (veh/h)	588			730			36	51	340	38	48	230
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	2	938	8	1186	1	36	12	2	2			
Volume Left	2	0	8	0	0	36	0	1	0			
Volume Right	0	89	0	0	1	0	12	0	2			
cSH	588	1700	730	1700	1700	36	340	43	230			
Volume to Capacity	0.00	0.55	0.01	0.70	0.00	0.99	0.04	0.05	0.01			
Queue Length (ft)	0	0	1	0	0	91	3	4	1			
Control Delay (s)	11.1	0.0	10.0	0.0	0.0	310.7	16.0	94.2	20.8			
Lane LOS	B		A			F	C	F	C			
Approach Delay (s)	0.0	0.1				237.0	57.5					
Approach LOS					F		F					
Intersection Summary												
Average Delay			5.3									
Intersection Capacity Utilization			74.1%		ICU Level of Service				D			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Background +Project AM Volumes
2/18/2010

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 			 			 		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.93		
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3466		1770	3304		
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.50	1.00		0.50	1.00		
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	935	3466		928	3304		
Volume (vph)	205	391	187	104	753	91	167	286	46	47	182	145	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	223	425	203	113	818	99	182	311	50	51	198	158	
RTOR Reduction (vph)	0	0	125	0	0	70	0	13	0	0	97	0	
Lane Group Flow (vph)	223	425	78	113	818	29	182	348	0	51	259	0	
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm			
Protected Phases	7	4		3	8			2			6		
Permitted Phases			4			8	2			6			
Actuated Green, G (s)	16.9	34.5	34.5	8.5	26.1	26.1	35.0	35.0		35.0	35.0		
Effective Green, g (s)	16.9	34.5	34.5	8.5	26.1	26.1	35.0	35.0		35.0	35.0		
Actuated g/C Ratio	0.19	0.38	0.38	0.09	0.29	0.29	0.39	0.39		0.39	0.39		
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	332	1357	607	167	1026	459	364	1348		361	1285		
v/s Ratio Prot	c0.13	0.12		0.06	c0.23			0.10			0.11		
v/s Ratio Perm			0.13			0.06	c0.19			0.05			
v/c Ratio	0.67	0.31	0.13	0.68	0.80	0.06	0.50	0.26		0.14	0.20		
Uniform Delay, d1	34.0	19.4	18.0	39.4	29.5	23.1	20.9	18.7		17.8	18.2		
Progression Factor	0.74	0.83	0.43	0.97	0.44	0.26	1.00	1.00		1.00	1.00		
Incremental Delay, d2	5.2	0.1	0.1	9.0	3.8	0.0	4.8	0.5		0.8	0.4		
Delay (s)	30.4	16.2	7.8	47.3	16.7	6.2	25.7	19.1		18.6	18.6		
Level of Service	C	B	A	D	B	A	C	B		B	B		
Approach Delay (s)		17.9			19.0			21.3			18.6		
Approach LOS		B			B			C			B		
Intersection Summary													
HCM Average Control Delay			19.1			HCM Level of Service			B				
HCM Volume to Capacity ratio			0.64										
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0				
Intersection Capacity Utilization			64.4%			ICU Level of Service			C				
Analysis Period (min)			15										
c Critical Lane Group													

HCM Unsignalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Background +Project AM Volumes
 2/18/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	139	428	0	2	671	26	0	1	2	13	1	228
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	151	465	0	2	729	28	0	1	2	14	1	248
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked	0.92			0.81			0.85	0.85	0.81	0.85	0.85	0.92
vC, conflicting volume	758			465			1764	1529	465	1518	1515	743
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	735			337			1752	1476	337	1462	1459	720
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	81			100			100	99	100	81	99	37
cM capacity (veh/h)	797			986			18	87	569	76	89	392

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	616	760	3	263
Volume Left	151	2	0	14
Volume Right	0	28	2	248
cSH	797	986	199	317
Volume to Capacity	0.19	0.00	0.02	0.83
Queue Length (ft)	17	0	1	178
Control Delay (s)	4.7	0.1	23.4	53.6
Lane LOS	A	A	C	F
Approach Delay (s)	4.7	0.1	23.4	53.6
Approach LOS			C	F

Intersection Summary			
Average Delay		10.4	
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶		↷		↶	↷
Sign Control	Stop		Free		Free	Free
Grade	0%		0%		0%	0%
Volume (veh/h)	101	174	478	53	166	694
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	110	189	520	58	180	754
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1664	548			577	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1664	548			577	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	65			82	
cM capacity (veh/h)	87	536			996	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	299	577	180	754
Volume Left	110	0	180	0
Volume Right	189	58	0	0
cSH	186	1700	996	1700
Volume to Capacity	1.61	0.34	0.18	0.44
Queue Length (ft)	495	0	16	0
Control Delay (s)	343.2	0.0	9.4	0.0
Lane LOS	F		A	
Approach Delay (s)	343.2	0.0	1.8	
Approach LOS	F			

Intersection Summary			
Average Delay		57.6	
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background +Project PM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1722	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1779	
Volume (vph)	2	1157	161	30	717	1	135	2	42	2	0	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1258	175	33	779	1	147	2	46	2	0	1
RTOR Reduction (vph)	0	0	34	0	0	0	0	36	0	0	1	0
Lane Group Flow (vph)	2	1258	141	33	780	0	147	12	0	0	2	0
Turn Type	Prot		Perm		Prot		Prot		Perm			
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4							6		
Actuated Green, G (s)	4.0	101.6	101.6	3.2	100.8		26.2	33.2			3.0	
Effective Green, g (s)	4.0	101.6	101.6	3.2	100.8		26.2	33.2			3.0	
Actuated g/C Ratio	0.03	0.68	0.68	0.02	0.67		0.17	0.22			0.02	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	47	1262	1072	38	1251		309	353			36	
v/s Ratio Prot	0.00	c0.68		0.02	c0.42		c0.08	c0.03				
v/s Ratio Perm			0.11								0.00	
v/c Ratio	0.04	1.00	0.13	0.87	0.62		0.48	0.03			0.06	
Uniform Delay, d1	71.1	24.0	8.6	73.2	13.9		55.7	45.8			72.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.4	24.4	0.1	93.8	1.0		5.2	0.2			0.7	
Delay (s)	71.5	48.4	8.6	167.0	14.9		60.9	46.0			72.8	
Level of Service	E	D	A	F	B		E	D			E	
Approach Delay (s)		43.6			21.0			57.2			72.8	
Approach LOS		D			C			E			E	
Intersection Summary												
HCM Average Control Delay			37.2	HCM Level of Service				D				
HCM Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			150.0	Sum of lost time (s)				16.0				
Intersection Capacity Utilization			77.8%	ICU Level of Service				D				
Analysis Period (min)			15									
c Critical Lane Group												
























HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background +Project PM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↖		↖	↗		↖	↗
Sign Control	Free		Free		Free		Stop		Stop		Stop	
Grade	0%		0%		0%		0%		0%		0%	
Volume (veh/h)	1	1199	145	7	1149	0	29	0	7	4	0	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1303	158	8	1249	0	32	0	8	4	0	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	1040											
pX, platoon unblocked												
vC, conflicting volume	1249			1461			2652	2648	1382	2577	2727	1249
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1249			1461			2652	2648	1382	2577	2727	1249
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			0	100	96	73	100	98
cM capacity (veh/h)	557			463			15	23	176	16	20	211
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	1	1461	8	1249	0	32	8	4	3			
Volume Left	1	0	8	0	0	32	0	4	0			
Volume Right	0	158	0	0	0	0	8	0	3			
cSH	557	1700	463	1700	1700	15	176	16	211			
Volume to Capacity	0.00	0.86	0.02	0.73	0.00	2.15	0.04	0.27	0.02			
Queue Length (ft)	0	0	1	0	0	116	3	18	1			
Control Delay (s)	11.5	0.0	12.9	0.0	0.0	1058.9	26.4	295.5	22.3			
Lane LOS	B		B			F	D	F	C			
Approach Delay (s)	0.0	0.1				858.1	178.4					
Approach LOS					F		F					
Intersection Summary												
Average Delay			12.7									
Intersection Capacity Utilization			88.6%		ICU Level of Service				E			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Background +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3420		1770	3293	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.40	1.00		0.47	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	750	3420		870	3293	
Volume (vph)	353	807	225	134	474	64	125	273	79	83	229	199
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	384	877	245	146	515	70	136	297	86	90	249	216
RTOR Reduction (vph)	0	0	145	0	0	56	0	29	0	0	141	0
Lane Group Flow (vph)	384	877	100	146	515	14	136	354	0	90	324	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	28.9	36.6	36.6	10.3	18.0	18.0	31.1	31.1		31.1	31.1	
Effective Green, g (s)	28.9	36.6	36.6	10.3	18.0	18.0	31.1	31.1		31.1	31.1	
Actuated g/C Ratio	0.32	0.41	0.41	0.11	0.20	0.20	0.35	0.35		0.35	0.35	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	568	1439	644	203	708	317	259	1182		301	1138	
v/s Ratio Prot	c0.22	0.25		0.08	c0.15			0.11			0.14	
v/s Ratio Perm			0.15			0.04	c0.18			0.10		
v/c Ratio	0.68	0.61	0.15	0.72	0.73	0.04	0.53	0.30		0.30	0.28	
Uniform Delay, d1	26.5	21.1	16.9	38.5	33.7	29.1	23.5	21.5		21.5	21.4	
Progression Factor	0.62	0.60	0.07	0.36	0.35	0.22	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	0.5	0.1	10.9	3.5	0.1	7.4	0.7		2.5	0.6	
Delay (s)	18.8	13.2	1.2	24.7	15.3	6.5	31.0	22.1		24.0	22.0	
Level of Service	B	B	A	C	B	A	C	C		C	C	
Approach Delay (s)		12.7			16.4			24.5			22.3	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM Average Control Delay			17.0				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			65.6%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Background +Project PM Volumes
 2/18/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	188	745	1	0	469	11	1	0	0	7	0	125
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	204	810	1	0	510	12	1	0	0	8	0	136
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked				0.65			0.65	0.65	0.65	0.65	0.65	
vC, conflicting volume	522			811			1871	1741	810	1735	1735	516
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	522			707			2349	2148	706	2138	2139	516
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	80			100			90	100	100	61	100	76
cM capacity (veh/h)	1045			575			10	25	281	19	25	559

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1015	522	1	143
Volume Left	204	0	1	8
Volume Right	1	12	0	136
cSH	1045	575	10	227
Volume to Capacity	0.20	0.00	0.10	0.63
Queue Length (ft)	18	0	7	95
Control Delay (s)	4.6	0.0	387.6	44.9
Lane LOS	A		F	E
Approach Delay (s)	4.6	0.0	387.6	44.9
Approach LOS			F	E

Intersection Summary			
Average Delay		6.9	
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free		Free	Free
Grade	0%		0%			0%
Volume (veh/h)	77	93	797	134	91	595
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	84	101	866	146	99	647
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1784	939			1012	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1784	939			1012	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	68			86	
cM capacity (veh/h)	77	320			685	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	185	1012	99	647
Volume Left	84	0	99	0
Volume Right	101	146	0	0
cSH	132	1700	685	1700
Volume to Capacity	1.40	0.60	0.14	0.38
Queue Length (ft)	307	0	13	0
Control Delay (s)	283.5	0.0	11.1	0.0
Lane LOS	F		B	
Approach Delay (s)	283.5	0.0	1.5	
Approach LOS	F			

Intersection Summary			
Average Delay		27.5	
Intersection Capacity Utilization		75.1%	ICU Level of Service D
Analysis Period (min)		15	



















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative +Project AM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.91			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1856		1770	1695			1813	
Flt Permitted	0.19	1.00	1.00	0.35	1.00		0.95	1.00			0.97	
Satd. Flow (perm)	363	1863	1583	655	1856		1770	1695			1767	
Volume (vph)	10	546	80	40	769	20	110	40	60	10	90	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	593	87	43	836	22	120	43	65	11	98	22
RTOR Reduction (vph)	0	0	31	0	1	0	0	48	0	0	9	0
Lane Group Flow (vph)	11	593	56	43	857	0	120	60	0	0	122	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0			11.3	
Effective Green, g (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0			11.3	
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.64		0.10	0.27			0.13	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	234	1201	1020	422	1196		171	452			222	
v/s Ratio Prot		0.32			c0.46		c0.07	0.06				
v/s Ratio Perm	0.03		0.05	0.07							c0.07	
v/c Ratio	0.05	0.49	0.05	0.10	0.72		0.70	0.13			0.55	
Uniform Delay, d1	5.9	8.3	5.9	6.1	10.6		39.4	25.1			37.0	
Progression Factor	0.33	0.40	0.14	1.22	0.86		0.92	1.23			1.00	
Incremental Delay, d2	0.4	1.4	0.1	0.1	1.5		11.8	0.1			2.9	
Delay (s)	2.3	4.8	0.9	7.5	10.6		48.2	31.0			39.9	
Level of Service	A	A	A	A	B		D	C			D	
Approach Delay (s)		4.2			10.5			40.1			39.9	
Approach LOS		A			B			D			D	
Intersection Summary												
HCM Average Control Delay			13.7			HCM Level of Service		B				
HCM Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			61.5%			ICU Level of Service		B				
Analysis Period (min)			15									
c Critical Lane Group												





























HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.98			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)		3480			3522		1770	1583			1817	1583
Flt Permitted		0.95			0.74		0.76	1.00			0.93	1.00
Satd. Flow (perm)		3317			2632		1409	1583			1739	1583
Volume (vph)	2	730	92	120	1167	1	41	0	61	1	1	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	793	100	130	1268	1	45	0	66	1	1	2
RTOR Reduction (vph)	0	10	0	0	0	0	0	55	0	0	0	2
Lane Group Flow (vph)	0	885	0	0	1399	0	45	11	0	0	2	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		66.9			66.9		15.1	15.1			15.1	15.1
Effective Green, g (s)		66.9			66.9		15.1	15.1			15.1	15.1
Actuated g/C Ratio		0.74			0.74		0.17	0.17			0.17	0.17
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2466			1956		236	266			292	266
v/s Ratio Prot							c0.04					
v/s Ratio Perm		0.27			c0.53		0.03				0.00	0.00
v/c Ratio		0.36			0.72		0.19	0.04			0.01	0.00
Uniform Delay, d1		4.0			6.3		32.2	31.4			31.2	31.2
Progression Factor		0.60			1.09		1.00	1.00			1.00	1.00
Incremental Delay, d2		0.1			0.4		1.8	0.3			0.0	0.0
Delay (s)		2.5			7.3		34.0	31.7			31.2	31.2
Level of Service		A			A		C	C			C	C
Approach Delay (s)		2.5			7.3			32.6			31.2	
Approach LOS		A			A			C			C	
Intersection Summary												
HCM Average Control Delay			6.7				HCM Level of Service				A	
HCM Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			77.9%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												

























HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Cumulative +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3480		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3480		1770	3539	1583
Volume (vph)	220	730	202	111	1146	260	180	450	56	50	220	320
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	793	220	121	1246	283	196	489	61	54	239	348
RTOR Reduction (vph)	0	0	138	0	0	161	0	11	0	0	0	184
Lane Group Flow (vph)	239	793	82	121	1246	122	196	539	0	54	239	164
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	8.2	33.4	33.4	13.0	38.2	38.2	13.2	22.0		5.6	14.4	14.4
Effective Green, g (s)	8.2	33.4	33.4	13.0	38.2	38.2	13.2	22.0		5.6	14.4	14.4
Actuated g/C Ratio	0.09	0.37	0.37	0.14	0.42	0.42	0.15	0.24		0.06	0.16	0.16
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	313	1313	587	256	1502	672	260	851		110	566	253
v/s Ratio Prot	c0.07	0.22		0.07	c0.35		c0.11	c0.16		0.03	0.07	
v/s Ratio Perm			0.14			0.18						0.22
v/c Ratio	0.76	0.60	0.14	0.47	0.83	0.18	0.75	0.63		0.49	0.42	0.65
Uniform Delay, d1	40.0	22.9	18.8	35.4	23.0	16.1	36.8	30.4		40.8	34.1	35.4
Progression Factor	1.25	0.78	0.85	0.47	0.26	0.08	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.1	0.7	0.1	0.6	1.8	0.1	11.7	3.6		3.4	2.3	12.2
Delay (s)	59.0	18.5	16.0	17.2	7.7	1.3	48.5	34.0		44.2	36.4	47.6
Level of Service	E	B	B	B	A	A	D	C		D	D	D
Approach Delay (s)		25.8			7.3			37.8			43.1	
Approach LOS		C			A			D			D	
Intersection Summary												
HCM Average Control Delay			23.4			HCM Level of Service		C				
HCM Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			71.5%			ICU Level of Service		C				
Analysis Period (min)			15									
c Critical Lane Group												














HCM Signalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Cumulative +Project AM Volumes
 2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	3524		1770	3535		1770	1706			1785	1583
Flt Permitted	0.95	1.00		0.43	1.00		0.43	1.00			0.74	1.00
Satd. Flow (perm)	1770	3524		810	3535		802	1706			1381	1583
Volume (vph)	169	516	15	23	1432	10	10	6	8	172	25	55
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	184	561	16	25	1557	11	11	7	9	187	27	60
RTOR Reduction (vph)	0	2	0	0	0	0	0	7	0	0	0	48
Lane Group Flow (vph)	184	575	0	25	1568	0	11	9	0	0	214	12
Turn Type	Prot		Perm			Perm			Perm			Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases				8			2			6		6
Actuated Green, G (s)	12.8	63.7		46.9	46.9		18.3	18.3			18.3	18.3
Effective Green, g (s)	12.8	63.7		46.9	46.9		18.3	18.3			18.3	18.3
Actuated g/C Ratio	0.14	0.71		0.52	0.52		0.20	0.20			0.20	0.20
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	252	2494		422	1842		163	347			281	322
v/s Ratio Prot	c0.10	0.16			c0.44			0.01				
v/s Ratio Perm				0.03			0.01				c0.15	0.04
v/c Ratio	0.73	0.23		0.06	0.85		0.07	0.03			0.76	0.04
Uniform Delay, d1	36.9	4.6		10.6	18.5		29.0	28.7			33.8	28.8
Progression Factor	1.02	0.04		0.58	0.54		0.78	0.74			1.00	1.00
Incremental Delay, d2	8.0	0.0		0.0	1.4		0.7	0.1			17.6	0.2
Delay (s)	45.6	0.2		6.2	11.5		23.3	21.2			51.4	29.0
Level of Service	D	A		A	B		C	C			D	C
Approach Delay (s)		11.2			11.4			22.1			46.5	
Approach LOS		B			B			C			D	
Intersection Summary												
HCM Average Control Delay			15.1			HCM Level of Service					B	
HCM Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			76.8%			ICU Level of Service					D	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
28: Delta Road & Main Street

Cumulative +Project AM Volumes
2/18/2010

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3490		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3490		1770	3539
Volume (vph)	120	247	740	75	226	905
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	268	804	82	246	984
RTOR Reduction (vph)	0	237	6	0	0	0
Lane Group Flow (vph)	130	31	880	0	246	984
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Actuated Green, G (s)	10.5	10.5	50.3		17.2	71.5
Effective Green, g (s)	10.5	10.5	50.3		17.2	71.5
Actuated g/C Ratio	0.12	0.12	0.56		0.19	0.79
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	207	185	1951		338	2812
v/s Ratio Prot	0.07		c0.25		c0.14	0.28
v/s Ratio Perm		0.17				
v/c Ratio	0.63	0.17	0.45		0.73	0.35
Uniform Delay, d1	37.9	35.8	11.7		34.2	2.6
Progression Factor	1.13	1.84	0.53		1.04	0.67
Incremental Delay, d2	5.8	0.4	0.7		7.3	0.3
Delay (s)	48.4	66.5	6.9		42.7	2.1
Level of Service	D	E	A		D	A
Approach Delay (s)	60.6		6.9			10.2
Approach LOS	E		A			B
Intersection Summary						
HCM Average Control Delay			17.0		HCM Level of Service	B
HCM Volume to Capacity ratio			0.65			
Actuated Cycle Length (s)			90.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			52.0%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative +Project PM Volumes
2/18/2010





















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.94			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1856		1770	1751			1797	
Flt Permitted	0.21	1.00	1.00	0.12	1.00		0.95	1.00			0.83	
Satd. Flow (perm)	400	1863	1583	216	1856		1770	1751			1519	
Volume (vph)	20	992	130	60	795	20	140	60	40	30	40	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1078	141	65	864	22	152	65	43	33	43	11
RTOR Reduction (vph)	0	0	42	0	1	0	0	26	0	0	5	0
Lane Group Flow (vph)	22	1078	99	65	885	0	152	82	0	0	82	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases	2				6		3	8				4
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1	
Effective Green, g (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1	
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.70		0.09	0.22			0.09	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	280	1302	1107	151	1297		159	387			138	
v/s Ratio Prot	c0.58				0.48		c0.09	0.06				
v/s Ratio Perm	0.06		0.09	0.30							c0.06	
v/c Ratio	0.08	0.83	0.09	0.43	0.68		0.96	0.21			0.59	
Uniform Delay, d1	4.8	10.8	4.8	6.5	8.7		45.3	31.8			43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.5	6.2	0.2	2.0	1.5		57.8	0.3			6.6	
Delay (s)	5.3	16.9	5.0	8.4	10.2		103.1	32.1			50.3	
Level of Service	A	B	A	A	B		F	C			D	
Approach Delay (s)	15.4				10.0			73.6			50.3	
Approach LOS	B				B			E			D	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			
























HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.99			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)		3497			3536		1770	1583			1770	1583
Flt Permitted		0.95			0.86		0.76	1.00			0.75	1.00
Satd. Flow (perm)		3339			3036		1407	1583			1399	1583
Volume (vph)	1	1778	154	25	1307	0	29	0	9	4	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1933	167	27	1421	0	32	0	10	4	0	3
RTOR Reduction (vph)	0	6	0	0	0	0	0	9	0	0	0	3
Lane Group Flow (vph)	0	2095	0	0	1448	0	32	1	0	0	4	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		69.1			69.1		12.9	12.9			12.9	12.9
Effective Green, g (s)		69.1			69.1		12.9	12.9			12.9	12.9
Actuated g/C Ratio		0.77			0.77		0.14	0.14			0.14	0.14
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2564			2331		202	227			201	227
v/s Ratio Prot							0.01					
v/s Ratio Perm		c0.63			0.48		c0.02				0.00	0.00
v/c Ratio		0.82			0.62		0.16	0.01			0.02	0.00
Uniform Delay, d1		6.5			4.6		33.8	33.1			33.1	33.0
Progression Factor		1.00			1.27		1.00	1.00			1.00	1.00
Incremental Delay, d2		2.1			0.3		1.7	0.1			0.0	0.0
Delay (s)		8.6			6.2		35.5	33.1			33.2	33.0
Level of Service		A			A		D	C			C	C
Approach Delay (s)		8.6			6.2		34.9				33.1	
Approach LOS		A			A		C				C	
Intersection Summary												
HCM Average Control Delay		8.0		HCM Level of Service				A				
HCM Volume to Capacity ratio		0.72										
Actuated Cycle Length (s)		90.0		Sum of lost time (s)				8.0				
Intersection Capacity Utilization		69.7%		ICU Level of Service				C				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Cumulative +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3410		1770	3285	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3410		1770	3285	
Volume (vph)	460	1454	310	123	1071	120	160	430	139	180	360	330
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	500	1580	337	134	1164	130	174	467	151	196	391	359
RTOR Reduction (vph)	0	0	137	0	0	70	0	26	0	0	138	0
Lane Group Flow (vph)	500	1580	200	134	1164	60	174	592	0	196	612	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	31.0	57.6	57.6	12.4	39.0	39.0	11.0	21.0		13.0	23.0	
Effective Green, g (s)	31.0	57.6	57.6	12.4	39.0	39.0	11.0	21.0		13.0	23.0	
Actuated g/C Ratio	0.26	0.48	0.48	0.10	0.32	0.32	0.09	0.18		0.11	0.19	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	457	1699	760	183	1150	514	162	597		192	630	
v/s Ratio Prot	c0.28	0.45		0.08	c0.33		0.10	0.18		c0.11	c0.23	
v/s Ratio Perm			0.21			0.08						
v/c Ratio	1.09	0.93	0.26	0.73	1.01	0.12	1.07	0.99		1.02	0.97	
Uniform Delay, d1	44.5	29.3	18.6	52.2	40.5	28.4	54.5	49.4		53.5	48.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	70.0	9.4	0.2	14.0	29.6	0.1	91.8	34.7		70.5	29.4	
Delay (s)	114.5	38.7	18.8	66.2	70.1	28.5	146.3	84.1		124.0	77.6	
Level of Service	F	D	B	E	E	C	F	F		F	E	
Approach Delay (s)		51.6			65.9			97.8			87.2	
Approach LOS		D			E			F			F	
Intersection Summary												
HCM Average Control Delay			67.9			HCM Level of Service		E				
HCM Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			97.8%			ICU Level of Service		F				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Cumulative +Project PM Volumes
 2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1770	3537		1770	3525		1770	1730			1810	1583
Flt Permitted	0.95	1.00		0.18	1.00		0.69	1.00			0.80	1.00
Satd. Flow (perm)	1770	3537		331	3525		1279	1730			1497	1583
Volume (vph)	68	1350	6	29	828	22	5	18	17	50	35	128
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	1467	7	32	900	24	5	20	18	54	38	139
RTOR Reduction (vph)	0	0	0	0	1	0	0	16	0	0	0	120
Lane Group Flow (vph)	74	1474	0	32	923	0	5	22	0	0	92	19
Turn Type	Prot		Perm			Perm			Perm		Perm	
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		6
Actuated Green, G (s)	7.2	69.7		58.5	58.5		12.3	12.3			12.3	12.3
Effective Green, g (s)	7.2	69.7		58.5	58.5		12.3	12.3			12.3	12.3
Actuated g/C Ratio	0.08	0.77		0.65	0.65		0.14	0.14			0.14	0.14
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	142	2739		215	2291		175	236			205	216
v/s Ratio Prot	0.04	c0.42			0.26			0.02				
v/s Ratio Perm				0.10			0.00				0.06	0.09
v/c Ratio	0.52	0.54		0.15	0.40		0.03	0.10			0.45	0.09
Uniform Delay, d1	39.7	3.9		6.1	7.5		33.7	34.0			35.7	33.9
Progression Factor	1.39	0.17		0.12	0.24		0.77	0.77			1.00	1.00
Incremental Delay, d2	1.6	0.1		0.2	0.1		0.3	0.8			7.0	0.8
Delay (s)	56.9	0.8		0.9	1.9		26.1	26.8			42.7	34.8
Level of Service	E	A		A	A		C	C			D	C
Approach Delay (s)		3.4			1.9			26.8			37.9	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	6.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
28: Delta Road & Main Street

Cumulative +Project PM Volumes
2/18/2010



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3467		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3467		1770	3539
Volume (vph)	101	230	1115	177	234	952
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	110	250	1212	192	254	1035
RTOR Reduction (vph)	0	220	12	0	0	0
Lane Group Flow (vph)	110	30	1392	0	254	1035
Turn Type	Perm		Prot			
Protected Phases	8		2		1	6
Permitted Phases	8					
Actuated Green, G (s)	10.9	10.9	51.2		15.9	71.1
Effective Green, g (s)	10.9	10.9	51.2		15.9	71.1
Actuated g/C Ratio	0.12	0.12	0.57		0.18	0.79
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	214	192	1972		313	2796
v/s Ratio Prot	0.06		c0.41		c0.14	0.29
v/s Ratio Perm		0.16				
v/c Ratio	0.51	0.16	0.71		0.81	0.37
Uniform Delay, d1	37.1	35.4	14.0		35.6	2.8
Progression Factor	1.12	1.96	0.57		1.00	0.67
Incremental Delay, d2	2.0	0.4	2.0		13.9	0.4
Delay (s)	43.4	69.7	10.1		49.5	2.2
Level of Service	D	E	B		D	A
Approach Delay (s)	61.7		10.1			11.6
Approach LOS	E		B			B

Intersection Summary

HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background +Project AM Volumes
2/18/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1678	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1712	
Volume (vph)	1	782	47	17	989	1	53	1	21	2	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	850	51	18	1075	1	58	1	23	2	0	3
RTOR Reduction (vph)	0	0	18	0	0	0	0	17	0	0	3	0
Lane Group Flow (vph)	1	850	33	18	1076	0	58	7	0	0	2	0
Turn Type	Prot		Perm		Prot		Prot		Perm			
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4							6		
Actuated Green, G (s)	0.8	72.2	72.2	3.0	74.4		26.1	32.8			2.7	
Effective Green, g (s)	0.8	72.2	72.2	3.0	74.4		26.1	32.8			2.7	
Actuated g/C Ratio	0.01	0.60	0.60	0.02	0.62		0.22	0.27			0.02	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	12	1121	952	44	1154		385	436			39	
v/s Ratio Prot	0.00	c0.46		0.01	c0.58		c0.03	0.02				
v/s Ratio Perm			0.03								c0.00	
v/c Ratio	0.08	0.76	0.03	0.41	0.93		0.15	0.02			0.05	
Uniform Delay, d1	59.2	17.5	9.7	57.6	20.5		38.0	31.8			57.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	3.0	3.0	0.0	6.1	13.3		0.8	0.1			0.6	
Delay (s)	62.2	20.5	9.7	63.7	33.8		38.8	31.9			58.0	
Level of Service	E	C	A	E	C		D	C			E	
Approach Delay (s)		19.9			34.3			36.8			58.0	
Approach LOS		B			C			D			E	

Intersection Summary

HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			




























HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background +Project AM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Free		Free		Stop		Stop		Stop		Stop	
Grade	0%		0%		0%		0%		0%		0%	
Volume (veh/h)	2	838	82	7	1169	1	33	0	11	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	911	89	8	1271	1	36	0	12	1	1	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	1040											
pX, platoon unblocked												
vC, conflicting volume	1272			1000			2248	2247	955	2213	2290	1271
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1272			1000			2248	2247	955	2213	2290	1271
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			0	100	96	96	97	99
cM capacity (veh/h)	546			692			28	41	313	30	39	205
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	2	1000	8	1271	1	36	12	2	2			
Volume Left	2	0	8	0	0	36	0	1	0			
Volume Right	0	89	0	0	1	0	12	0	2			
cSH	546	1700	692	1700	1700	28	313	34	205			
Volume to Capacity	0.00	0.59	0.01	0.75	0.00	1.26	0.04	0.06	0.01			
Queue Length (ft)	0	0	1	0	0	104	3	5	1			
Control Delay (s)	11.6	0.0	10.3	0.0	0.0	466.7	17.0	119.1	22.7			
Lane LOS	B		B			F	C	F	C			
Approach Delay (s)	0.0	0.1				354.2	70.9					
Approach LOS							F	F				
Intersection Summary												
Average Delay			7.4									
Intersection Capacity Utilization			78.2%		ICU Level of Service				D			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Background +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3455		1770	3304	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.50	1.00		0.49	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	939	3455		918	3304	
Volume (vph)	205	416	187	115	788	91	167	286	54	47	182	145
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	452	203	125	857	99	182	311	59	51	198	158
RTOR Reduction (vph)	0	0	127	0	0	70	0	16	0	0	95	0
Lane Group Flow (vph)	223	452	76	125	857	29	182	354	0	51	261	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	15.7	33.6	33.6	8.7	26.6	26.6	35.7	35.7		35.7	35.7	
Effective Green, g (s)	15.7	33.6	33.6	8.7	26.6	26.6	35.7	35.7		35.7	35.7	
Actuated g/C Ratio	0.17	0.37	0.37	0.10	0.30	0.30	0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	309	1321	591	171	1046	468	372	1370		364	1311	
v/s Ratio Prot	c0.13	0.13		0.07	c0.24			0.11			0.11	
v/s Ratio Perm			0.13			0.06	c0.19			0.06		
v/c Ratio	0.72	0.34	0.13	0.73	0.82	0.06	0.49	0.26		0.14	0.20	
Uniform Delay, d1	35.1	20.3	18.6	39.5	29.5	22.8	20.3	18.2		17.3	17.8	
Progression Factor	0.76	0.85	0.46	0.99	0.42	0.23	1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.0	0.2	0.1	12.6	4.3	0.0	4.5	0.5		0.8	0.3	
Delay (s)	34.6	17.3	8.7	51.8	16.6	5.4	24.9	18.7		18.1	18.1	
Level of Service	C	B	A	D	B	A	C	B		B	B	
Approach Delay (s)		19.7			19.6			20.7			18.1	
Approach LOS		B			B			C			B	
Intersection Summary												
HCM Average Control Delay			19.6				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			65.4%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	149	451	0	2	701	26	0	1	2	13	1	243
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	162	490	0	2	762	28	0	1	2	14	1	264
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked	0.92			0.79			0.83	0.83	0.79	0.83	0.83	0.92
vC, conflicting volume	790			490			1859	1609	490	1597	1595	776
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	772			354			1889	1587	354	1573	1570	756
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	79			100			100	98	100	77	98	30
cM capacity (veh/h)	775			951			11	71	544	61	72	375

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	652	792	3	279
Volume Left	162	2	0	14
Volume Right	0	28	2	264
cSH	775	951	168	294
Volume to Capacity	0.21	0.00	0.02	0.95
Queue Length (ft)	20	0	1	234
Control Delay (s)	5.1	0.1	26.8	79.4
Lane LOS	A	A	D	F
Approach Delay (s)	5.1	0.1	26.8	79.4
Approach LOS			D	F

Intersection Summary			
Average Delay		14.9	
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free		Free	Free
Grade	0%		0%			0%
Volume (veh/h)	106	174	499	58	166	723
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	115	189	542	63	180	786
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1721	574			605	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1721	574			605	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	64			81	
cM capacity (veh/h)	80	518			973	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	304	605	180	786
Volume Left	115	0	180	0
Volume Right	189	63	0	0
cSH	169	1700	973	1700
Volume to Capacity	1.80	0.36	0.19	0.46
Queue Length (ft)	553	0	17	0
Control Delay (s)	431.0	0.0	9.5	0.0
Lane LOS	F		A	
Approach Delay (s)	431.0	0.0	1.8	
Approach LOS	F			

Intersection Summary			
Average Delay		70.8	
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background +Project PM Volumes
2/18/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1722	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1779	
Volume (vph)	2	1235	161	30	783	1	135	2	42	2	0	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1342	175	33	851	1	147	2	46	2	0	1
RTOR Reduction (vph)	0	0	32	0	0	0	0	36	0	0	1	0
Lane Group Flow (vph)	2	1342	143	33	852	0	147	12	0	0	2	0
Turn Type	Prot		Perm		Prot		Prot				Perm	
Protected Phases	7	4		3	8		5	2				6
Permitted Phases			4								6	
Actuated Green, G (s)	0.8	101.8	101.8	3.2	104.2		26.2	33.0			2.8	
Effective Green, g (s)	0.8	101.8	101.8	3.2	104.2		26.2	33.0			2.8	
Actuated g/C Ratio	0.01	0.68	0.68	0.02	0.69		0.17	0.22			0.02	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	9	1264	1074	38	1293		309	351			33	
v/s Ratio Prot	0.00	c0.72		0.02	c0.46		c0.08	c0.03				
v/s Ratio Perm			0.11								0.00	
v/c Ratio	0.22	1.06	0.13	0.87	0.66		0.48	0.03			0.06	
Uniform Delay, d1	74.3	24.1	8.5	73.2	12.9		55.7	46.0			72.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	12.1	43.4	0.1	93.8	1.2		5.2	0.2			0.8	
Delay (s)	86.4	67.5	8.6	167.0	14.1		60.9	46.2			73.1	
Level of Service	F	E	A	F	B		E	D			E	
Approach Delay (s)		60.8			19.8			57.3			73.1	
Approach LOS		E			B			E			E	

Intersection Summary			
HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background +Project PM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗		↖	↗	↖		↖	↗		↖	↗	
Sign Control	Free			Free			Stop			Stop			
Grade	0%			0%			0%			0%			
Volume (veh/h)	1	1329	145	7	1260	0	29	0	7	4	0	3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	1	1445	158	8	1370	0	32	0	8	4	0	3	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type							None			None			
Median storage (veh)													
Upstream signal (ft)	1040												
pX, platoon unblocked													
vC, conflicting volume	1370	1602			2914			2910	1523	2839	2989	1370	
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1370	1602			2914			2910	1523	2839	2989	1370	
tC, single (s)	4.1	4.1			7.1			6.5	6.2	7.1	6.5	6.2	
tC, 2 stage (s)													
tF (s)	2.2	2.2			3.5			4.0	3.3	3.5	4.0	3.3	
p0 queue free %	100	98			0			100	95	58	100	98	
cM capacity (veh/h)	501	408			9			15	145	10	14	179	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2				
Volume Total	1	1602	8	1370	0	32	8	4	3				
Volume Left	1	0	8	0	0	32	0	4	0				
Volume Right	0	158	0	0	0	0	8	0	3				
cSH	501	1700	408	1700	1700	9	145	10	179				
Volume to Capacity	0.00	0.94	0.02	0.81	0.00	3.36	0.05	0.42	0.02				
Queue Length (ft)	0	0	1	0	0	Err	4	24	1				
Control Delay (s)	12.2	0.0	14.0	0.0	0.0	Err	31.2	514.0	25.5				
Lane LOS	B		B			F	D	F	D				
Approach Delay (s)	0.0	0.1			8060.8			304.6					
Approach LOS				F			F						
Intersection Summary													
Average Delay	105.0												
Intersection Capacity Utilization	95.4%			ICU Level of Service					F				
Analysis Period (min)	15												

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Background +Project PM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3401		1770	3293	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.40	1.00		0.45	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	739	3401		832	3293	
Volume (vph)	353	865	225	149	523	64	125	273	97	83	229	199
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	384	940	245	162	568	70	136	297	105	90	249	216
RTOR Reduction (vph)	0	0	149	0	0	55	0	39	0	0	144	0
Lane Group Flow (vph)	384	940	96	162	568	15	136	363	0	90	321	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	28.9	35.3	35.3	12.7	19.1	19.1	30.0	30.0		30.0	30.0	
Effective Green, g (s)	28.9	35.3	35.3	12.7	19.1	19.1	30.0	30.0		30.0	30.0	
Actuated g/C Ratio	0.32	0.39	0.39	0.14	0.21	0.21	0.33	0.33		0.33	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	568	1388	621	250	751	336	246	1134		277	1098	
v/s Ratio Prot	0.22	c0.27		0.09	c0.16			0.12			0.14	
v/s Ratio Perm			0.15			0.04	c0.18			0.11		
v/c Ratio	0.68	0.68	0.15	0.65	0.76	0.04	0.55	0.32		0.32	0.29	
Uniform Delay, d1	26.5	22.6	17.7	36.5	33.3	28.2	24.5	22.4		22.4	22.2	
Progression Factor	0.62	0.58	0.16	0.37	0.33	0.20	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	0.9	0.1	5.3	4.0	0.1	8.7	0.7		3.1	0.7	
Delay (s)	18.6	14.1	2.9	19.0	15.1	5.6	33.2	23.1		25.5	22.8	
Level of Service	B	B	A	B	B	A	C	C		C	C	
Approach Delay (s)		13.4			15.1			25.7			23.3	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM Average Control Delay			17.3			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)			8.0					
Intersection Capacity Utilization			67.0%	ICU Level of Service			C					
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Background +Project PM Volumes
 2/18/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	214	796	1	0	512	11	1	0	0	7	0	146
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	233	865	1	0	557	12	1	0	0	8	0	159
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked				0.61			0.61	0.61	0.61	0.61	0.61	0.61
vC, conflicting volume	568			866			2052	1899	866	1893	1894	562
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	568			782			2713	2464	781	2455	2455	562
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	77			100			77	100	100	28	100	70
cM capacity (veh/h)	1004			513			5	14	242	11	15	526

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1099	568	1	166
Volume Left	233	0	1	8
Volume Right	1	12	0	159
cSH	1004	513	5	163
Volume to Capacity	0.23	0.00	0.23	1.02
Queue Length (ft)	22	0	11	202
Control Delay (s)	5.6	0.0	905.8	131.8
Lane LOS	A		F	F
Approach Delay (s)	5.6	0.0	905.8	131.8
Approach LOS			F	F

Intersection Summary			
Average Delay		15.9	
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)		15	
























Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶		↷		↶	↷
Sign Control	Stop		Free		Free	Free
Grade	0%		0%			0%
Volume (veh/h)	85	93	845	144	91	636
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	92	101	918	157	99	691
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1886	997			1075	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1886	997			1075	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	66			85	
cM capacity (veh/h)	66	296			649	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	193	1075	99	691
Volume Left	92	0	99	0
Volume Right	101	157	0	0
cSH	111	1700	649	1700
Volume to Capacity	1.75	0.63	0.15	0.41
Queue Length (ft)	378	0	13	0
Control Delay (s)	437.2	0.0	11.5	0.0
Lane LOS	F		B	
Approach Delay (s)	437.2	0.0	1.4	
Approach LOS	F			

Intersection Summary			
Average Delay		41.6	
Intersection Capacity Utilization	78.7%		ICU Level of Service D
Analysis Period (min)		15	



















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.91			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1856		1770	1695			1813	
Flt Permitted	0.17	1.00	1.00	0.33	1.00		0.95	1.00			0.97	
Satd. Flow (perm)	310	1863	1583	612	1856		1770	1695			1767	
Volume (vph)	10	580	80	40	815	20	110	40	60	10	90	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	630	87	43	886	22	120	43	65	11	98	22
RTOR Reduction (vph)	0	0	31	0	1	0	0	48	0	0	9	0
Lane Group Flow (vph)	11	630	56	43	907	0	120	60	0	0	122	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0			11.3	
Effective Green, g (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0			11.3	
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.64		0.10	0.27			0.13	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	200	1201	1020	394	1196		171	452			222	
v/s Ratio Prot		0.34			c0.49		c0.07	0.06				
v/s Ratio Perm	0.04		0.05	0.07							c0.07	
v/c Ratio	0.06	0.52	0.05	0.11	0.76		0.70	0.13			0.55	
Uniform Delay, d1	5.9	8.6	5.9	6.1	11.1		39.4	25.1			37.0	
Progression Factor	0.34	0.42	0.14	1.19	0.88		0.92	1.23			1.00	
Incremental Delay, d2	0.5	1.6	0.1	0.1	2.0		11.8	0.1			2.9	
Delay (s)	2.5	5.2	0.9	7.4	11.7		48.0	31.0			39.9	
Level of Service	A	A	A	A	B		D	C			D	
Approach Delay (s)		4.6			11.5			40.0			39.9	
Approach LOS		A			B			D			D	
Intersection Summary												
HCM Average Control Delay			14.1				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			63.9%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												





























HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.98			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)		3483			3523		1770	1583			1817	1583
Flt Permitted		0.95			0.74		0.76	1.00			0.91	1.00
Satd. Flow (perm)		3321			2611		1409	1583			1700	1583
Volume (vph)	2	787	92	120	1245	1	41	0	61	1	1	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	855	100	130	1353	1	45	0	66	1	1	2
RTOR Reduction (vph)	0	8	0	0	0	0	0	58	0	0	0	2
Lane Group Flow (vph)	0	949	0	0	1484	0	45	8	0	0	2	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		71.3			71.3		10.7	10.7			10.7	10.7
Effective Green, g (s)		71.3			71.3		10.7	10.7			10.7	10.7
Actuated g/C Ratio		0.79			0.79		0.12	0.12			0.12	0.12
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2631			2068		168	188			202	188
v/s Ratio Prot							c0.04					
v/s Ratio Perm		0.29			c0.57		0.03				0.00	0.00
v/c Ratio		0.36			0.72		0.27	0.04			0.01	0.00
Uniform Delay, d1		2.7			4.5		36.1	35.1			35.0	34.9
Progression Factor		0.42			1.21		1.00	1.00			1.00	1.00
Incremental Delay, d2		0.1			0.1		3.9	0.4			0.0	0.0
Delay (s)		1.2			5.6		40.0	35.5			35.0	34.9
Level of Service		A			A		D	D			C	C
Approach Delay (s)		1.2			5.6		37.3				35.0	
Approach LOS		A			A		D				C	
Intersection Summary												
HCM Average Control Delay		5.4		HCM Level of Service				A				
HCM Volume to Capacity ratio		0.67										
Actuated Cycle Length (s)		90.0		Sum of lost time (s)				8.0				
Intersection Capacity Utilization		81.6%		ICU Level of Service				D				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Cumulative +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3473		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3473		1770	3539	1583
Volume (vph)	220	755	202	122	1181	260	180	450	64	50	220	320
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	821	220	133	1284	283	196	489	70	54	239	348
RTOR Reduction (vph)	0	0	145	0	0	164	0	13	0	0	0	181
Lane Group Flow (vph)	239	821	75	133	1284	119	196	546	0	54	239	167
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases			4			8						6
Actuated Green, G (s)	8.2	30.7	30.7	14.9	37.4	37.4	13.2	22.8		5.6	15.2	15.2
Effective Green, g (s)	8.2	30.7	30.7	14.9	37.4	37.4	13.2	22.8		5.6	15.2	15.2
Actuated g/C Ratio	0.09	0.34	0.34	0.17	0.42	0.42	0.15	0.25		0.06	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	313	1207	540	293	1471	658	260	880		110	598	267
v/s Ratio Prot	0.07	c0.23		0.08	c0.36		c0.11	c0.16		0.03	0.07	
v/s Ratio Perm			0.14			0.18						0.22
v/c Ratio	0.76	0.68	0.14	0.45	0.87	0.18	0.75	0.62		0.49	0.40	0.62
Uniform Delay, d1	40.0	25.4	20.5	33.9	24.1	16.6	36.8	29.8		40.8	33.3	34.8
Progression Factor	1.25	0.77	0.84	0.47	0.25	0.07	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.0	1.3	0.1	0.4	2.5	0.1	11.7	3.3		3.4	2.0	10.6
Delay (s)	58.9	20.9	17.4	16.4	8.6	1.2	48.5	33.1		44.2	35.3	45.3
Level of Service	E	C	B	B	A	A	D	C		D	D	D
Approach Delay (s)		27.4			8.0			37.1			41.5	
Approach LOS		C			A			D			D	
Intersection Summary												
HCM Average Control Delay			23.6	HCM Level of Service				C				
HCM Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				12.0				
Intersection Capacity Utilization			72.4%	ICU Level of Service				C				
Analysis Period (min)			15									
c Critical Lane Group												














HCM Signalized Intersection Capacity Analysis
23: Laurel Road & Rose Avenue

Cumulative +Project AM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	3525		1770	3536		1770	1706			1785	1583
Flt Permitted	0.95	1.00		0.42	1.00		0.43	1.00			0.74	1.00
Satd. Flow (perm)	1770	3525		790	3536		799	1706			1381	1583
Volume (vph)	179	539	15	23	1462	10	10	6	8	172	25	70
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	195	586	16	25	1589	11	11	7	9	187	27	76
RTOR Reduction (vph)	0	2	0	0	0	0	0	7	0	0	0	61
Lane Group Flow (vph)	195	600	0	25	1600	0	11	9	0	0	214	15
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases				8			2			6		6
Actuated Green, G (s)	13.1	63.8		46.7	46.7		18.2	18.2			18.2	18.2
Effective Green, g (s)	13.1	63.8		46.7	46.7		18.2	18.2			18.2	18.2
Actuated g/C Ratio	0.15	0.71		0.52	0.52		0.20	0.20			0.20	0.20
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	258	2499		410	1835		162	345			279	320
v/s Ratio Prot	c0.11	0.17			c0.45			0.01				
v/s Ratio Perm				0.03			0.01				c0.15	0.05
v/c Ratio	0.76	0.24		0.06	0.87		0.07	0.03			0.77	0.05
Uniform Delay, d1	36.9	4.6		10.8	19.0		29.0	28.8			33.9	28.9
Progression Factor	1.01	0.04		0.60	0.57		0.78	0.72			1.00	1.00
Incremental Delay, d2	8.9	0.0		0.0	1.6		0.7	0.1			18.1	0.3
Delay (s)	46.2	0.2		6.4	12.4		23.3	20.9			52.0	29.2
Level of Service	D	A		A	B		C	C			D	C
Approach Delay (s)		11.5			12.3			21.9			46.0	
Approach LOS		B			B			C			D	
Intersection Summary												
HCM Average Control Delay			15.7			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			78.2%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												






















HCM Signalized Intersection Capacity Analysis
28: Delta Road & Main Street

Cumulative +Project AM Volumes
2/18/2010

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3489		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3489		1770	3539
Volume (vph)	125	247	761	80	226	934
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	268	827	87	246	1015
RTOR Reduction (vph)	0	237	6	0	0	0
Lane Group Flow (vph)	136	31	908	0	246	1015
Turn Type	Perm			Prot		
Protected Phases	8		2		1	6
Permitted Phases	8					
Actuated Green, G (s)	10.3	10.3	50.4		17.3	71.7
Effective Green, g (s)	10.3	10.3	50.4		17.3	71.7
Actuated g/C Ratio	0.11	0.11	0.56		0.19	0.80
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	203	181	1954		340	2819
v/s Ratio Prot	0.08		c0.26		c0.14	0.29
v/s Ratio Perm		0.17				
v/c Ratio	0.67	0.17	0.46		0.72	0.36
Uniform Delay, d1	38.2	36.0	11.8		34.1	2.6
Progression Factor	1.22	2.40	0.52		1.01	0.53
Incremental Delay, d2	8.0	0.4	0.8		7.0	0.3
Delay (s)	54.6	86.9	6.9		41.5	1.7
Level of Service	D	F	A		D	A
Approach Delay (s)	76.0		6.9			9.5
Approach LOS	E		A			A
Intersection Summary						
HCM Average Control Delay			19.0	HCM Level of Service		B
HCM Volume to Capacity ratio			0.66			
Actuated Cycle Length (s)			90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization			53.0%	ICU Level of Service	A	
Analysis Period (min)			15			
c Critical Lane Group						



















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.94			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1856		1770	1751			1797	
Flt Permitted	0.18	1.00	1.00	0.07	1.00		0.95	1.00			0.83	
Satd. Flow (perm)	331	1863	1583	130	1856		1770	1751			1519	
Volume (vph)	20	1070	130	60	861	20	140	60	40	30	40	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1163	141	65	936	22	152	65	43	33	43	11
RTOR Reduction (vph)	0	0	39	0	1	0	0	26	0	0	5	0
Lane Group Flow (vph)	22	1163	102	65	957	0	152	82	0	0	82	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases	2		2	6			3	8		4		
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1	
Effective Green, g (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1	
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.70		0.09	0.22			0.09	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	231	1302	1107	91	1297		159	387			138	
v/s Ratio Prot	c0.62				0.52		c0.09	0.06				
v/s Ratio Perm	0.07		0.09	0.50							c0.06	
v/c Ratio	0.10	0.89	0.09	0.71	0.74		0.96	0.21			0.59	
Uniform Delay, d1	4.9	12.1	4.8	9.0	9.4		45.3	31.8			43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.8	9.6	0.2	23.2	2.2		57.8	0.3			6.6	
Delay (s)	5.7	21.7	5.0	32.3	11.6		103.1	32.1			50.3	
Level of Service	A	C	A	C	B		F	C			D	
Approach Delay (s)	19.7				12.9		73.6				50.3	
Approach LOS	B				B		E				D	
Intersection Summary												
HCM Average Control Delay	23.3		HCM Level of Service		C							
HCM Volume to Capacity ratio	0.87											
Actuated Cycle Length (s)	100.0				Sum of lost time (s)				12.0			
Intersection Capacity Utilization	77.4%				ICU Level of Service				D			
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.99			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)		3500			3536		1770	1583			1770	1583
Flt Permitted		0.95			0.85		0.76	1.00			0.75	1.00
Satd. Flow (perm)		3341			3020		1407	1583			1399	1583
Volume (vph)	1	1908	154	25	1418	0	29	0	9	4	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	2074	167	27	1541	0	32	0	10	4	0	3
RTOR Reduction (vph)	0	4	0	0	0	0	0	9	0	0	0	3
Lane Group Flow (vph)	0	2238	0	0	1568	0	32	1	0	0	4	0
Turn Type	Perm		Perm			Perm			Perm		Perm	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		6			6
Actuated Green, G (s)		74.5			74.5		7.5	7.5			7.5	7.5
Effective Green, g (s)		74.5			74.5		7.5	7.5			7.5	7.5
Actuated g/C Ratio		0.83			0.83		0.08	0.08			0.08	0.08
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2766			2500		117	132			117	132
v/s Ratio Prot							0.01					
v/s Ratio Perm		c0.67			0.52		c0.02				0.00	0.00
v/c Ratio		0.81			0.63		0.27	0.01			0.03	0.00
Uniform Delay, d1		4.0			2.8		38.7	37.8			37.9	37.8
Progression Factor		1.00			1.27		1.00	1.00			1.00	1.00
Incremental Delay, d2		1.8			0.3		5.7	0.1			0.1	0.0
Delay (s)		5.9			3.8		44.4	37.9			38.0	37.8
Level of Service		A			A		D	D			D	D
Approach Delay (s)		5.9			3.8		42.8				37.9	
Approach LOS		A			A		D				D	
Intersection Summary												
HCM Average Control Delay		5.5		HCM Level of Service				A				
HCM Volume to Capacity ratio		0.76										
Actuated Cycle Length (s)		90.0		Sum of lost time (s)				8.0				
Intersection Capacity Utilization		73.3%		ICU Level of Service				D				
Analysis Period (min)		15										
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Cumulative +Project PM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3397		1770	3285	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3397		1770	3285	
Volume (vph)	460	1512	310	138	1120	120	160	430	157	180	360	330
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	500	1643	337	150	1217	130	174	467	171	196	391	359
RTOR Reduction (vph)	0	0	130	0	0	67	0	31	0	0	138	0
Lane Group Flow (vph)	500	1643	207	150	1217	63	174	607	0	196	612	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	31.0	58.3	58.3	11.7	39.0	39.0	11.0	21.0		13.0	23.0	
Effective Green, g (s)	31.0	58.3	58.3	11.7	39.0	39.0	11.0	21.0		13.0	23.0	
Actuated g/C Ratio	0.26	0.49	0.49	0.10	0.32	0.32	0.09	0.18		0.11	0.19	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	457	1719	769	173	1150	514	162	594		192	630	
v/s Ratio Prot	c0.28	0.46		0.08	c0.34		0.10	0.19		c0.11	c0.23	
v/s Ratio Perm			0.21			0.08						
v/c Ratio	1.09	0.96	0.27	0.87	1.06	0.12	1.07	1.02		1.02	0.97	
Uniform Delay, d1	44.5	29.6	18.2	53.4	40.5	28.5	54.5	49.5		53.5	48.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	70.0	12.7	0.2	33.7	43.4	0.1	91.8	42.4		70.5	29.4	
Delay (s)	114.5	42.3	18.4	87.1	83.9	28.6	146.3	91.9		124.0	77.6	
Level of Service	F	D	B	F	F	C	F	F		F	E	
Approach Delay (s)		53.6			79.4			103.6			87.2	
Approach LOS		D			E			F			F	
Intersection Summary												
HCM Average Control Delay			73.0			HCM Level of Service			E			
HCM Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			99.2%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
23: Laurel Road & Rose Avenue

Cumulative +Project PM Volumes
2/18/2010














												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1770	3537		1770	3526		1770	1730			1810	1583
Flt Permitted	0.95	1.00		0.17	1.00		0.68	1.00			0.80	1.00
Satd. Flow (perm)	1770	3537		313	3526		1276	1730			1491	1583
Volume (vph)	94	1401	6	29	871	22	5	18	17	50	35	149
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	1523	7	32	947	24	5	20	18	54	38	162
RTOR Reduction (vph)	0	0	0	0	1	0	0	16	0	0	0	141
Lane Group Flow (vph)	102	1530	0	32	970	0	5	22	0	0	92	21
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		6
Actuated Green, G (s)	8.3	70.2		57.9	57.9		11.8	11.8			11.8	11.8
Effective Green, g (s)	8.3	70.2		57.9	57.9		11.8	11.8			11.8	11.8
Actuated g/C Ratio	0.09	0.78		0.64	0.64		0.13	0.13			0.13	0.13
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	163	2759		201	2268		167	227			195	208
v/s Ratio Prot	0.06	c0.43			0.28			0.02				
v/s Ratio Perm				0.10			0.00				0.06	0.10
v/c Ratio	0.63	0.55		0.16	0.43		0.03	0.10			0.47	0.10
Uniform Delay, d1	39.4	3.8		6.4	7.9		34.1	34.4			36.2	34.4
Progression Factor	1.36	0.21		0.14	0.18		0.75	0.74			1.00	1.00
Incremental Delay, d2	2.8	0.1		0.2	0.1		0.3	0.8			8.0	1.0
Delay (s)	56.4	0.9		1.1	1.5		25.8	26.3			44.2	35.4
Level of Service	E	A		A	A		C	C			D	D
Approach Delay (s)		4.4			1.5			26.2			38.6	
Approach LOS		A			A			C			D	

Intersection Summary

HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 28: Delta Road & Main Street

Cumulative +Project PM Volumes
 2/18/2010

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3466		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3466		1770	3539
Volume (vph)	109	230	1163	187	234	993
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	118	250	1264	203	254	1079
RTOR Reduction (vph)	0	219	13	0	0	0
Lane Group Flow (vph)	118	31	1454	0	254	1079
Turn Type	Perm			Prot		
Protected Phases	8		2		1	6
Permitted Phases	8					
Actuated Green, G (s)	11.2	11.2	50.9		15.9	70.8
Effective Green, g (s)	11.2	11.2	50.9		15.9	70.8
Actuated g/C Ratio	0.12	0.12	0.57		0.18	0.79
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	220	197	1960		313	2784
v/s Ratio Prot	0.07		c0.42		c0.14	0.30
v/s Ratio Perm		0.16				
v/c Ratio	0.54	0.16	0.74		0.81	0.39
Uniform Delay, d1	37.0	35.2	14.6		35.6	2.9
Progression Factor	1.11	1.83	0.56		0.98	0.57
Incremental Delay, d2	2.3	0.4	2.4		13.8	0.4
Delay (s)	43.5	64.9	10.6		48.6	2.1
Level of Service	D	E	B		D	A
Approach Delay (s)	58.1		10.6			10.9
Approach LOS	E		B			B
Intersection Summary						
HCM Average Control Delay			16.3	HCM Level of Service		B
HCM Volume to Capacity ratio			0.84			
Actuated Cycle Length (s)			90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization			67.1%	ICU Level of Service	C	
Analysis Period (min)			15			
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background +Project AM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1678	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1712	
Volume (vph)	1	821	47	17	997	1	53	1	21	2	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	892	51	18	1084	1	58	1	23	2	0	3
RTOR Reduction (vph)	0	0	17	0	0	0	0	17	0	0	3	0
Lane Group Flow (vph)	1	892	34	18	1085	0	58	7	0	0	2	0
Turn Type	Prot		Perm	Prot			Prot			Perm		
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4							6		
Actuated Green, G (s)	0.8	72.8	72.8	2.4	74.4		26.1	32.8			2.7	
Effective Green, g (s)	0.8	72.8	72.8	2.4	74.4		26.1	32.8			2.7	
Actuated g/C Ratio	0.01	0.61	0.61	0.02	0.62		0.22	0.27			0.02	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	12	1130	960	35	1154		385	436			39	
v/s Ratio Prot	0.00	c0.48		0.01	c0.58		c0.03	0.02				
v/s Ratio Perm			0.03								c0.00	
v/c Ratio	0.08	0.79	0.04	0.51	0.94		0.15	0.02			0.05	
Uniform Delay, d1	59.2	17.8	9.5	58.2	20.8		38.0	31.8			57.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	3.0	3.7	0.0	12.2	14.4		0.8	0.1			0.6	
Delay (s)	62.2	21.6	9.5	70.4	35.2		38.8	31.9			58.0	
Level of Service	E	C	A	E	D		D	C			E	
Approach Delay (s)		20.9			35.8			36.8			58.0	
Approach LOS		C			D			D			E	
Intersection Summary												
HCM Average Control Delay			29.3			HCM Level of Service					C	
HCM Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)		16.0				
Intersection Capacity Utilization			65.5%			ICU Level of Service					C	
Analysis Period (min)			15									
c Critical Lane Group												



























HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background +Project AM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Free		Free				Stop				Stop	
Grade	0%		0%				0%				0%	
Volume (veh/h)	2	903	82	7	1182	1	33	0	11	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	982	89	8	1285	1	36	0	12	1	1	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None			None		
Median storage (veh)												
Upstream signal (ft)	1040											
pX, platoon unblocked												
vC, conflicting volume	1286			1071			2333	2332	1026	2298	2375	1285
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1286			1071			2333	2332	1026	2298	2375	1285
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			0	100	96	96	97	99
cM capacity (veh/h)	539			651			25	36	285	26	34	201
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2			
Volume Total	2	1071	8	1285	1	36	12	2	2			
Volume Left	2	0	8	0	0	36	0	1	0			
Volume Right	0	89	0	0	1	0	12	0	2			
cSH	539	1700	651	1700	1700	25	285	29	201			
Volume to Capacity	0.00	0.63	0.01	0.76	0.00	1.46	0.04	0.07	0.01			
Queue Length (ft)	0	0	1	0	0	111	3	6	1			
Control Delay (s)	11.7	0.0	10.6	0.0	0.0	582.6	18.2	137.0	23.1			
Lane LOS	B		B			F	C	F	C			
Approach Delay (s)	0.0	0.1				441.5	80.1					
Approach LOS							F	F				
Intersection Summary												
Average Delay			8.9									
Intersection Capacity Utilization			78.9%		ICU Level of Service				D			
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Background +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3444		1770	3304	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.50	1.00		0.49	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	939	3444		906	3304	
Volume (vph)	205	445	187	117	794	91	167	286	63	47	182	145
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	484	203	127	863	99	182	311	68	51	198	158
RTOR Reduction (vph)	0	0	127	0	0	70	0	19	0	0	95	0
Lane Group Flow (vph)	223	484	76	127	863	29	182	360	0	51	261	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	15.7	33.5	33.5	8.8	26.6	26.6	35.7	35.7		35.7	35.7	
Effective Green, g (s)	15.7	33.5	33.5	8.8	26.6	26.6	35.7	35.7		35.7	35.7	
Actuated g/C Ratio	0.17	0.37	0.37	0.10	0.30	0.30	0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	309	1317	589	173	1046	468	372	1366		359	1311	
v/s Ratio Prot	c0.13	0.14		0.07	c0.24			0.11			0.11	
v/s Ratio Perm			0.13			0.06	c0.19			0.06		
v/c Ratio	0.72	0.37	0.13	0.73	0.83	0.06	0.49	0.26		0.14	0.20	
Uniform Delay, d1	35.1	20.5	18.6	39.5	29.5	22.8	20.3	18.3		17.4	17.8	
Progression Factor	0.77	0.86	0.51	1.00	0.41	0.23	1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.0	0.2	0.1	12.5	4.5	0.0	4.5	0.5		0.8	0.3	
Delay (s)	34.9	17.9	9.5	51.9	16.8	5.2	24.9	18.8		18.2	18.1	
Level of Service	C	B	A	D	B	A	C	B		B	B	
Approach Delay (s)		20.2			19.8			20.7			18.1	
Approach LOS		C			B			C			B	
Intersection Summary												
HCM Average Control Delay			19.9				HCM Level of Service			B		
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)		12.0			
Intersection Capacity Utilization			65.6%				ICU Level of Service		C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Background +Project AM Volumes
 2/18/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	162	476	0	2	707	26	0	1	2	13	1	246
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	176	517	0	2	768	28	0	1	2	14	1	267
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type							None				None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked	0.92			0.77			0.80	0.80	0.77	0.80	0.80	0.92
vC, conflicting volume	797			517			1924	1671	517	1659	1657	783
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	780			371			2009	1694	371	1679	1676	765
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	77			100			100	98	100	71	98	28
cM capacity (veh/h)	774			911			8	58	518	49	59	373
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	693	799	3	283								
Volume Left	176	2	0	14								
Volume Right	0	28	2	267								
cSH	774	911	141	276								
Volume to Capacity	0.23	0.00	0.02	1.02								
Queue Length (ft)	22	0	2	268								
Control Delay (s)	5.5	0.1	31.1	101.3								
Lane LOS	A	A	D	F								
Approach Delay (s)	5.5	0.1	31.1	101.3								
Approach LOS			D	F								
Intersection Summary												
Average Delay			18.3									
Intersection Capacity Utilization			105.6%		ICU Level of Service				G			
Analysis Period (min)			15									



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free		Free	Free
Grade	0%		0%			0%
Volume (veh/h)	107	174	523	62	166	728
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	116	189	568	67	180	791
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1754	602			636	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1754	602			636	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	62			81	
cM capacity (veh/h)	76	499			948	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	305	636	180	791
Volume Left	116	0	180	0
Volume Right	189	67	0	0
cSH	160	1700	948	1700
Volume to Capacity	1.91	0.37	0.19	0.47
Queue Length (ft)	579	0	18	0
Control Delay (s)	480.9	0.0	9.7	0.0
Lane LOS	F		A	
Approach Delay (s)	480.9	0.0	1.8	
Approach LOS	F			

Intersection Summary			
Average Delay		77.7	
Intersection Capacity Utilization		67.1%	ICU Level of Service C
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Background +Project PM Volumes
2/18/2010
























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗		↖	↗			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.86			0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.97	
Satd. Flow (prot)	1770	1863	1583	1770	1862		1770	1595			1722	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1862		1770	1595			1779	
Volume (vph)	2	1258	161	30	823	1	135	2	42	2	0	1
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1367	175	33	895	1	147	2	46	2	0	1
RTOR Reduction (vph)	0	0	31	0	0	0	0	36	0	0	1	0
Lane Group Flow (vph)	2	1367	144	33	896	0	147	12	0	0	2	0
Turn Type	Prot		Perm		Prot		Prot		Perm			
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases			4							6		
Actuated Green, G (s)	0.8	101.8	101.8	3.2	104.2		26.2	33.0			2.8	
Effective Green, g (s)	0.8	101.8	101.8	3.2	104.2		26.2	33.0			2.8	
Actuated g/C Ratio	0.01	0.68	0.68	0.02	0.69		0.17	0.22			0.02	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	9	1264	1074	38	1293		309	351			33	
v/s Ratio Prot	0.00	c0.73		0.02	c0.48		c0.08	c0.03				
v/s Ratio Perm			0.11								0.00	
v/c Ratio	0.22	1.08	0.13	0.87	0.69		0.48	0.03			0.06	
Uniform Delay, d1	74.3	24.1	8.5	73.2	13.5		55.7	46.0			72.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	12.1	50.4	0.1	93.8	1.6		5.2	0.2			0.8	
Delay (s)	86.4	74.5	8.6	167.0	15.1		60.9	46.2			73.1	
Level of Service	F	E	A	F	B		E	D			E	
Approach Delay (s)		67.1			20.5			57.3			73.1	
Approach LOS		E			C			E			E	

Intersection Summary

HCM Average Control Delay	50.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



























HCM Unsignalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Background +Project PM Volumes
2/18/2010

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Sign Control	Free		Free		Stop		Stop						
Grade	0%		0%		0%		0%						
Volume (veh/h)	1	1367	145	7	1327	0	29	0	7	4	0	3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Hourly flow rate (vph)	1	1486	158	8	1442	0	32	0	8	4	0	3	
Pedestrians													
Lane Width (ft)													
Walking Speed (ft/s)													
Percent Blockage													
Right turn flare (veh)													
Median type							None			None			
Median storage veh)													
Upstream signal (ft)	1040												
pX, platoon unblocked													
vC, conflicting volume	1442		1643			3028		3024	1565	2953	3103	1442	
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1442		1643			3028		3024	1565	2953	3103	1442	
tC, single (s)	4.1		4.1			7.1		6.5	6.2	7.1	6.5	6.2	
tC, 2 stage (s)													
tF (s)	2.2		2.2			3.5		4.0	3.3	3.5	4.0	3.3	
p0 queue free %	100		98			0		100	94	49	100	98	
cM capacity (veh/h)	470		394			8		13	137	8	11	162	
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1	SB 2				
Volume Total	1	1643	8	1442	0	32	8	4	3				
Volume Left	1	0	8	0	0	32	0	4	0				
Volume Right	0	158	0	0	0	0	8	0	3				
cSH	470	1700	394	1700	1700	8	137	8	162				
Volume to Capacity	0.00	0.97	0.02	0.85	0.00	4.08	0.06	0.51	0.02				
Queue Length (ft)	0	0	1	0	0	Err	4	26	2				
Control Delay (s)	12.7	0.0	14.3	0.0	0.0	Err	32.8	654.8	27.6				
Lane LOS	B		B			F	D	F	D				
Approach Delay (s)	0.0		0.1			8061.1		386.0					
Approach LOS						F		F					
Intersection Summary													
Average Delay			101.4										
Intersection Capacity Utilization			97.4%			ICU Level of Service			F				
Analysis Period (min)			15										

HCM Signalized Intersection Capacity Analysis
21: Laurel Road & Empire Avenue

Background +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3395		1770	3293	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.39	1.00		0.44	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	734	3395		819	3293	
Volume (vph)	353	882	225	158	553	64	125	273	102	83	229	199
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	384	959	245	172	601	70	136	297	111	90	249	216
RTOR Reduction (vph)	0	0	148	0	0	55	0	42	0	0	145	0
Lane Group Flow (vph)	384	959	97	172	601	15	136	366	0	90	320	0
Turn Type	Prot		Perm	Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)	28.8	35.5	35.5	13.0	19.7	19.7	29.5	29.5		29.5	29.5	
Effective Green, g (s)	28.8	35.5	35.5	13.0	19.7	19.7	29.5	29.5		29.5	29.5	
Actuated g/C Ratio	0.32	0.39	0.39	0.14	0.22	0.22	0.33	0.33		0.33	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	566	1396	624	256	775	347	241	1113		268	1079	
v/s Ratio Prot	0.22	c0.27		0.10	c0.17			0.12			0.14	
v/s Ratio Perm			0.15			0.04	c0.19			0.11		
v/c Ratio	0.68	0.69	0.15	0.67	0.78	0.04	0.56	0.33		0.34	0.30	
Uniform Delay, d1	26.6	22.6	17.6	36.5	33.1	27.7	24.9	22.8		22.8	22.5	
Progression Factor	0.62	0.58	0.18	0.37	0.32	0.18	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	1.0	0.1	6.2	4.5	0.0	9.2	0.8		3.4	0.7	
Delay (s)	18.8	14.2	3.3	19.8	14.9	4.9	34.2	23.6		26.2	23.2	
Level of Service	B	B	A	B	B	A	C	C		C	C	
Approach Delay (s)		13.6			15.1			26.2			23.7	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM Average Control Delay			17.5			HCM Level of Service			B			
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)			8.0					
Intersection Capacity Utilization			67.8%	ICU Level of Service			C					
Analysis Period (min)			15									
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Background +Project PM Volumes
 2/18/2010



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	221	810	1	0	538	11	1	0	0	7	0	159
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	240	880	1	0	585	12	1	0	0	8	0	173
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)		1040			1010							
pX, platoon unblocked				0.60			0.60	0.60	0.60	0.60	0.60	
vC, conflicting volume	597			882			2125	1958	881	1952	1953	591
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	597			804			2860	2584	803	2574	2575	591
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	75			100			68	100	100	10	100	66
cM capacity (veh/h)	980			496			3	12	232	8	12	507

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1122	597	1	180
Volume Left	240	0	1	8
Volume Right	1	12	0	173
cSH	980	496	3	145
Volume to Capacity	0.25	0.00	0.32	1.24
Queue Length (ft)	24	0	13	268
Control Delay (s)	6.1	0.0	1312.7	213.8
Lane LOS	A		F	F
Approach Delay (s)	6.1	0.0	1312.7	213.8
Approach LOS			F	F

Intersection Summary			
Average Delay		24.6	
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)		15	























Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↘		↙	↘
Sign Control	Stop		Free		Free	Free
Grade	0%		0%		0%	0%
Volume (veh/h)	90	93	859	147	91	661
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	98	101	934	160	99	718
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1930	1014			1093	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1930	1014			1093	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	65			85	
cM capacity (veh/h)	62	290			638	

Direction, Lane #	WB 1	NB 1	SB 1	SB 2
Volume Total	199	1093	99	718
Volume Left	98	0	99	0
Volume Right	101	160	0	0
cSH	103	1700	638	1700
Volume to Capacity	1.94	0.64	0.15	0.42
Queue Length (ft)	414	0	14	0
Control Delay (s)	525.5	0.0	11.7	0.0
Lane LOS	F		B	
Approach Delay (s)	525.5	0.0	1.4	
Approach LOS	F			

Intersection Summary			
Average Delay		50.1	
Intersection Capacity Utilization	79.9%		ICU Level of Service D
Analysis Period (min)		15	



















HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.91			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1856		1770	1695			1813	
Flt Permitted	0.16	1.00	1.00	0.30	1.00		0.95	1.00			0.97	
Satd. Flow (perm)	301	1863	1583	563	1856		1770	1695			1767	
Volume (vph)	10	619	80	40	823	20	110	40	60	10	90	20
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	673	87	43	895	22	120	43	65	11	98	22
RTOR Reduction (vph)	0	0	31	0	1	0	0	48	0	0	9	0
Lane Group Flow (vph)	11	673	56	43	916	0	120	60	0	0	122	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases		2			6		3	8			4	
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0			11.3	
Effective Green, g (s)	58.0	58.0	58.0	58.0	58.0		8.7	24.0			11.3	
Actuated g/C Ratio	0.64	0.64	0.64	0.64	0.64		0.10	0.27			0.13	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	194	1201	1020	363	1196		171	452			222	
v/s Ratio Prot		0.36			c0.49		c0.07	0.06				
v/s Ratio Perm	0.04		0.05	0.08							c0.07	
v/c Ratio	0.06	0.56	0.05	0.12	0.77		0.70	0.13			0.55	
Uniform Delay, d1	5.9	8.9	5.9	6.2	11.2		39.4	25.1			37.0	
Progression Factor	0.36	0.46	0.13	1.27	0.93		0.92	1.22			1.00	
Incremental Delay, d2	0.5	1.8	0.1	0.1	2.0		11.8	0.1			2.9	
Delay (s)	2.7	5.9	0.9	7.9	12.4		48.1	30.8			39.9	
Level of Service	A	A	A	A	B		D	C			D	
Approach Delay (s)		5.3			12.2			39.9			39.9	
Approach LOS		A			B			D			D	
Intersection Summary												
HCM Average Control Delay			14.4				HCM Level of Service				B	
HCM Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			12.0		
Intersection Capacity Utilization			64.4%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												





























HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative +Project AM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.99			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)		3487			3524		1770	1583			1817	1583
Flt Permitted		0.95			0.72		0.76	1.00			0.93	1.00
Satd. Flow (perm)		3325			2553		1409	1583			1728	1583
Volume (vph)	2	852	92	120	1258	1	41	0	61	1	1	2
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	926	100	130	1367	1	45	0	66	1	1	2
RTOR Reduction (vph)	0	8	0	0	0	0	0	56	0	0	0	2
Lane Group Flow (vph)	0	1020	0	0	1498	0	45	10	0	0	2	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		68.5			68.5		13.5	13.5			13.5	13.5
Effective Green, g (s)		68.5			68.5		13.5	13.5			13.5	13.5
Actuated g/C Ratio		0.76			0.76		0.15	0.15			0.15	0.15
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2531			1943		211	237			259	237
v/s Ratio Prot							c0.04					
v/s Ratio Perm		0.31			c0.59		0.03				0.00	0.00
v/c Ratio		0.40			0.77		0.21	0.04			0.01	0.00
Uniform Delay, d1		3.7			6.2		33.6	32.7			32.6	32.5
Progression Factor		0.57			1.13		1.00	1.00			1.00	1.00
Incremental Delay, d2		0.1			0.2		2.3	0.3			0.0	0.0
Delay (s)		2.2			7.2		35.9	33.0			32.6	32.5
Level of Service		A			A		D	C			C	C
Approach Delay (s)		2.2			7.2		34.2				32.5	
Approach LOS		A			A		C				C	
Intersection Summary												
HCM Average Control Delay		6.4		HCM Level of Service				A				
HCM Volume to Capacity ratio		0.69										
Actuated Cycle Length (s)		90.0		Sum of lost time (s)				8.0				
Intersection Capacity Utilization		83.8%		ICU Level of Service				E				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 21: Laurel Road & Empire Avenue

Cumulative +Project AM Volumes
 2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	1770	3465		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	1770	3465		1770	3539	1583
Volume (vph)	220	784	202	124	1187	260	180	450	73	50	220	320
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	852	220	135	1290	283	196	489	79	54	239	348
RTOR Reduction (vph)	0	0	143	0	0	164	0	14	0	0	0	181
Lane Group Flow (vph)	239	852	77	135	1290	119	196	554	0	54	239	167
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1		6
Permitted Phases			4			8						6
Actuated Green, G (s)	8.2	31.3	31.3	14.3	37.4	37.4	13.2	22.8		5.6	15.2	15.2
Effective Green, g (s)	8.2	31.3	31.3	14.3	37.4	37.4	13.2	22.8		5.6	15.2	15.2
Actuated g/C Ratio	0.09	0.35	0.35	0.16	0.42	0.42	0.15	0.25		0.06	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	313	1231	551	281	1471	658	260	878		110	598	267
v/s Ratio Prot	0.07	c0.24		0.08	c0.36		c0.11	c0.16		0.03	0.07	
v/s Ratio Perm			0.14			0.18						0.22
v/c Ratio	0.76	0.69	0.14	0.48	0.88	0.18	0.75	0.63		0.49	0.40	0.62
Uniform Delay, d1	40.0	25.2	20.1	34.5	24.2	16.6	36.8	29.9		40.8	33.3	34.8
Progression Factor	1.26	0.74	0.73	0.47	0.25	0.07	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.9	1.4	0.1	0.5	2.6	0.1	11.7	3.4		3.4	2.0	10.6
Delay (s)	59.3	20.1	14.8	16.9	8.7	1.2	48.5	33.3		44.2	35.3	45.3
Level of Service	E	C	B	B	A	A	D	C		D	D	D
Approach Delay (s)		26.4			8.1			37.2			41.5	
Approach LOS		C			A			D			D	
Intersection Summary												
HCM Average Control Delay			23.4			HCM Level of Service		C				
HCM Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			72.6%			ICU Level of Service		C				
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 23: Laurel Road & Rose Avenue

Cumulative +Project AM Volumes
 2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.92			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.96	1.00
Satd. Flow (prot)	1770	3526		1770	3536		1770	1706			1785	1583
Flt Permitted	0.95	1.00		0.41	1.00		0.43	1.00			0.74	1.00
Satd. Flow (perm)	1770	3526		770	3536		796	1706			1381	1583
Volume (vph)	192	564	15	23	1468	10	10	6	8	172	25	73
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	209	613	16	25	1596	11	11	7	9	187	27	79
RTOR Reduction (vph)	0	2	0	0	0	0	0	7	0	0	0	63
Lane Group Flow (vph)	209	627	0	25	1607	0	11	9	0	0	214	16
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	6
Permitted Phases				8			2			6		6
Actuated Green, G (s)	13.4	63.9		46.5	46.5		18.1	18.1			18.1	18.1
Effective Green, g (s)	13.4	63.9		46.5	46.5		18.1	18.1			18.1	18.1
Actuated g/C Ratio	0.15	0.71		0.52	0.52		0.20	0.20			0.20	0.20
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	264	2503		398	1827		160	343			278	318
v/s Ratio Prot	c0.12	0.18			c0.45			0.01				
v/s Ratio Perm				0.03			0.01				c0.15	0.05
v/c Ratio	0.79	0.25		0.06	0.88		0.07	0.03			0.77	0.05
Uniform Delay, d1	37.0	4.6		10.9	19.3		29.1	28.9			34.0	29.0
Progression Factor	0.98	0.03		0.59	0.57		0.78	0.73			1.00	1.00
Incremental Delay, d2	10.9	0.0		0.0	1.7		0.8	0.1			18.4	0.3
Delay (s)	47.2	0.2		6.5	12.7		23.5	21.2			52.4	29.3
Level of Service	D	A		A	B		C	C			D	C
Approach Delay (s)		11.9			12.6			22.1			46.2	
Approach LOS		B			B			C			D	
Intersection Summary												
HCM Average Control Delay			16.0			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			79.0%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
28: Delta Road & Main Street

Cumulative +Project AM Volumes
2/18/2010
























Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰	↱	↕	↱	↰	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3488		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3488		1770	3539
Volume (vph)	126	247	785	84	226	939
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	137	268	853	91	246	1021
RTOR Reduction (vph)	0	237	6	0	0	0
Lane Group Flow (vph)	137	31	938	0	246	1021
Turn Type	Perm		Prot			
Protected Phases	8		2		1	6
Permitted Phases	8					
Actuated Green, G (s)	10.4	10.4	50.3		17.3	71.6
Effective Green, g (s)	10.4	10.4	50.3		17.3	71.6
Actuated g/C Ratio	0.12	0.12	0.56		0.19	0.80
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	205	183	1949		340	2815
v/s Ratio Prot	0.08		c0.27		c0.14	0.29
v/s Ratio Perm		0.17				
v/c Ratio	0.67	0.17	0.48		0.72	0.36
Uniform Delay, d1	38.1	35.9	12.0		34.1	2.6
Progression Factor	1.22	2.44	0.53		1.00	0.51
Incremental Delay, d2	7.9	0.4	0.8		7.0	0.3
Delay (s)	54.6	88.1	7.2		41.2	1.7
Level of Service	D	F	A		D	A
Approach Delay (s)	76.7		7.2			9.4
Approach LOS	E		A			A

Intersection Summary

HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
5: Main Street & Ohara Avenue

Cumulative +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.94			0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	1863	1583	1770	1857		1770	1751			1797	
Flt Permitted	0.16	1.00	1.00	0.06	1.00		0.95	1.00			0.83	
Satd. Flow (perm)	290	1863	1583	107	1857		1770	1751			1519	
Volume (vph)	20	1093	130	60	901	20	140	60	40	30	40	10
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1188	141	65	979	22	152	65	43	33	43	11
RTOR Reduction (vph)	0	0	38	0	1	0	0	26	0	0	5	0
Lane Group Flow (vph)	22	1188	103	65	1000	0	152	82	0	0	82	0
Turn Type	Perm		Perm	Perm			Prot			Perm		
Protected Phases	2		2	6			3	8		4		
Permitted Phases	2		2	6						4		
Actuated Green, G (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1	
Effective Green, g (s)	69.9	69.9	69.9	69.9	69.9		9.0	22.1			9.1	
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.70		0.09	0.22			0.09	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	203	1302	1107	75	1298		159	387			138	
v/s Ratio Prot	c0.64				0.54		c0.09	0.06				
v/s Ratio Perm	0.08		0.09	0.61							c0.06	
v/c Ratio	0.11	0.91	0.09	0.87	0.77		0.96	0.21			0.59	
Uniform Delay, d1	4.9	12.5	4.8	11.5	9.8		45.3	31.8			43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	1.1	11.2	0.2	60.4	2.9		57.8	0.3			6.6	
Delay (s)	6.0	23.7	5.0	71.8	12.7		103.1	32.1			50.3	
Level of Service	A	C	A	E	B		F	C			D	
Approach Delay (s)	21.5				16.3			73.6			50.3	
Approach LOS	C				B			E			D	
Intersection Summary												
HCM Average Control Delay			25.3			HCM Level of Service		C				
HCM Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			78.6%			ICU Level of Service		D				
Analysis Period (min)			15									
c Critical Lane Group												




























HCM Signalized Intersection Capacity Analysis
6: Main Street & Rose Avenue

Cumulative +Project PM Volumes
2/18/2010

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Lane Util. Factor		0.95			0.95		1.00	1.00			1.00	1.00
Frt		0.99			1.00		1.00	0.85			1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00			0.95	1.00
Satd. Flow (prot)		3500			3536		1770	1583			1770	1583
Flt Permitted		0.95			0.85		0.76	1.00			0.75	1.00
Satd. Flow (perm)		3342			3019		1407	1583			1399	1583
Volume (vph)	1	1946	154	25	1485	0	29	0	9	4	0	3
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	2115	167	27	1614	0	32	0	10	4	0	3
RTOR Reduction (vph)	0	4	0	0	0	0	0	9	0	0	0	3
Lane Group Flow (vph)	0	2279	0	0	1641	0	32	1	0	0	4	0
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		73.5			73.5		8.5	8.5			8.5	8.5
Effective Green, g (s)		73.5			73.5		8.5	8.5			8.5	8.5
Actuated g/C Ratio		0.82			0.82		0.09	0.09			0.09	0.09
Clearance Time (s)		4.0			4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)		2729			2466		133	150			132	150
v/s Ratio Prot							0.01					
v/s Ratio Perm		c0.68			0.54		c0.02				0.00	0.00
v/c Ratio		0.83			0.67		0.24	0.01			0.03	0.00
Uniform Delay, d1		4.8			3.3		37.8	36.9			37.0	36.9
Progression Factor		1.00			1.22		1.00	1.00			1.00	1.00
Incremental Delay, d2		2.4			0.3		4.2	0.1			0.1	0.0
Delay (s)		7.1			4.3		42.0	37.0			37.1	36.9
Level of Service		A			A		D	D			D	D
Approach Delay (s)		7.1			4.3		40.8				37.0	
Approach LOS		A			A		D				D	
Intersection Summary												
HCM Average Control Delay			6.4				HCM Level of Service				A	
HCM Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			74.3%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												
























HCM Signalized Intersection Capacity Analysis
 21: Laurel Road & Empire Avenue

Cumulative +Project PM Volumes
 2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3394		1770	3285	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583	1770	3394		1770	3285	
Volume (vph)	460	1529	310	147	1150	120	160	430	162	180	360	330
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	500	1662	337	160	1250	130	174	467	176	196	391	359
RTOR Reduction (vph)	0	0	128	0	0	65	0	33	0	0	138	0
Lane Group Flow (vph)	500	1662	209	160	1250	65	174	610	0	196	612	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	31.0	58.5	58.5	11.5	39.0	39.0	11.0	21.0		13.0	23.0	
Effective Green, g (s)	31.0	58.5	58.5	11.5	39.0	39.0	11.0	21.0		13.0	23.0	
Actuated g/C Ratio	0.26	0.49	0.49	0.10	0.32	0.32	0.09	0.18		0.11	0.19	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	457	1725	772	170	1150	514	162	594		192	630	
v/s Ratio Prot	c0.28	0.47		0.09	c0.35		0.10	0.19		c0.11	c0.23	
v/s Ratio Perm			0.21			0.08						
v/c Ratio	1.09	0.96	0.27	0.94	1.09	0.13	1.07	1.03		1.02	0.97	
Uniform Delay, d1	44.5	29.7	18.2	53.9	40.5	28.5	54.5	49.5		53.5	48.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	70.0	13.9	0.2	51.8	53.5	0.1	91.8	44.0		70.5	29.4	
Delay (s)	114.5	43.7	18.3	105.7	94.0	28.6	146.3	93.5		124.0	77.6	
Level of Service	F	D	B	F	F	C	F	F		F	E	
Approach Delay (s)		54.4			89.7			104.7			87.2	
Approach LOS		D			F			F			F	
Intersection Summary												
HCM Average Control Delay			76.2			HCM Level of Service		E				
HCM Volume to Capacity ratio			1.08									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)		12.0				
Intersection Capacity Utilization			100.0%			ICU Level of Service		G				
Analysis Period (min)			15									
c Critical Lane Group												














HCM Signalized Intersection Capacity Analysis
23: Laurel Road & Rose Avenue

Cumulative +Project PM Volumes
2/18/2010

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	0.93			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.97	1.00
Satd. Flow (prot)	1770	3537		1770	3526		1770	1730			1810	1583
Flt Permitted	0.95	1.00		0.17	1.00		0.68	1.00			0.80	1.00
Satd. Flow (perm)	1770	3537		309	3526		1275	1730			1490	1583
Volume (vph)	101	1415	6	29	897	22	5	18	17	50	35	162
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	110	1538	7	32	975	24	5	20	18	54	38	176
RTOR Reduction (vph)	0	0	0	0	1	0	0	16	0	0	0	153
Lane Group Flow (vph)	110	1545	0	32	998	0	5	22	0	0	92	23
Turn Type	Prot			Perm			Perm			Perm		Perm
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		6
Actuated Green, G (s)	8.6	70.3		57.7	57.7		11.7	11.7			11.7	11.7
Effective Green, g (s)	8.6	70.3		57.7	57.7		11.7	11.7			11.7	11.7
Actuated g/C Ratio	0.10	0.78		0.64	0.64		0.13	0.13			0.13	0.13
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	169	2763		198	2261		166	225			194	206
v/s Ratio Prot	0.06	c0.44			0.28			0.02				
v/s Ratio Perm				0.10			0.00				0.06	0.11
v/c Ratio	0.65	0.56		0.16	0.44		0.03	0.10			0.47	0.11
Uniform Delay, d1	39.3	3.8		6.5	8.1		34.2	34.5			36.3	34.6
Progression Factor	1.35	0.22		0.15	0.17		0.73	0.72			1.00	1.00
Incremental Delay, d2	3.1	0.1		0.2	0.1		0.3	0.8			8.1	1.1
Delay (s)	56.2	0.9		1.2	1.4		25.3	25.7			44.4	35.6
Level of Service	E	A		A	A		C	C			D	D
Approach Delay (s)		4.6			1.4			25.7			38.6	
Approach LOS		A			A			C			D	
Intersection Summary												
HCM Average Control Delay			6.9				HCM Level of Service				A	
HCM Volume to Capacity ratio			0.60									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			63.9%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
28: Delta Road & Main Street

Cumulative +Project PM Volumes
2/18/2010

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3465		1770	3539
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1770	1583	3465		1770	3539
Volume (vph)	114	230	1177	190	234	1018
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	124	250	1279	207	254	1107
RTOR Reduction (vph)	0	218	13	0	0	0
Lane Group Flow (vph)	124	32	1473	0	254	1107
Turn Type	Perm			Prot		
Protected Phases	8		2		1	6
Permitted Phases	8					
Actuated Green, G (s)	11.4	11.4	50.7		15.9	70.6
Effective Green, g (s)	11.4	11.4	50.7		15.9	70.6
Actuated g/C Ratio	0.13	0.13	0.56		0.18	0.78
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	224	201	1952		313	2776
v/s Ratio Prot	0.07		c0.43		c0.14	0.31
v/s Ratio Perm		0.16				
v/c Ratio	0.55	0.16	0.75		0.81	0.40
Uniform Delay, d1	36.9	35.0	14.9		35.6	3.0
Progression Factor	1.12	1.89	0.56		0.97	0.54
Incremental Delay, d2	2.7	0.3	2.6		13.7	0.4
Delay (s)	44.2	66.4	10.9		48.2	2.0
Level of Service	D	E	B		D	A
Approach Delay (s)	59.1		10.9			10.7
Approach LOS	E		B			B
Intersection Summary						
HCM Average Control Delay			16.4	HCM Level of Service		B
HCM Volume to Capacity ratio			0.84			
Actuated Cycle Length (s)			90.0	Sum of lost time (s)	12.0	
Intersection Capacity Utilization			67.9%	ICU Level of Service	C	
Analysis Period (min)			15			
c Critical Lane Group						

Abrams Associates
 1660 Olympic Boulevard
 Suite 210
 Walnut Creek, CA 94596
 Phone: 925-945-0201
 E-mail:

Fax: 925-945-7966

 Operational Analysis

Analyst: Lili
 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
 Analysis Time Period: AM_EB
 Freeway/Directi on: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction: Background
 Analysis Year: Background
 Description: Emerson Ranch

 Flow Inputs and Adjustments

Volume, V	1611	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	438	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	904	pc/h/ln

 Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h
	Urban Freeway	

 LOS and Performance Measures

Flow rate, vp	904	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	15.8	pc/mi/ln
Level of service, LOS	B	

background_AM_EB.txt

Overall results are not computed when free-flow speed is less than 55 mph.

Abrams Associates
 1660 Olympic Boulevard
 Suite 210
 Walnut Creek, CA 94596
 Phone: 925-945-0201
 E-mail:

Fax: 925-945-7966

 Operational Analysis

Analyst: Lili
 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
 Analysis Time Period: AM_WB
 Freeway/Direction: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction: Background
 Analysis Year: Background
 Description: Emerson Ranch

 Flow Inputs and Adjustments

Volume, V	1590	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	432	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	892	pc/h/ln

 Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h
	Urban Freeway	

 LOS and Performance Measures

Flow rate, vp	892	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	15.6	pc/mi/ln
Level of service, LOS	B	

background_AM_WB.txt

Overall results are not computed when free-flow speed is less than 55 mph.

Abrams Associates
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 Operational Analysis

Analyst: Lili
 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
 Analysis Time Period: PM_EB
 Freeway/Division: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction: Background
 Analysis Year: Background
 Description: Emerson Ranch

 Flow Inputs and Adjustments

Volume, V	2608	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	709	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	1463	pc/h/ln

 Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h
	Urban Freeway	

 LOS and Performance Measures

Flow rate, vp	1463	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	25.6	pc/mi/ln
Level of service, LOS	C	

background_PM_EB.txt

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 Operational Analysis

Analyst: Lili
 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
 Analysis Time Period: PM_WB
 Freeway/Division: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction: Background
 Analysis Year: Background
 Description: Emerson Ranch

 Flow Inputs and Adjustments

Volume, V	1772	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	482	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	994	pc/h/ln

 Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h
	Urban Freeway	

 LOS and Performance Measures

Flow rate, vp	994	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	17.4	pc/mi/ln
Level of service, LOS	B	

background_PM_WB.txt

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-----Operational Analysis-----

Analyst: SCA
 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
 Analysis Time Period: AM_EB
 Freeway/Direction: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction:
 Analysis Year: Background+Project
 Description: Emerson Ranch

-----Flow Inputs and Adjustments-----

Volume, V	1656	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	450	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	929	pc/h/ln

-----Speed Inputs and Adjustments-----

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h
	Urban Freeway	

-----LOS and Performance Measures-----

Flow rate, vp	929	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	16.2	pc/mi/ln

Level of service, LOS

B

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-----Operational Analysis-----

Analyst: SCA
 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
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 Freeway/Direction: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction:
 Analysis Year: Background+Project
 Description: Emerson Ranch

-----Flow Inputs and Adjustments-----

Volume, V	1653	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	449	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	927	pc/h/ln

-----Speed Inputs and Adjustments-----

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h

Urban Freeway

-----LOS and Performance Measures-----

Flow rate, vp	927	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	16.2	pc/mi/ln

Level of service, LOS

B

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-----Operational Analysis-----

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 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
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 From/To: Laurel Rd to State Route 4
 Jurisdiction:
 Analysis Year: Background+Project
 Description: Emerson Ranch

-----Flow Inputs and Adjustments-----

Volume, V	2710	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	736	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	1520	pc/h/ln

-----Speed Inputs and Adjustments-----

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h

Urban Freeway

-----LOS and Performance Measures-----

Flow rate, vp	1520	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	26.6	pc/mi/ln

Level of service, LOS

D

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 Agency or Company: Abrams Associates
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 Jurisdiction:
 Analysis Year: Background+Project
 Description: Emerson Ranch

-----Flow Inputs and Adjustments-----

Volume, V	1860	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	505	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	1043	pc/h/ln

-----Speed Inputs and Adjustments-----

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h

Urban Freeway

-----LOS and Performance Measures-----

Flow rate, vp	1043	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	18.2	pc/mi/ln

Level of service, LOS

C

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Operational Analysis

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 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
 Analysis Time Period: AM_EB
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 From/To: Laurel Rd to State Route 4
 Jurisdiction: Cumulative
 Analysis Year: Cumulative
 Description: Emerson Ranch

Flow Inputs and Adjustments

Volume, V	2102	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	571	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	1179	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fn	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1179	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	20.6	pc/mi/ln
Level of service, LOS	C	

cumulative_AM_EB.txt

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HCS+: Basic Freeway Segments Release 5.21

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 Operational Analysis

Analyst: Lili
 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
 Analysis Time Period: AM_WB
 Freeway/Division: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction: Cumulative
 Analysis Year: Cumulative
 Description: Emerson Ranch

 Flow Inputs and Adjustments

Volume, V	2074	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	564	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.969	
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	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fn	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h
	Urban Freeway	

 LOS and Performance Measures

Flow rate, vp	1163	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	20.3	pc/mi/ln
Level of service, LOS	C	

cumulative_AM_WB.txt

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Operational Analysis

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 From/To: Laurel Rd to State Route 4
 Jurisdiction: Cumulative
 Analysis Year: Cumulative
 Description: Emerson Ranch

Flow Inputs and Adjustments

Volume, V	3403	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	925	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	1909	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1909	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	56.6	mi/h
Number of lanes, N	2	
Density, D	33.7	pc/mi/ln
Level of service, LOS	D	

cumulative_PM_EB.txt

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 Freeway/Division: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction: Cumulative
 Analysis Year: Cumulative
 Description: Emerson Ranch

Flow Inputs and Adjustments

Volume, V	2313	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	629	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fhv	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	1297	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fn	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1297	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	22.7	pc/mi/ln
Level of service, LOS	C	

cumulative_PM_WB.txt

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-----Operational Analysis-----

Analyst: SCA
 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
 Analysis Time Period: AM_EB
 Freeway/Direction: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction:
 Analysis Year: Cumulative+Project
 Description: Emerson Ranch

-----Flow Inputs and Adjustments-----

Volume, V	2147	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	583	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	1204	pc/h/ln

-----Speed Inputs and Adjustments-----

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h

Urban Freeway

-----LOS and Performance Measures-----

Flow rate, vp	1204	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	21.0	pc/mi/ln

Level of service, LOS

C

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-----Operational Analysis-----

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 Freeway/Direction: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction:
 Analysis Year: Cumulative+Project
 Description: Emerson Ranch

-----Flow Inputs and Adjustments-----

Volume, V	2137	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	581	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	1199	pc/h/ln

-----Speed Inputs and Adjustments-----

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h

Urban Freeway

-----LOS and Performance Measures-----

Flow rate, vp	1199	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	21.0	pc/mi/ln

Level of service, LOS

C

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 From/To: Laurel Rd to State Route 4
 Jurisdiction:
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-----Flow Inputs and Adjustments-----

Volume, V	3505	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	952	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	1966	pc/h/ln

-----Speed Inputs and Adjustments-----

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h
	Urban Freeway	

-----LOS and Performance Measures-----

Flow rate, vp	1966	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	56.2	mi/h
Number of lanes, N	2	
Density, D	35.0-	pc/mi/ln

Level of service, LOS

D

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-----Operational Analysis-----

Analyst: SCA
 Agency or Company: Abrams Associates
 Date Performed: 7/20/2009
 Analysis Time Period: PM_WB
 Freeway/Direction: State Route 4 Bypass
 From/To: Laurel Rd to State Route 4
 Jurisdiction:
 Analysis Year: Cumulative+Project
 Description: Emerson Ranch

-----Flow Inputs and Adjustments-----

Volume, V	2401	veh/h
Peak-hour factor, PHF	0.92	
Peak 15-min volume, v15	652	v
Trucks and buses	6	%
Recreational vehicles	1	%
Terrain type:	Grade	
Grade	0.00	%
Segment length	1.50	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.969	
Driver population factor, fp	1.00	
Flow rate, vp	1347	pc/h/ln

-----Speed Inputs and Adjustments-----

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	0.66	interchange/mi
Number of lanes, N	2	
Free-flow speed:	Base	
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	3.3*	mi/h
Number of lanes adjustment, fN	4.5	mi/h
Free-flow speed, FFS	57.2	mi/h

Urban Freeway

-----LOS and Performance Measures-----

Flow rate, vp	1347	pc/h/ln
Free-flow speed, FFS	57.2	mi/h
Average passenger-car speed, S	57.2	mi/h
Number of lanes, N	2	
Density, D	23.5	pc/mi/ln

Level of service, LOS

C

Overall results are not computed when free-flow speed is less than 55 mph.

APPENDIX D2



MEMORANDUM

Date: December 17, 2009
 To: Raney Planning & Management
 From: Rebecca Willis, Community Development Director
 Subject: Emerson EIR traffic assumptions

The East Cypress Corridor Specific Plan EIR should not be included in the near term traffic projects for the Emerson EIR. The courts recently ruled against the City and found the EIR was not adequate. Prior to any construction, there is at least 5 years of work ahead (1 year to re-certify EIR, 2 years for NEPA process, min. 2 years to design and construct levee system). The Burroughs property does not have an application for processing, and has significant infrastructure costs that were not feasible even in the peak of housing prices in 2006, therefore it is not likely in the near term. Please refer to the information below for near term traffic assumptions for the following projects that have been approved, but are not yet constructed:

Project Name	Location	Approved Lots	Lots under construction or finalized	Remaining lots	No. lots assumed in near term build-out (w/in 5 years)	Comments
Gilbert Ranch (Sub 9033)	East Cypress and Sellers Ave	506	0	506	506	Assume full build-out
Baldocchi Property (Sub 8904)	East Cypress and Sellers Ave	97	0	97	0	Contingent upon construction of the storm drain detention facilities and sewer pump station in Gilbert Map

Project Name	Location	Approved Lots	Lots under construction or finalized	Remaining lots	No. lots assumed in near term build-out (w/in 5 years)	Comments
Teal Cove (Sub 9080)	Cypress Grove/Frank Hengle Way	26	0	26	26	Infill development
Crosetti & Creson (Sub 9015)	4219 Machado Lane	98	0	98	0	Contingent upon construction of the storm drain detention facilities and sewer pump station in Gilbert Map
De Jesus Property (Sub 9016)	Sellers, north of railroad	78	0	78	0	Contingent upon construction of storm drain detention facilities and sewer pump station in Gilbert Map
Summer Lakes South	East Cypress Specific Plan area; County approved in the 1990's	625	120	505	505	Assume full build out of County approved subdivision

APPENDIX E 1

Donald Ballanti
Certified Consulting Meteorologist

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**AIR QUALITY IMPACT ANALYSIS FOR THE
PROPOSED EMERSON RANCH PROJECT, CITY OF OAKLEY**

Technical Appendices

Prepared for:

Raney Planning & Management
1501 Sports Drive
Sacramento, CA. 95834

March 2010

Air Pollution Meteorology • Dispersion Modeling • Climatological Analysis
APPENDIX 1: URBEMIS 2007 PROGRAM

Estimates of construction phase emissions and operational emissions generated by project traffic and area sources were made using a program called URBEMIS-2007 (Version 9.2.4). URBEMIS-2007 is a program that estimates the emissions that result from development projects. Land use projects can include residential uses such as single-family dwelling units, apartments and condominiums, and nonresidential uses such as shopping centers, office buildings, and industrial facilities. URBEMIS-2007 contains default values for much of the information needed to calculate emissions. However, project-specific, user-supplied information can also be used when it is available.

As a worst-case assumption, the project was assumed to be built in a single phase 24-month period with construction beginning January 1, 2010. The lengths of the various construction phases during the 24-month build out period were estimated using a construction phase calculator developed by the San Joaquin Valley Air Pollution Control District. The URBEMIS-2007 default values for equipment, vehicle and other activities were utilized. BAAQMD Best Management Practices dust control mitigation measures were utilized. The URBEMIS-2007 construction output is attached.

On-Road Vehicular Emissions

Inputs to the URBEMIS-2007 program include trip generation rates, vehicle mix, average trip length by trip type and average speed. Default trip lengths and average trip speeds for the Contra Costa County were used. The analysis was carried out assuming a 2009 vehicle mix.

Area Source Emissions

Area source emissions were also quantified using the URBEMIS-2007 program. The URBEMIS-2007 program identifies 5 categories of area source emissions:

- Natural Gas Combustion
- Hearth Emissions
- Landscaping Emissions
- Architectural Coatings
- Consumer Products

Natural gas emissions result from the combustion of natural gas for space heating and water heating. Estimates are based on the size of project.

Hearth emissions consist of emissions from wood stoves, wood fireplaces, and natural gas fireplaces related to residential uses. The URBEMIS program utilizes county-wide statistics for fuel consumption and the percentage of homes utilizing each type of fireplace.

URBEMIS-2007 calculates emissions from fuel combustion and evaporation of unburned fuel by landscape maintenance equipment. Equipment in this category includes lawn mowers, roto-tillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used in maintenance of the site.

Architectural coating emissions result from the evaporation of solvents contained in paints, varnished, primers and other surface coatings associated with maintenance of structures. This category of emission is associated with operation of project land uses rather than with initial construction of the project. The default assumption is that 10% of structures will be painted each year. The URBEMIS 2007 program utilizes VOC (volatile organic compounds) content limits as they have been specified by each air district.

Consumer product emissions are generated by a wide range of product categories, including air fresheners, automotive products, household cleaners and personal care products. Emissions associated with these products primarily depend on the increase in population in the area associated with residential development.

The URBEMIS-2007 program was used to quantify emissions separately for summer and winter. Summertime emissions were utilized for reactive organic gases (ROG) and oxides of nitrogen (NO_x), as both are ozone precursors (ozone is a summer time pollutant). Winter emissions were utilized for PM_{10} when emissions of this pollutant are at a maximum, primarily due to hearth emissions. The program was also used to estimate project carbon dioxide emissions on an annual basis. The program output for the project and alternatives are attached.

APPENDIX 2: CONSTRUCTION HEALTH RISK CALCULATION

Total diesel particulate emissions were estimated for construction using the URBEMIS-2007 emission program and assuming a worst-case single phase construction period of 24 months. URBEMIS 2007 utilizes the concept of “time slices” to account for periods where differing activities may overlap and have additive emissions. The maximum DPM emission for each time slice was multiplied by the number of days for each type of activity, allowing a calculation of the total on-site DPM emissions over the 24-month construction period. The table below summarizes the calculation.

Diesel Particulate Matter			
Time Slice	Duration (Days)	Max. On-Site Emission in Pounds per Day	Emission
1	5	2.22	11.10
2	51	3.95	201.45
3	24	1.65	40.32
4	181	1.67	302.27
5	260	1.57	408.20
Total	521	-	963.34

The total emissions were converted to the required rate in grams/second per square meter assuming a 521 work-day total construction period and a nine-hour work day.

The *BAAQMD CEQA Guidelines* document does not provide modeling guidance for construction emissions. Therefore, construction modeling was conducted using Sacramento Metropolitan Air Quality Management District guidance.¹ The DPM emissions shown above were modeled as being released by 64 equally-spaced volume sources covering the construction site. The ISCST-3 program calculated concentrations for 720 receptors located on a polar grid out to a distance of 3,000 meters and at nearby existing residences. Annual average diesel particulate emissions were estimated on an assumed five-day work week, and all emissions were assumed to occur between 8 am and 5 pm. In this analysis, the ISCST3 model used regulatory default options.

The ISCST-3 program generated an estimate of annual average concentration using three one-year data files of hourly weather observations for Bethel Island, located a few miles northeast of the project site. The model sequentially predicts concentrations for 8,760 hours of the year using the hourly observations of wind speed, wind direction, temperature and stability. The annual average concentration is calculated as the average of the 8,760 hourly-averaged concentrations. Model runs were made using 2003, 2004 and 2005 weather files. The highest concentrations were found for the 2005 weather data file, and

¹ Sacramento Metropolitan Air Quality Management District, Guide to Air Quality Assessment in Sacramento County, July 2004.

DPM risks were estimated based on the worst-case 2005 data file. The ISCST-3 results are attached.

The Office of Environmental Health and Hazard Assessment is now recommending that the risk assessment methodology follow the recommendations contained within ARB's Recommended Interim Risk Management Policy for Inhalation Based Cancer Risk. Where a single cancer risk value for a sensitive receptor is needed for risk management decisions, the ARB recommends that the breathing pathway be based on the 80th percentile breathing rate. The 80th percentile breathing rate is the midpoint value of the percentile range between the mean and high-end points of value for the breathing pathway. The 80th percentile corresponds to a breathing rate of 302 Liters/kilogram-day.

To calculate potential cancer risk using the 80th percentile breathing rate, the inhalation dose must first be determined. The inhalation dose is calculated as follows:

$$\text{Dose} = \frac{(C_{\text{air}})(\text{DBR})(A)(\text{EF})(\text{ED})(1 \times 10^{-6})}{\text{AT}}$$

Where:

Dose = Dose through inhalation (mg/kg/d)

C_{air} = Concentration in air ($\mu\text{g}/\text{M}^3$), annual average

DBR = Daily breathing rate (L/kg body weight-day or L/kg/day)

A = Inhalation absorption factor

EF = Exposure frequency

ED = Exposure duration

AT = Averaging time

Using recommended default values for the dose equation, the dose is obtained and it is multiplied by the cancer potency factor of 1.1 mg/kg/day, and then by 1×10^6 to express the risk per million people.

Risks were conservatively adjusted to an assumed exposure of 9 years (LEA= 9/70), even though the emission rates reflect a two-year construction period.

The maximum off-site calculated risk is 3.04 in one million (outside the project boundary). The maximum calculated risk at existing nearby residences (on the opposite side of Cypress Boulevard) was calculated as 2.20 in one million. At a maximum extent of receptors, at a distance of 3,000 meters (1.86 miles), the maximum calculated risk at any receptor was 0.179 in one million.

APPENDIX 3: OPERATIONAL HEALTH RISK ANALYSIS

The BAAQMD has not issued guidance regarding modeling of truck traffic emissions, so the document *Guidance for Air Dispersion Modeling* issued by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and California Air Resources Board's *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles* were used for guidance in the development of the emission estimates, modeling methods, modeling parameters and risk assessment calculation. The ISCST-3 air dispersion model was utilized to estimate risks from on-site diesel truck exhausts. The model predicted concentrations of diesel particulate for a grid of receptors located within the residential area adjacent to the proposed shopping center.

Truck trips for project land uses were estimated using published trip generation factors for retail uses. The project is expected to conservatively generate about 36 large truck deliveries per day. As a worst-case assumption, all truck trips, regardless of destination, were assumed to enter at the northern driveway off Sellers Avenue and drive the perimeter of the site, accessing either the truck loading dock for Major Pad 1 or Major Pad 2 (closest to nearby new residences). Half the trucks generated by Major Pad 2 were assumed to use Truck Refrigerator Units (TRUs).

Diesel particulate emissions from the project were estimated based on the following worst-case assumptions:

- TRUs, which operate while truck engines are shut down, would operate for 1-hour on site;
- Each delivery would result in 5 minutes of truck idling while maneuvering; and
- All trucks would enter at the northeast corner of the site and then drive along the back side of the buildings.

As per SJVAPCD guidance, idling emissions were assumed to be released as point sources located at the two loading docks. Using the CARB's default emission factor of 2.67 grams diesel particulate matter (DPM) per hour of idling, the daily emission from idling was estimated for the two loading docks.

Truck refrigerator unit (TRU) emissions were also treated as a point source. Emissions were estimated using the CARB's default emission factor of 7.56 grams per hour.

SJVAPCD guidance suggests that traveling truck emissions on site be modeled as a line source, which is approximated by a series of volume sources. Total traveling emission for the trucks was estimated by multiplying the length of the path by the number of trucks to obtain the Vehicle Miles Traveled (VMT) on site. Using the CARB's default emission factor of 0.67 grams DPM per mile, driveway emissions were estimated. As a simplifying worst-

case assumption, the emission rate assumed all vehicles traveled the entire length of the rear driveways, so that the emission rate was uniform over the entire length.

The ISCST3 model used regulatory default options. Modeling parameters were based on SJVAPCD guidance. The model of the project site treated idle truck emissions as two separate point sources located at the center of the loading dock areas. As recommended in SJVAPCD guidance source parameters for idling vehicles were:

Emission Height: 3.84 meters (12.6 feet)
Stack Diameter: 0.1 meter (4 inches)
Exhaust Velocity: 51.71 meters per second (169.6 feet per second)
Exhaust Temperature: 366 degrees Kelvin

TRU emissions were similarly treated as a point source (for a stationary vehicle), with different source parameters:

Emission Height²: 3.96 meters (13 feet)
Stack Diameter: 0.04445 meter (1.75 inches)
Exhaust Velocity: 49.0 meters per second (160.7 feet per second)
Exhaust Temperature: 501 degrees Kelvin

Line source parameters (for a moving vehicle) were:

Emission Height³: 1.83 meters (6 feet)
Length of Side: 3.66 meters (12.0 feet)
Vertical Dimension: 0.85 meters (2.8 feet)

The ISCST-3 program calculated concentrations for 2800 receptors located at five-meter intervals along the northern fence line of the commercial area and within a grid of receptors extending 250 meters beyond the fence line to the north, an area that encompasses the most-exposed and closest adjacent residences (sensitive receptors).

The ISCST-3 program generated an estimate of annual average concentration using three one-year data files of hourly weather observations for Bethel Island, located a few miles northeast of the project site. The model sequentially predicts concentrations for 8760 hours of the year using the hourly observations of wind speed, wind direction, temperature and stability. The annual average concentration is calculated as the average of the 8760 hourly-averaged concentrations. Model runs were made using 2003, 2004 and 2005 weather files. The highest concentrations were found for the 2005 weather data file, and DPM risks were estimated based on the worst-case 2005 data file. The ISCST-3 results are attached.

² Note: The Emission height is based on an idling vehicle without air flow/turbulence.

³ Note: The Emission height is based on a line source parameter, or a single direction for a moving vehicle (i.e., the air flow/turbulence lowers the height of the emissions for a moving vehicle).

The Office of Environmental Health and Hazard Assessment is now recommending that the risk assessment methodology follow the recommendations contained within ARB's Recommended Interim Risk Management Policy for Inhalation Based Cancer Risk. Where a single cancer risk value for a sensitive receptor is needed for risk management decisions, the ARB recommends that the breathing pathway be based on the 80th percentile breathing rate. The 80th percentile breathing rate is the midpoint value of the percentile range between the mean and high-end points of value for the breathing pathway. The 80th percentile corresponds to a breathing rate of 302 Liters/kilogram-day.

To calculate potential cancer risk using the 80th percentile breathing rate, the inhalation dose must first be determined. The inhalation dose is calculated as follows:

$$\text{Dose} = \frac{(C_{\text{air}})(\text{DBR})(A)(\text{EF})(\text{ED})(1 \times 10^{-6})}{\text{AT}}$$

Where:

Dose = Dose through inhalation (mg/kg/d)

C_{air} = Concentration in air ($\mu\text{g}/\text{M}^3$), annual average

DBR = Daily breathing rate (L/kg body weight-day or L/kg/day)

A = Inhalation absorption factor

EF = Exposure frequency

ED = Exposure duration

AT = Averaging time

Using recommended default values for the dose equation, the dose is obtained and it is multiplied by the cancer potency factor of 1.1 mg/kg/day, and then by 1×10^6 to express the risk per million people.

Based on the maximum concentration of 0.01264 micrograms per cubic meter, the maximum calculated risk of cancer is 5.23 in one million. This is well below the BAAQMD's significance threshold of 10 in one million.

The above calculations are based on the ISCST-3 results assuming that diesel particulate emissions on the site would continue at the same levels for 70 years. Diesel particulate emissions from diesel trucks can be expected to decline in the future due to state-wide programs to reduce diesel exhaust health risks.

APPENDIX 4: CALINE-4 MODELING

A screening-level form of the CALINE-4 program was used to predict concentrations. Normalized concentrations for each roadway size (two lanes, four lanes, etc.) are adjusted for the two-way traffic volume and emission factor. Calculations were made for a receptor at a corner of the intersection, located at the curb. Emission factors were derived from the CARB EMFAC-2007 computer program based on a 2010 and 2030 Bay Area vehicle mix.

Air dispersion models were applied to anticipated construction and operational emissions of diesel particulate and benzene emissions from a proposed gasoline station to allow estimation of health risks.

The CALINE-4 model is a fourth-generation line source air quality model that is based on the Gaussian diffusion equation and employs a mixing zone concept to characterize pollutant dispersion over the roadway. Given source strength, meteorology, site geometry and site characteristics, the model predicts pollutant concentrations for receptors located within 150 meters of the roadway. The CALINE-4 model allows roadways to be broken into multiple links that can vary in traffic volume, emission rates, height, width, etc.

A screening-level form of the CALINE-4 program was used to predict concentrations.⁴ Normalized concentrations for each roadway size (2 lanes, 4 lanes, etc.) are adjusted for the two-way traffic volume and emission factor. Calculations were made for a receptor at a corner of the intersection, located at the curb. Emission factors were derived from the California Air Resources Board EMFAC7-2002 computer program based on a 2008 and 2030 Bay Area vehicle mix.

The screening form of the CALINE-4 model calculates the local contribution of nearby roads to the total concentration. The other contribution is the background level attributed to more distant traffic. The 1-hour background level was taken as 3.5 PPM and the 8-hour background concentration was taken as 1.8 PPM. These backgrounds were estimated using isopleth maps and correction factors developed by the Bay Area Air Quality Management District.

Eight-hour concentrations were obtained from the 1-hour output of the CALINE-4 model using a persistence factor of 0.7.

⁴ Bay Area Air Quality Management District, BAAQMD CEQA Guidelines, 1996.

APPENDIX 5: GREEN HOUSE GAS EMISSIONS METHODOLOGY

During operation, the project would contribute to long-term increases in GHGs as a result of traffic increases (mobile sources) and residential and commercial operations associated with heating and energy use (area sources). These sources are considered to result in direct emissions. The project would also indirectly result in GHG emissions from off-site electricity generation at power plants.

Direct Emissions from Mobile Sources

Estimates of carbon dioxide generated by project traffic were made by the URBEMIS-2007 program. While URBEMIS-2007 estimates carbon dioxide emissions from land use projects, there are other global warming gases that should be considered. Emissions of methane (CH₄) and nitrous oxide (N₂O) were estimated separately based on the URBEMIS-2007 estimates of carbon dioxide from vehicles and natural gas combustion. CH₄ and N₂O emission factors from Table 3 in BAAQMD's "Source Inventory of Bay Area Greenhouse Gas Emissions" were utilized to estimate project emissions of these gases. Because these gases are more powerful global warming gases the emissions were multiplied by a correction factor to estimate "carbon dioxide equivalents". CH₄ was assumed to have a Global Warming Potential of 21 times that of CO₂, while N₂O was assumed to have a Global Warming Potential of 310 times that of CO₂. The URBEMIS-2007 output for operational emissions is attached. A spreadsheet is also attached that shows the adjustment of the transportation emissions to account for methane and nitrous oxide emissions, with the result reported as "CO₂ equivalent".

Direct Emissions from Area Sources

Area source emissions of carbon dioxide were also quantified by the URBEMIS-2007 program.

Indirect Emissions

Indirect emissions are related to secondary emissions of global warming gases emitted away from the site and not directly related to project activities. The largest of this type of source is the electricity used by the project, a portion of which is generated by fossil-fueled power plants that generate global warming gases.

Global warming gas emissions related to electricity use were estimated using average annual electrical consumption per residence recommended by the Bay Area Air Quality Management District.. Emission rates for CO₂, CH₄ and N₂O per megawatt hour were taken from the California Air Resources Board's *Local Governments Operations Protocol, Version 1.0*. Electrical usage was multiplied by emission rates per megawatt hour to obtain annual emissions for CO₂, CH₄ and N₂O. These emissions were converted to CO₂ equivalents. The calculation for the project and alternatives are shown in the attached

spreadsheet outputs.

GHG emissions from water conveyance were estimated by multiplying annual water usage by an estimated “embedded” electrical consumption for northern California of 1,450 kwh/million gallons recommended by the Bay Area Air Quality Management District. Emission rates for CO₂, CH₄ and N₂O per megawatt hour were taken from the California Air Resources Board's *Local Governments Operations Protocol, Version 1.0*. Electrical usage was multiplied by emission rates per megawatt hour to obtain annual emissions for CO₂, CH₄ and N₂O. These emissions were converted to CO₂ equivalents. The calculation is shown in the attached spreadsheets.

GHG emissions from wastewater treatment were estimated by multiplying annual water usage by an estimated “embedded” electrical consumption for northern California of 2,500 kwh/million gallons recommended by the Bay Area Air Quality Management District. Wastewater generation was assumed to be equal to water consumption. Emission rates for CO₂, CH₄ and N₂O per megawatt hour were taken from the California Air Resources Board's *Local Governments Operations Protocol, Version 1.0*. Electrical usage was multiplied by emission rates per megawatt hour to obtain annual emissions for CO₂, CH₄ and N₂O. These emissions were converted to CO₂ equivalents. The calculation is shown in the attached spreadsheets.

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Users\Weatherman\AppData\Roaming\Urbemis\Version9a\Projects\projects\emersonalt1.urb924

Project Name: Emerson Clustered

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	30.94	4.60	5.23	0.00	0.02	0.02	5,784.52

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	36.76	41.91	436.43	0.46	81.92	15.69	46,523.34

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	67.70	46.51	441.66	0.46	81.94	15.71	52,307.86

3/30/2010 2:27:19 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.35	4.56	2.14	0.00	0.01	0.01	5,778.90
Hearth - No Summer Emissions							
Landscape	0.25	0.04	3.09	0.00	0.01	0.01	5.62
Consumer Products	26.42						
Architectural Coatings	3.92						
TOTALS (lbs/day, unmitigated)	30.94	4.60	5.23	0.00	0.02	0.02	5,784.52

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Condo/townhouse general	26.04	27.96	296.28	0.31	54.80	10.50	31,222.96
Regnl shop. center	10.72	13.95	140.15	0.15	27.12	5.19	15,300.38
TOTALS (lbs/day, unmitigated)	36.76	41.91	436.43	0.46	81.92	15.69	46,523.34

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 Temperature (F): 85 Season: Summer

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	33.75	6.90	dwelling units	540.00	3,726.00	31,856.18
Regnl shop. center		42.67	1000 sq ft	50.00	2,133.50	15,772.96
					5,859.50	47,629.14

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.6	99.2	0.2
Light Truck < 3750 lbs	13.2	0.8	96.2	3.0
Light Truck 3751-5750 lbs	20.4	0.5	99.5	0.0
Med Truck 5751-8500 lbs	7.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	72.7	27.3
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.7	54.1	45.9	0.0
School Bus	0.4	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Regnl shop. center				2.0	1.0	97.0

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Users\Weatherman\AppData\Roaming\Urbemis\Version9a\Projects\projects\emersonalt1.urb924

Project Name: Emerson Clustered

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	107.16	11.14	282.35	0.83	44.24	42.59	14,809.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	39.27	62.26	464.50	0.40	81.92	15.69	40,218.50

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	146.43	73.40	746.85	1.23	126.16	58.28	55,028.31

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.35	4.56	2.14	0.00	0.01	0.01	5,778.90
Hearth	76.47	6.58	280.21	0.83	44.23	42.58	9,030.91
Landscaping - No Winter Emissions							
Consumer Products	26.42						
Architectural Coatings	3.92						
TOTALS (lbs/day, unmitigated)	107.16	11.14	282.35	0.83	44.24	42.59	14,809.81

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Condo/townhouse general	26.23	41.58	312.50	0.27	54.80	10.50	27,006.04
Regnl shop. center	13.04	20.68	152.00	0.13	27.12	5.19	13,212.46
TOTALS (lbs/day, unmitigated)	39.27	62.26	464.50	0.40	81.92	15.69	40,218.50

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 Temperature (F): 40 Season: Winter

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	33.75	6.90	dwelling units	540.00	3,726.00	31,856.18
Regnl shop. center		42.67	1000 sq ft	50.00	2,133.50	15,772.96
					5,859.50	47,629.14

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.6	99.2	0.2
Light Truck < 3750 lbs	13.2	0.8	96.2	3.0
Light Truck 3751-5750 lbs	20.4	0.5	99.5	0.0
Med Truck 5751-8500 lbs	7.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	72.7	27.3
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.7	54.1	45.9	0.0
School Bus	0.4	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Regnl shop. center				2.0	1.0	97.0

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Users\Weatherman\AppData\Roaming\Urbemis\Version9a\Projects\projects\emersonalt1.urb924

Project Name: Emerson Clustered

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	8.75	1.03	12.13	0.03	1.81	1.74	1,340.52

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	6.86	8.88	81.36	0.08	14.95	2.87	8,106.96

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	15.61	9.91	93.49	0.11	16.76	4.61	9,447.48

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.06	0.83	0.39	0.00	0.00	0.00	1,054.65
Hearth	3.13	0.20	11.46	0.03	1.81	1.74	285.36
Landscape	0.02	0.00	0.28	0.00	0.00	0.00	0.51
Consumer Products	4.82						
Architectural Coatings	0.72						
TOTALS (tons/year, unmitigated)	8.75	1.03	12.13	0.03	1.81	1.74	1,340.52

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Condo/townhouse general	4.76	5.93	55.06	0.05	10.00	1.92	5,441.66
Regnl shop. center	2.10	2.95	26.30	0.03	4.95	0.95	2,665.30
TOTALS (tons/year, unmitigated)	6.86	8.88	81.36	0.08	14.95	2.87	8,106.96

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 Season: Annual

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	33.75	6.90	dwelling units	540.00	3,726.00	31,856.18
Regnl shop. center		42.67	1000 sq ft	50.00	2,133.50	15,772.96
					5,859.50	47,629.14

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.6	99.2	0.2
Light Truck < 3750 lbs	13.2	0.8	96.2	3.0
Light Truck 3751-5750 lbs	20.4	0.5	99.5	0.0
Med Truck 5751-8500 lbs	7.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	72.7	27.3
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.7	54.1	45.9	0.0
School Bus	0.4	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Regnl shop. center				2.0	1.0	97.0

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Users\Weatherman\AppData\Roaming\Urbemis\Version9a\Projects\projects\Emersonalt2.urb924

Project Name: Emerson All Residential

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	57.98	9.74	31.67	0.00	0.09	0.09	12,078.87

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	42.95	46.45	492.10	0.51	91.01	17.43	51,859.77

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	100.93	56.19	523.77	0.51	91.10	17.52	63,938.64

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.73	9.43	4.01	0.00	0.02	0.02	12,034.13
Hearth - No Summer Emissions							
Landscape	4.84	0.31	27.66	0.00	0.07	0.07	44.74
Consumer Products	42.22						
Architectural Coatings	10.19						
TOTALS (lbs/day, unmitigated)	57.98	9.74	31.67	0.00	0.09	0.09	12,078.87

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Single family housing	29.54	32.05	339.57	0.35	62.80	12.03	35,785.73
Apartments low rise	13.41	14.40	152.53	0.16	28.21	5.40	16,074.04
TOTALS (lbs/day, unmitigated)	42.95	46.45	492.10	0.51	91.01	17.43	51,859.77

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 Temperature (F): 85 Season: Summer

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	195.00	7.30	dwelling units	585.00	4,270.50	36,511.50
Apartments low rise	17.38	6.90	dwelling units	278.00	1,918.20	16,400.04
					6,188.70	52,911.54

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.6	99.2	0.2
Light Truck < 3750 lbs	13.2	0.8	96.2	3.0
Light Truck 3751-5750 lbs	20.4	0.5	99.5	0.0
Med Truck 5751-8500 lbs	7.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	72.7	27.3
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.7	54.1	45.9	0.0
School Bus	0.4	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commuter	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Users\Weatherman\AppData\Roaming\Urbemis\Version9a\Projects\projects\Emersonalt2.urb924

Project Name: Emerson All Residential

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	175.40	20.84	452.20	1.33	70.78	68.13	27,602.45

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	43.56	69.07	519.05	0.45	91.01	17.43	44,855.68

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	218.96	89.91	971.25	1.78	161.79	85.56	72,458.13

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.73	9.43	4.01	0.00	0.02	0.02	12,034.13
Hearth	122.26	11.41	448.19	1.33	70.76	68.11	15,568.32
Landscaping - No Winter Emissions							
Consumer Products	42.22						
Architectural Coatings	10.19						
TOTALS (lbs/day, unmitigated)	175.40	20.84	452.20	1.33	70.78	68.13	27,602.45

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Single family housing	30.06	47.66	358.17	0.31	62.80	12.03	30,952.57
Apartments low rise	13.50	21.41	160.88	0.14	28.21	5.40	13,903.11
TOTALS (lbs/day, unmitigated)	43.56	69.07	519.05	0.45	91.01	17.43	44,855.68

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 Temperature (F): 40 Season: Winter

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	195.00	7.30	dwelling units	585.00	4,270.50	36,511.50
Apartments low rise	17.38	6.90	dwelling units	278.00	1,918.20	16,400.04
					6,188.70	52,911.54

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.6	99.2	0.2
Light Truck < 3750 lbs	13.2	0.8	96.2	3.0
Light Truck 3751-5750 lbs	20.4	0.5	99.5	0.0
Med Truck 5751-8500 lbs	7.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	72.7	27.3
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.7	54.1	45.9	0.0
School Bus	0.4	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Users\Weatherman\AppData\Roaming\Urbemis\Version9a\Projects\projects\Emersonalt2.urb924

Project Name: Emerson All Residential

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	15.14	2.08	21.54	0.05	2.90	2.79	2,656.88

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	7.87	9.85	91.44	0.09	16.61	3.19	9,038.33

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	23.01	11.93	112.98	0.14	19.51	5.98	11,695.21

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.13	1.72	0.73	0.00	0.00	0.00	2,196.23
Hearth	5.00	0.33	18.32	0.05	2.89	2.78	456.62
Landscape	0.44	0.03	2.49	0.00	0.01	0.01	4.03
Consumer Products	7.71						
Architectural Coatings	1.86						
TOTALS (tons/year, unmitigated)	15.14	2.08	21.54	0.05	2.90	2.79	2,656.88

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Single family housing	5.42	6.80	63.10	0.06	11.46	2.20	6,236.88
Apartments low rise	2.45	3.05	28.34	0.03	5.15	0.99	2,801.45
TOTALS (tons/year, unmitigated)	7.87	9.85	91.44	0.09	16.61	3.19	9,038.33

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2013 Season: Annual

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	195.00	7.30	dwelling units	585.00	4,270.50	36,511.50
Apartments low rise	17.38	6.90	dwelling units	278.00	1,918.20	16,400.04
					6,188.70	52,911.54

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	50.9	0.6	99.2	0.2
Light Truck < 3750 lbs	13.2	0.8	96.2	3.0
Light Truck 3751-5750 lbs	20.4	0.5	99.5	0.0
Med Truck 5751-8500 lbs	7.7	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.1	0.0	72.7	27.3
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	0.7	0.0	14.3	85.7
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.0	0.0	0.0	0.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.7	54.1	45.9	0.0
School Bus	0.4	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Users\Weatherman\AppData\Roaming\Urbemis\Version9a\Projects\projects\emersonalt3.urb924

Project Name: Emerson Onsite School

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	40.02	9.93	31.77	0.00	0.09	0.09	12,095.43

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	95.06	111.28	1,134.77	1.22	216.83	41.48	122,668.09

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	135.08	121.21	1,166.54	1.22	216.92	41.57	134,763.52

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3/30/2010 2:31:48 PM

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Users\Weatherman\AppData\Roaming\Urbemis\Version9a\Projects\projects\emersonalt3.urb924

Project Name: Emerson Onsite School

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Users\Weatherman\AppData\Roaming\Urbemis\Version9a\Projects\projects\emersonalt3.urb924

Project Name: Emerson Onsite School

Project Location: Contra Costa County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

EMERSON.OUT.txt

**

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** ISCST3 Input Produced by:

** ISC-AERMOD View Ver. 5.8.1

** Lakes Environmental Software Inc.

** Date: 5/30/2009

** File: C:\Documents and Settings\Don Ballanti\Local Settings\My Documents\Business\Project Files\Emerson FEIR\emreson.INP
**

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** ISCST3 Control Pathway

**

**

CO STARTING

TITLEONE Emerson Ranch Construction

MODELOPT DFAULT CONC RURAL

AVERTIME ANNUAL

POLLUTID DIESELP

TERRHGTS FLAT

FLAGPOLE 1.50

RUNORNOT RUN

CO FINISHED

**

** ISCST3 Source Pathway

**

**

S0 STARTING

** Source Location **

** Source ID - Type - X Coord. - Y Coord. **

LOCATI ON V1 VOLUME -340.900 300.300
LOCATI ON V2 VOLUME -243.500 300.300
LOCATI ON V3 VOLUME -146.100 300.300
LOCATI ON V4 VOLUME -48.700 300.300
LOCATI ON V5 VOLUME 48.700 300.300
LOCATI ON V6 VOLUME 146.100 300.300
LOCATI ON V7 VOLUME 243.500 300.300
LOCATI ON V8 VOLUME 340.900 300.300
LOCATI ON V9 VOLUME -340.900 214.500
LOCATI ON V10 VOLUME -243.500 214.500
LOCATI ON V11 VOLUME -146.100 214.500
LOCATI ON V12 VOLUME -48.700 214.500
LOCATI ON V13 VOLUME 48.700 214.500
LOCATI ON V14 VOLUME 146.100 214.500
LOCATI ON V15 VOLUME 243.500 214.500
LOCATI ON V16 VOLUME 340.900 214.500
LOCATI ON V17 VOLUME -340.900 128.700
LOCATI ON V18 VOLUME -243.500 128.700
LOCATI ON V19 VOLUME -146.100 128.700
LOCATI ON V20 VOLUME -48.700 128.700
LOCATI ON V21 VOLUME 48.700 128.700
LOCATI ON V22 VOLUME 146.100 128.700
LOCATI ON V23 VOLUME 243.500 128.700
LOCATI ON V24 VOLUME 340.900 128.700
LOCATI ON V25 VOLUME -340.900 42.900
LOCATI ON V26 VOLUME -243.500 42.900
LOCATI ON V27 VOLUME -146.100 42.900
LOCATI ON V28 VOLUME -48.700 42.900

EMERSON.OUT.txt

LOCATI ON V29 VOLUME 48.700 42.900
LOCATI ON V30 VOLUME 146.100 42.900
LOCATI ON V31 VOLUME 243.500 42.900
LOCATI ON V32 VOLUME 340.900 42.900
LOCATI ON V33 VOLUME -340.900 -42.900
LOCATI ON V34 VOLUME -243.500 -42.900
LOCATI ON V35 VOLUME -146.100 -42.900
LOCATI ON V36 VOLUME -48.700 -42.900
LOCATI ON V37 VOLUME 48.700 -42.900
LOCATI ON V38 VOLUME 146.100 -42.900
LOCATI ON V39 VOLUME 243.500 -42.900
LOCATI ON V40 VOLUME 340.900 -42.900
LOCATI ON V41 VOLUME -340.900 -128.700
LOCATI ON V42 VOLUME -243.400 -128.700
LOCATI ON V43 VOLUME -146.100 -128.700
LOCATI ON V44 VOLUME -48.700 -128.700
LOCATI ON V45 VOLUME 48.700 -128.700
LOCATI ON V46 VOLUME 146.100 -128.700
LOCATI ON V47 VOLUME 243.500 -128.700
LOCATI ON V48 VOLUME 340.900 -128.700
LOCATI ON V49 VOLUME -340.900 -214.500
LOCATI ON V50 VOLUME -243.500 -214.500
LOCATI ON V51 VOLUME -146.100 -214.500
LOCATI ON V52 VOLUME -48.700 -214.500
LOCATI ON V53 VOLUME 48.700 -214.500
LOCATI ON V54 VOLUME 146.100 -214.500
LOCATI ON V55 VOLUME 243.500 -214.500
LOCATI ON V56 VOLUME 340.900 -214.500
LOCATI ON V57 VOLUME -340.900 -300.300
LOCATI ON V58 VOLUME -243.500 -300.300
LOCATI ON V59 VOLUME -146.100 -300.300

LOCATI ON V60 VOLUME -48.700 -300.300
LOCATI ON V61 VOLUME 48.700 -300.300
LOCATI ON V62 VOLUME 146.100 -300.300
LOCATI ON V63 VOLUME 243.500 -300.300
LOCATI ON V64 VOLUME 340.900 -300.300

** Source Parameters **

SRCPARAM V1 0.0003642 3.000 19.953 0.500
SRCPARAM V2 0.0003642 3.000 19.953 0.500
SRCPARAM V3 0.0003642 3.000 19.953 0.500
SRCPARAM V4 0.0003642 3.000 19.953 0.500
SRCPARAM V5 0.0003642 3.000 19.953 0.500
SRCPARAM V6 0.0003642 3.000 19.953 0.500
SRCPARAM V7 0.000362 3.000 19.953 0.500
SRCPARAM V8 0.0003642 3.000 19.953 0.500
SRCPARAM V9 0.0003642 3.000 19.953 0.500
SRCPARAM V10 0.0003642 3.000 19.953 0.500
SRCPARAM V11 0.000364 3.000 19.953 0.500
SRCPARAM V12 0.0003642 3.000 19.953 0.500
SRCPARAM V13 0.0003642 3.000 19.953 0.500
SRCPARAM V14 0.0003642 3.000 19.953 0.500
SRCPARAM V15 0.0003642 3.000 19.953 0.500
SRCPARAM V16 0.0003642 3.000 19.953 0.500
SRCPARAM V17 0.0003642 3.000 19.953 0.500
SRCPARAM V18 0.0003642 3.000 19.953 0.500
SRCPARAM V19 0.0003642 3.000 19.953 0.500
SRCPARAM V20 0.0003642 3.000 19.953 0.500
SRCPARAM V21 0.0003642 3.000 19.953 0.500
SRCPARAM V22 0.0003642 3.000 19.953 0.500
SRCPARAM V23 0.0003642 3.000 19.953 0.500
SRCPARAM V24 0.0003642 3.000 19.953 0.500
SRCPARAM V25 0.0003642 3.000 19.953 0.500
SRCPARAM V26 0.0003642 3.000 19.953 0.500

EMERSON.OUT.txt

SRCPARAM V27 0.0003642 3.000 19.953 0.500
SRCPARAM V28 0.0003642 3.000 19.953 0.500
SRCPARAM V29 0.0003642 3.000 19.953 0.500
SRCPARAM V30 0.0003642 3.000 19.953 0.500
SRCPARAM V31 0.0003642 3.000 19.953 0.500
SRCPARAM V32 0.0003642 3.000 19.953 0.500
SRCPARAM V33 0.0003642 3.000 19.953 0.500
SRCPARAM V34 0.0003642 3.000 19.953 0.500
SRCPARAM V35 0.0003642 3.000 19.953 0.500
SRCPARAM V36 0.0003642 3.000 19.953 0.500
SRCPARAM V37 0.0003642 3.000 19.953 0.500
SRCPARAM V38 0.0003642 3.000 19.953 0.500
SRCPARAM V39 0.0003642 3.000 19.953 0.500
SRCPARAM V40 0.0003642 3.000 19.953 0.500
SRCPARAM V41 0.0003642 3.000 19.953 0.500
SRCPARAM V42 0.0003642 3.000 19.953 0.500
SRCPARAM V43 0.0003642 3.000 19.953 0.500
SRCPARAM V44 0.0003642 3.000 19.953 0.500
SRCPARAM V45 0.0003642 3.000 19.953 0.500
SRCPARAM V46 0.0003642 3.000 19.953 0.500
SRCPARAM V47 0.0003642 3.000 19.953 0.500
SRCPARAM V48 0.0003642 3.000 19.953 0.500
SRCPARAM V49 0.0003642 3.000 19.953 0.500
SRCPARAM V50 0.0003642 3.000 19.953 0.500
SRCPARAM V51 0.0003642 3.000 19.953 0.500
SRCPARAM V52 0.0003642 3.000 19.953 0.500
SRCPARAM V53 0.0003642 3.000 19.953 0.500
SRCPARAM V54 0.0003642 3.000 19.953 0.500
SRCPARAM V55 0.0003642 3.000 19.953 0.500
SRCPARAM V56 0.0003642 3.000 19.953 0.500
SRCPARAM V57 0.0003642 3.000 19.953 0.500

SRCPARAM V58 0.0003642 3.000 19.953 0.500
SRCPARAM V59 0.0003642 3.000 19.953 0.500
SRCPARAM V60 0.0003642 3.000 19.953 0.500
SRCPARAM V61 0.0003642 3.000 19.953 0.500
SRCPARAM V62 0.0003642 3.000 19.953 0.500
SRCPARAM V63 0.0003642 3.000 19.953 0.500
SRCPARAM V64 0.0003642 3.000 19.953 0.500

** Variable Emissions Type: "By Season / Hour / Day"

** Variable Emission Scenario: "Scenario 1"

** WeekDays:

** Winter

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 1 1 1 1 1
EMI SFACT V9 SHRDOW 1 1 1 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 1 1 1 1 1
EMI SFACT V9 SHRDOW 1 1 1 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 1 1 1 1 1
EMI SFACT V9 SHRDOW 1 1 1 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 1 1 1 1 1
EMI SFACT V9 SHRDOW 1 1 1 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0
EMI SFACT V9 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 1 1 1 1 1
EMI SFACT V1 SHRDOW 1 1 1 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 1 1 1 1 1
EMI SFACT V1 SHRDOW 1 1 1 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 1 1 1 1 1
EMI SFACT V1 SHRDOW 1 1 1 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 1 1 1 1 1
EMI SFACT V1 SHRDOW 1 1 1 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0
EMI SFACT V1 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 1 1 1 1 1
EMI SFACT V10 SHRDOW 1 1 1 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 1 1 1 1 1
EMI SFACT V10 SHRDOW 1 1 1 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 1 1 1 1 1
EMI SFACT V10 SHRDOW 1 1 1 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 1 1 1 1 1
EMI SFACT V10 SHRDOW 1 1 1 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** Fal I

EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0
EMI SFACT V10 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Wi nter

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 1 1 1 1 1
EMI SFACT V11 SHRDOW 1 1 1 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Spri ng

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 1 1 1 1 1
EMI SFACT V11 SHRDOW 1 1 1 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 1 1 1 1 1
EMI SFACT V11 SHRDOW 1 1 1 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Fal I

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 1 1 1 1 1
EMI SFACT V11 SHRDOW 1 1 1 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0
EMI SFACT V11 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 1 1 1 1 1
EMI SFACT V12 SHRDOW 1 1 1 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 1 1 1 1 1
EMI SFACT V12 SHRDOW 1 1 1 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 1 1 1 1 1
EMI SFACT V12 SHRDOW 1 1 1 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 1 1 1 1 1
EMI SFACT V12 SHRDOW 1 1 1 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** Fal I

EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0
EMI SFACT V12 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Wi nter

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 1 1 1 1 1
EMI SFACT V13 SHRDOW 1 1 1 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Spri ng

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 1 1 1 1 1
EMI SFACT V13 SHRDOW 1 1 1 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 1 1 1 1 1
EMI SFACT V13 SHRDOW 1 1 1 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Fal I

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 1 1 1 1 1
EMI SFACT V13 SHRDOW 1 1 1 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0
EMI SFACT V13 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 1 1 1 1 1
EMI SFACT V14 SHRDOW 1 1 1 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 1 1 1 1 1
EMI SFACT V14 SHRDOW 1 1 1 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 1 1 1 1 1
EMI SFACT V14 SHRDOW 1 1 1 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 1 1 1 1 1
EMI SFACT V14 SHRDOW 1 1 1 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0
EMI SFACT V14 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 1 1 1 1 1
EMI SFACT V15 SHRDOW 1 1 1 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 1 1 1 1 1
EMI SFACT V15 SHRDOW 1 1 1 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 1 1 1 1 1
EMI SFACT V15 SHRDOW 1 1 1 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 1 1 1 1 1
EMI SFACT V15 SHRDOW 1 1 1 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0
EMI SFACT V15 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 1 1 1 1 1
EMI SFACT V16 SHRDOW 1 1 1 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 1 1 1 1 1
EMI SFACT V16 SHRDOW 1 1 1 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 1 1 1 1 1
EMI SFACT V16 SHRDOW 1 1 1 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 1 1 1 1 1
EMI SFACT V16 SHRDOW 1 1 1 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0
EMI SFACT V16 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 1 1 1 1 1
EMI SFACT V17 SHRDOW 1 1 1 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 1 1 1 1 1
EMI SFACT V17 SHRDOW 1 1 1 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 1 1 1 1 1
EMI SFACT V17 SHRDOW 1 1 1 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 1 1 1 1 1
EMI SFACT V17 SHRDOW 1 1 1 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0
EMI SFACT V17 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 1 1 1 1 1
EMI SFACT V18 SHRDOW 1 1 1 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 1 1 1 1 1
EMI SFACT V18 SHRDOW 1 1 1 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 1 1 1 1 1
EMI SFACT V18 SHRDOW 1 1 1 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 1 1 1 1 1
EMI SFACT V18 SHRDOW 1 1 1 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0
EMI SFACT V18 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 1 1 1 1 1
EMI SFACT V19 SHRDOW 1 1 1 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 1 1 1 1 1
EMI SFACT V19 SHRDOW 1 1 1 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 1 1 1 1 1
EMI SFACT V19 SHRDOW 1 1 1 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 1 1 1 1 1
EMI SFACT V19 SHRDOW 1 1 1 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0
EMI SFACT V19 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 1 1 1 1 1
EMI SFACT V2 SHRDOW 1 1 1 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 1 1 1 1 1
EMI SFACT V2 SHRDOW 1 1 1 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 1 1 1 1 1
EMI SFACT V2 SHRDOW 1 1 1 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 1 1 1 1 1
EMI SFACT V2 SHRDOW 1 1 1 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** Fall

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EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0
EMI SFACT V2 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 1 1 1 1 1
EMI SFACT V20 SHRDOW 1 1 1 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 1 1 1 1 1
EMI SFACT V20 SHRDOW 1 1 1 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 1 1 1 1 1
EMI SFACT V20 SHRDOW 1 1 1 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 1 1 1 1 1
EMI SFACT V20 SHRDOW 1 1 1 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Spring

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EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Summer

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EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Fall

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EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0
EMI SFACT V20 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 1 1 1 1 1
EMI SFACT V21 SHRDOW 1 1 1 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 1 1 1 1 1
EMI SFACT V21 SHRDOW 1 1 1 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 1 1 1 1 1
EMI SFACT V21 SHRDOW 1 1 1 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 1 1 1 1 1
EMI SFACT V21 SHRDOW 1 1 1 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Spring

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EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Summer

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EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** Fall

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EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0
EMI SFACT V21 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V22 SHRDOW 0 0 0 0 0 0
EMI SFACT V22 SHRDOW 0 1 1 1 1 1
EMI SFACT V22 SHRDOW 1 1 1 0 0 0
EMI SFACT V22 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V22 SHRDOW 0 0 0 0 0 0
EMI SFACT V22 SHRDOW 0 1 1 1 1 1
EMI SFACT V22 SHRDOW 1 1 1 0 0 0
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** Summer

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** Fall

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EMI SFACT V22 SHRDOW 0 1 1 1 1 1
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** Saturday:

** Winter

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** Spring

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** Summer

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** Fall

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** Sunday:

** Winter

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** Spring

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** Summer

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** Fall

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** WeekDays:

** Winter

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** Spring

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** Summer

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** Fall

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** Saturday:

** Winter

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** Spring

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** Summer

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** Fall

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** Sunday:

** Winter

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** Spring

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** Summer

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** Fall

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** WeekDays:

** Winter

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** Spring

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** Summer

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** Fall

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** Saturday:

** Winter

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** Spring

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** Summer

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** Fall

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** Sunday:

** Winter

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** Spring

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** Summer

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** Fall

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** WeekDays:

** Winter

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EMI SFACT V25 SHRDOW 0 1 1 1 1 1
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** Spring

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EMI SFACT V25 SHRDOW 0 1 1 1 1 1
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** Summer

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** Fall

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EMI SFACT V25 SHRDOW 0 1 1 1 1 1
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** Saturday:

** Winter

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EMI SFACT V25 SHRDOW 0 0 0 0 0 0
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EMI SFACT V25 SHRDOW 0 0 0 0 0 0

** Spring

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EMI SFACT V25 SHRDOW 0 0 0 0 0 0
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** Summer

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** Fall

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EMI SFACT V25 SHRDOW 0 0 0 0 0 0
EMI SFACT V25 SHRDOW 0 0 0 0 0 0
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** Sunday:

** Winter

EMI SFACT V25 SHRDOW 0 0 0 0 0 0
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** Spring

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** Summer

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** Fal l

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** WeekDays:

** Wi nter

EMI SFACT V26 SHRDOW 0 0 0 0 0 0
EMI SFACT V26 SHRDOW 0 1 1 1 1 1
EMI SFACT V26 SHRDOW 1 1 1 0 0 0
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** Spri ng

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** Summer

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** Fal l

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EMI SFACT V26 SHRDOW 0 1 1 1 1 1
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** Saturday:

** Winter

EMI SFACT V26 SHRDOW 0 0 0 0 0 0
EMI SFACT V26 SHRDOW 0 0 0 0 0 0
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** Spring

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** Summer

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** Fall

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** Sunday:

** Winter

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** Spring

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** Summer

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** Fall

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** WeekDays:

** Winter

EMI SFACT V27 SHRDOW 0 0 0 0 0 0
EMI SFACT V27 SHRDOW 0 1 1 1 1 1
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** Spring

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** Summer

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** Fall

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** Saturday:

** Winter

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** Spring

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** Summer

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** Fall

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** Sunday:

** Winter

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** Spring

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** Summer

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** Fall

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** WeekDays:

** Winter

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** Summer

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** Saturday:

** Winter

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** Sunday:

** Winter

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** WeekDays:

** Winter

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** Summer

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** Saturday:

** Winter

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EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0
EMI SFACT V29 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 1 1 1 1 1
EMI SFACT V3 SHRDOW 1 1 1 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 1 1 1 1 1
EMI SFACT V3 SHRDOW 1 1 1 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 1 1 1 1 1
EMI SFACT V3 SHRDOW 1 1 1 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 1 1 1 1 1
EMI SFACT V3 SHRDOW 1 1 1 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0
EMI SFACT V3 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 1 1 1 1 1
EMI SFACT V30 SHRDOW 1 1 1 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 1 1 1 1 1
EMI SFACT V30 SHRDOW 1 1 1 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 1 1 1 1 1
EMI SFACT V30 SHRDOW 1 1 1 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 1 1 1 1 1
EMI SFACT V30 SHRDOW 1 1 1 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** Fal l

EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0
EMI SFACT V30 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Wi nter

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 1 1 1 1 1
EMI SFACT V31 SHRDOW 1 1 1 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Spri ng

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 1 1 1 1 1
EMI SFACT V31 SHRDOW 1 1 1 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 1 1 1 1 1
EMI SFACT V31 SHRDOW 1 1 1 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Fal l

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 1 1 1 1 1
EMI SFACT V31 SHRDOW 1 1 1 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0
EMI SFACT V31 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 1 1 1 1 1
EMI SFACT V32 SHRDOW 1 1 1 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 1 1 1 1 1
EMI SFACT V32 SHRDOW 1 1 1 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 1 1 1 1 1
EMI SFACT V32 SHRDOW 1 1 1 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 1 1 1 1 1
EMI SFACT V32 SHRDOW 1 1 1 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0
EMI SFACT V32 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 1 1 1 1 1
EMI SFACT V33 SHRDOW 1 1 1 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 1 1 1 1 1
EMI SFACT V33 SHRDOW 1 1 1 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 1 1 1 1 1
EMI SFACT V33 SHRDOW 1 1 1 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 1 1 1 1 1
EMI SFACT V33 SHRDOW 1 1 1 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0
EMI SFACT V33 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 1 1 1 1 1
EMI SFACT V34 SHRDOW 1 1 1 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 1 1 1 1 1
EMI SFACT V34 SHRDOW 1 1 1 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 1 1 1 1 1
EMI SFACT V34 SHRDOW 1 1 1 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 1 1 1 1 1
EMI SFACT V34 SHRDOW 1 1 1 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0
EMI SFACT V34 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 1 1 1 1 1
EMI SFACT V35 SHRDOW 1 1 1 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 1 1 1 1 1
EMI SFACT V35 SHRDOW 1 1 1 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 1 1 1 1 1
EMI SFACT V35 SHRDOW 1 1 1 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 1 1 1 1 1
EMI SFACT V35 SHRDOW 1 1 1 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0
EMI SFACT V35 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 1 1 1 1 1
EMI SFACT V36 SHRDOW 1 1 1 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 1 1 1 1 1
EMI SFACT V36 SHRDOW 1 1 1 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 1 1 1 1 1
EMI SFACT V36 SHRDOW 1 1 1 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 1 1 1 1 1
EMI SFACT V36 SHRDOW 1 1 1 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0
EMI SFACT V36 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 1 1 1 1 1
EMI SFACT V37 SHRDOW 1 1 1 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 1 1 1 1 1
EMI SFACT V37 SHRDOW 1 1 1 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 1 1 1 1 1
EMI SFACT V37 SHRDOW 1 1 1 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 1 1 1 1 1
EMI SFACT V37 SHRDOW 1 1 1 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0
EMI SFACT V37 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 1 1 1 1 1
EMI SFACT V38 SHRDOW 1 1 1 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 1 1 1 1 1
EMI SFACT V38 SHRDOW 1 1 1 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 1 1 1 1 1
EMI SFACT V38 SHRDOW 1 1 1 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 1 1 1 1 1
EMI SFACT V38 SHRDOW 1 1 1 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0
EMI SFACT V38 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 1 1 1 1 1
EMI SFACT V39 SHRDOW 1 1 1 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 1 1 1 1 1
EMI SFACT V39 SHRDOW 1 1 1 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 1 1 1 1 1
EMI SFACT V39 SHRDOW 1 1 1 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 1 1 1 1 1
EMI SFACT V39 SHRDOW 1 1 1 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0
EMI SFACT V39 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 1 1 1 1 1
EMI SFACT V4 SHRDOW 1 1 1 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 1 1 1 1 1
EMI SFACT V4 SHRDOW 1 1 1 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 1 1 1 1 1
EMI SFACT V4 SHRDOW 1 1 1 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 1 1 1 1 1
EMI SFACT V4 SHRDOW 1 1 1 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0
EMI SFACT V4 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 1 1 1 1 1
EMI SFACT V40 SHRDOW 1 1 1 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 1 1 1 1 1
EMI SFACT V40 SHRDOW 1 1 1 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 1 1 1 1 1
EMI SFACT V40 SHRDOW 1 1 1 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 1 1 1 1 1
EMI SFACT V40 SHRDOW 1 1 1 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0
EMI SFACT V40 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 1 1 1 1 1
EMI SFACT V41 SHRDOW 1 1 1 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 1 1 1 1 1
EMI SFACT V41 SHRDOW 1 1 1 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 1 1 1 1 1
EMI SFACT V41 SHRDOW 1 1 1 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 1 1 1 1 1
EMI SFACT V41 SHRDOW 1 1 1 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0
EMI SFACT V41 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 1 1 1 1 1
EMI SFACT V42 SHRDOW 1 1 1 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 1 1 1 1 1
EMI SFACT V42 SHRDOW 1 1 1 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 1 1 1 1 1
EMI SFACT V42 SHRDOW 1 1 1 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 1 1 1 1 1
EMI SFACT V42 SHRDOW 1 1 1 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0
EMI SFACT V42 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 1 1 1 1 1
EMI SFACT V43 SHRDOW 1 1 1 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 1 1 1 1 1
EMI SFACT V43 SHRDOW 1 1 1 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 1 1 1 1 1
EMI SFACT V43 SHRDOW 1 1 1 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 1 1 1 1 1
EMI SFACT V43 SHRDOW 1 1 1 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0
EMI SFACT V43 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 1 1 1 1 1
EMI SFACT V44 SHRDOW 1 1 1 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 1 1 1 1 1
EMI SFACT V44 SHRDOW 1 1 1 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 1 1 1 1 1
EMI SFACT V44 SHRDOW 1 1 1 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 1 1 1 1 1
EMI SFACT V44 SHRDOW 1 1 1 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0
EMI SFACT V44 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 1 1 1 1 1
EMI SFACT V45 SHRDOW 1 1 1 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 1 1 1 1 1
EMI SFACT V45 SHRDOW 1 1 1 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 1 1 1 1 1
EMI SFACT V45 SHRDOW 1 1 1 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 1 1 1 1 1
EMI SFACT V45 SHRDOW 1 1 1 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0
EMI SFACT V45 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 1 1 1 1 1
EMI SFACT V46 SHRDOW 1 1 1 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 1 1 1 1 1
EMI SFACT V46 SHRDOW 1 1 1 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 1 1 1 1 1
EMI SFACT V46 SHRDOW 1 1 1 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 1 1 1 1 1
EMI SFACT V46 SHRDOW 1 1 1 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0
EMI SFACT V46 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 1 1 1 1 1
EMI SFACT V47 SHRDOW 1 1 1 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 1 1 1 1 1
EMI SFACT V47 SHRDOW 1 1 1 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 1 1 1 1 1
EMI SFACT V47 SHRDOW 1 1 1 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 1 1 1 1 1
EMI SFACT V47 SHRDOW 1 1 1 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0
EMI SFACT V47 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 1 1 1 1 1
EMI SFACT V48 SHRDOW 1 1 1 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 1 1 1 1 1
EMI SFACT V48 SHRDOW 1 1 1 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 1 1 1 1 1
EMI SFACT V48 SHRDOW 1 1 1 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 1 1 1 1 1
EMI SFACT V48 SHRDOW 1 1 1 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0
EMI SFACT V48 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 1 1 1 1 1
EMI SFACT V49 SHRDOW 1 1 1 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 1 1 1 1 1
EMI SFACT V49 SHRDOW 1 1 1 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 1 1 1 1 1
EMI SFACT V49 SHRDOW 1 1 1 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 1 1 1 1 1
EMI SFACT V49 SHRDOW 1 1 1 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0
EMI SFACT V49 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 1 1 1 1 1
EMI SFACT V5 SHRDOW 1 1 1 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 1 1 1 1 1
EMI SFACT V5 SHRDOW 1 1 1 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 1 1 1 1 1
EMI SFACT V5 SHRDOW 1 1 1 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 1 1 1 1 1
EMI SFACT V5 SHRDOW 1 1 1 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0
EMI SFACT V5 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 1 1 1 1 1
EMI SFACT V6 SHRDOW 1 1 1 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 1 1 1 1 1
EMI SFACT V6 SHRDOW 1 1 1 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 1 1 1 1 1
EMI SFACT V6 SHRDOW 1 1 1 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 1 1 1 1 1
EMI SFACT V6 SHRDOW 1 1 1 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0
EMI SFACT V6 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 1 1 1 1 1
EMI SFACT V59 SHRDOW 1 1 1 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 1 1 1 1 1
EMI SFACT V59 SHRDOW 1 1 1 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 1 1 1 1 1
EMI SFACT V59 SHRDOW 1 1 1 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 1 1 1 1 1
EMI SFACT V59 SHRDOW 1 1 1 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0
EMI SFACT V59 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 1 1 1 1 1
EMI SFACT V58 SHRDOW 1 1 1 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 1 1 1 1 1
EMI SFACT V58 SHRDOW 1 1 1 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 1 1 1 1 1
EMI SFACT V58 SHRDOW 1 1 1 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 1 1 1 1 1
EMI SFACT V58 SHRDOW 1 1 1 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0
EMI SFACT V58 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 1 1 1 1 1
EMI SFACT V57 SHRDOW 1 1 1 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 1 1 1 1 1
EMI SFACT V57 SHRDOW 1 1 1 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 1 1 1 1 1
EMI SFACT V57 SHRDOW 1 1 1 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 1 1 1 1 1
EMI SFACT V57 SHRDOW 1 1 1 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0
EMI SFACT V57 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 1 1 1 1 1
EMI SFACT V56 SHRDOW 1 1 1 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 1 1 1 1 1
EMI SFACT V56 SHRDOW 1 1 1 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 1 1 1 1 1
EMI SFACT V56 SHRDOW 1 1 1 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 1 1 1 1 1
EMI SFACT V56 SHRDOW 1 1 1 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0
EMI SFACT V56 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 1 1 1 1 1
EMI SFACT V55 SHRDOW 1 1 1 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 1 1 1 1 1
EMI SFACT V55 SHRDOW 1 1 1 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 1 1 1 1 1
EMI SFACT V55 SHRDOW 1 1 1 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 1 1 1 1 1
EMI SFACT V55 SHRDOW 1 1 1 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0
EMI SFACT V55 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 1 1 1 1 1
EMI SFACT V54 SHRDOW 1 1 1 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 1 1 1 1 1
EMI SFACT V54 SHRDOW 1 1 1 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 1 1 1 1 1
EMI SFACT V54 SHRDOW 1 1 1 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 1 1 1 1 1
EMI SFACT V54 SHRDOW 1 1 1 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0
EMI SFACT V54 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 1 1 1 1 1
EMI SFACT V53 SHRDOW 1 1 1 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 1 1 1 1 1
EMI SFACT V53 SHRDOW 1 1 1 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 1 1 1 1 1
EMI SFACT V53 SHRDOW 1 1 1 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 1 1 1 1 1
EMI SFACT V53 SHRDOW 1 1 1 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0
EMI SFACT V53 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 1 1 1 1 1
EMI SFACT V51 SHRDOW 1 1 1 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 1 1 1 1 1
EMI SFACT V51 SHRDOW 1 1 1 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 1 1 1 1 1
EMI SFACT V51 SHRDOW 1 1 1 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 1 1 1 1 1
EMI SFACT V51 SHRDOW 1 1 1 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0
EMI SFACT V51 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 1 1 1 1 1
EMI SFACT V52 SHRDOW 1 1 1 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 1 1 1 1 1
EMI SFACT V52 SHRDOW 1 1 1 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 1 1 1 1 1
EMI SFACT V52 SHRDOW 1 1 1 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 1 1 1 1 1
EMI SFACT V52 SHRDOW 1 1 1 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0
EMI SFACT V52 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 1 1 1 1 1
EMI SFACT V50 SHRDOW 1 1 1 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 1 1 1 1 1
EMI SFACT V50 SHRDOW 1 1 1 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 1 1 1 1 1
EMI SFACT V50 SHRDOW 1 1 1 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 1 1 1 1 1
EMI SFACT V50 SHRDOW 1 1 1 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0
EMI SFACT V50 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 1 1 1 1 1
EMI SFACT V8 SHRDOW 1 1 1 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 1 1 1 1 1
EMI SFACT V8 SHRDOW 1 1 1 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 1 1 1 1 1
EMI SFACT V8 SHRDOW 1 1 1 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 1 1 1 1 1
EMI SFACT V8 SHRDOW 1 1 1 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0
EMI SFACT V8 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 1 1 1 1 1
EMI SFACT V7 SHRDOW 1 1 1 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 1 1 1 1 1
EMI SFACT V7 SHRDOW 1 1 1 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 1 1 1 1 1
EMI SFACT V7 SHRDOW 1 1 1 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 1 1 1 1 1
EMI SFACT V7 SHRDOW 1 1 1 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0
EMI SFACT V7 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 1 1 1 1 1
EMI SFACT V64 SHRDOW 1 1 1 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 1 1 1 1 1
EMI SFACT V64 SHRDOW 1 1 1 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 1 1 1 1 1
EMI SFACT V64 SHRDOW 1 1 1 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 1 1 1 1 1
EMI SFACT V64 SHRDOW 1 1 1 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0
EMI SFACT V64 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 1 1 1 1 1
EMI SFACT V63 SHRDOW 1 1 1 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 1 1 1 1 1
EMI SFACT V63 SHRDOW 1 1 1 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 1 1 1 1 1
EMI SFACT V63 SHRDOW 1 1 1 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 1 1 1 1 1
EMI SFACT V63 SHRDOW 1 1 1 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0
EMI SFACT V63 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 1 1 1 1 1
EMI SFACT V62 SHRDOW 1 1 1 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 1 1 1 1 1
EMI SFACT V62 SHRDOW 1 1 1 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 1 1 1 1 1
EMI SFACT V62 SHRDOW 1 1 1 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 1 1 1 1 1
EMI SFACT V62 SHRDOW 1 1 1 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0
EMI SFACT V62 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 1 1 1 1 1
EMI SFACT V61 SHRDOW 1 1 1 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 1 1 1 1 1
EMI SFACT V61 SHRDOW 1 1 1 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 1 1 1 1 1
EMI SFACT V61 SHRDOW 1 1 1 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 1 1 1 1 1
EMI SFACT V61 SHRDOW 1 1 1 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0
EMI SFACT V61 SHRDOW 0 0 0 0 0 0

** WeekDays:

** Winter

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 1 1 1 1 1
EMI SFACT V60 SHRDOW 1 1 1 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 1 1 1 1 1
EMI SFACT V60 SHRDOW 1 1 1 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 1 1 1 1 1
EMI SFACT V60 SHRDOW 1 1 1 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 1 1 1 1 1
EMI SFACT V60 SHRDOW 1 1 1 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Saturday:

** Winter

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Sunday:

** Winter

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Spring

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Summer

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0

** Fall

EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
EMI SFACT V60 SHRDOW 0 0 0 0 0 0
SRCGROUP ALL

SO FINISHED

**

** ISCST3 Receptor Pathway

**

**

RE STARTING

GRI DPOLR UPOL1 STA

ORIG 0.00 0.00

DIST 600 700 800 900 1000 1500 2000 2500 3000

GDIR 72 0.00 5.00

FLAG	1	1.50	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	1	1.50	1.50	1.50				
FLAG	2	1.50	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	2	1.50	1.50	1.50				
FLAG	3	1.50	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	3	1.50	1.50	1.50				
FLAG	4	1.50	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	4	1.50	1.50	1.50				
FLAG	5	1.50	1.50	1.50	1.50	1.50	1.50	1.50

EMERSON.OUT.txt

FLAG	5	1.50	1.50	1.50			
FLAG	6	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	6	1.50	1.50	1.50			
FLAG	7	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	7	1.50	1.50	1.50			
FLAG	8	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	8	1.50	1.50	1.50			
FLAG	9	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	9	1.50	1.50	1.50			
FLAG	10	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	10	1.50	1.50	1.50			
FLAG	11	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	11	1.50	1.50	1.50			
FLAG	12	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	12	1.50	1.50	1.50			
FLAG	13	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	13	1.50	1.50	1.50			
FLAG	14	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	14	1.50	1.50	1.50			
FLAG	15	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	15	1.50	1.50	1.50			
FLAG	16	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	16	1.50	1.50	1.50			
FLAG	17	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	17	1.50	1.50	1.50			
FLAG	18	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	18	1.50	1.50	1.50			
FLAG	19	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	19	1.50	1.50	1.50			
FLAG	20	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	20	1.50	1.50	1.50			

		EMERSON. OUT. txt					
FLAG	21	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	21	1.50	1.50	1.50			
FLAG	22	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	22	1.50	1.50	1.50			
FLAG	23	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	23	1.50	1.50	1.50			
FLAG	24	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	24	1.50	1.50	1.50			
FLAG	25	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	25	1.50	1.50	1.50			
FLAG	26	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	26	1.50	1.50	1.50			
FLAG	27	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	27	1.50	1.50	1.50			
FLAG	28	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	28	1.50	1.50	1.50			
FLAG	29	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	29	1.50	1.50	1.50			
FLAG	30	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	30	1.50	1.50	1.50			
FLAG	31	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	31	1.50	1.50	1.50			
FLAG	32	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	32	1.50	1.50	1.50			
FLAG	33	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	33	1.50	1.50	1.50			
FLAG	34	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	34	1.50	1.50	1.50			
FLAG	35	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	35	1.50	1.50	1.50			
FLAG	36	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	36	1.50	1.50	1.50			

EMERSON.OUT.txt

FLAG	37	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	37	1.50	1.50	1.50			
FLAG	38	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	38	1.50	1.50	1.50			
FLAG	39	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	39	1.50	1.50	1.50			
FLAG	40	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	40	1.50	1.50	1.50			
FLAG	41	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	41	1.50	1.50	1.50			
FLAG	42	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	42	1.50	1.50	1.50			
FLAG	43	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	43	1.50	1.50	1.50			
FLAG	44	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	44	1.50	1.50	1.50			
FLAG	45	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	45	1.50	1.50	1.50			
FLAG	46	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	46	1.50	1.50	1.50			
FLAG	47	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	47	1.50	1.50	1.50			
FLAG	48	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	48	1.50	1.50	1.50			
FLAG	49	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	49	1.50	1.50	1.50			
FLAG	50	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	50	1.50	1.50	1.50			
FLAG	51	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	51	1.50	1.50	1.50			
FLAG	52	1.50	1.50	1.50	1.50	1.50	1.50

		EMERSON. OUT. txt					
FLAG	52	1.50	1.50	1.50			
FLAG	53	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	53	1.50	1.50	1.50			
FLAG	54	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	54	1.50	1.50	1.50			
FLAG	55	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	55	1.50	1.50	1.50			
FLAG	56	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	56	1.50	1.50	1.50			
FLAG	57	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	57	1.50	1.50	1.50			
FLAG	58	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	58	1.50	1.50	1.50			
FLAG	59	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	59	1.50	1.50	1.50			
FLAG	60	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	60	1.50	1.50	1.50			
FLAG	61	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	61	1.50	1.50	1.50			
FLAG	62	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	62	1.50	1.50	1.50			
FLAG	63	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	63	1.50	1.50	1.50			
FLAG	64	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	64	1.50	1.50	1.50			
FLAG	65	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	65	1.50	1.50	1.50			
FLAG	66	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	66	1.50	1.50	1.50			
FLAG	67	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	67	1.50	1.50	1.50			
FLAG	68	1.50	1.50	1.50	1.50	1.50	1.50

EMERSON.OUT.txt

FLAG	68	1.50	1.50	1.50			
FLAG	69	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	69	1.50	1.50	1.50			
FLAG	70	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	70	1.50	1.50	1.50			
FLAG	71	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	71	1.50	1.50	1.50			
FLAG	72	1.50	1.50	1.50	1.50	1.50	1.50
FLAG	72	1.50	1.50	1.50			

GRI DPOLR UPOL1 END

** DESCRREC "" ""

DI SCCART 440.00 -552.00 1.50

DI SCCART 352.00 -402.00 1.50

RE FINISHED

**

** ISCST3 Meteorology Pathway

**

**

ME STARTING

INPUTFIL bet05300.asc

ANEMHGHT 10 METERS

SURFDATA 2901 2005

UAI RDATA 2901 2005

ME FINISHED

**

** ISCST3 Output Pathway

**

EMERSON.OUT.txt

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
 Model Outputs Tables of ANNUAL Averages by Receptor
 Model Outputs External File(s) of High Values for Plotting (PLOTFILE
 Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
 m for Missing Hours
 b for Both Calm and

Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot.
 Angle = 0.0
 Emission Units = GRAMS/SEC ;
 Emission Rate Unit Factor = 0.10000E+07
 Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 1.4 MB of RAM.

**Input Runstream File: emreson.INP

**Output Print File: emreson.OUT

*** ISCAST3 - VERSION 02035 *** *** Emerson Ranch Constructi on
 *** 05/30/09

 *** 18:46:22

**MODELOPTs:

CONC PAGE 2
 RURAL FLAT FLGPOL DFAULT

*** VOLUME SOURCE DATA ***

INIT.	EMISSION RATE	NUMBER	EMISSION RATE			BASE	RELEASE	INIT.	
SOURCE	SCALAR VARY	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	SY	SZ
ID	CATS.	BY		(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	
(METERS)									
V1		0	0.36420E-03	-340.9	300.3	0.0	3.00	19.95	
0.50	SHRDOW								
V2		0	0.36420E-03	-243.5	300.3	0.0	3.00	19.95	
0.50	SHRDOW								
V3		0	0.36420E-03	-146.1	300.3	0.0	3.00	19.95	
0.50	SHRDOW								
V4		0	0.36420E-03	-48.7	300.3	0.0	3.00	19.95	
0.50	SHRDOW								
V5		0	0.36420E-03	48.7	300.3	0.0	3.00	19.95	
0.50	SHRDOW								
V6		0	0.36420E-03	146.1	300.3	0.0	3.00	19.95	
0.50	SHRDOW								
V7		0	0.36200E-03	243.5	300.3	0.0	3.00	19.95	
0.50	SHRDOW								
V8		0	0.36420E-03	340.9	300.3	0.0	3.00	19.95	

EMERSON.OUT.txt

0.50	SHRDOW							
V9		0	0.36420E-03	-340.9	214.5	0.0	3.00	19.95
0.50	SHRDOW							
V10		0	0.36420E-03	-243.5	214.5	0.0	3.00	19.95
0.50	SHRDOW							
V11		0	0.36400E-03	-146.1	214.5	0.0	3.00	19.95
0.50	SHRDOW							
V12		0	0.36420E-03	-48.7	214.5	0.0	3.00	19.95
0.50	SHRDOW							
V13		0	0.36420E-03	48.7	214.5	0.0	3.00	19.95
0.50	SHRDOW							
V14		0	0.36420E-03	146.1	214.5	0.0	3.00	19.95
0.50	SHRDOW							
V15		0	0.36420E-03	243.5	214.5	0.0	3.00	19.95
0.50	SHRDOW							
V16		0	0.36420E-03	340.9	214.5	0.0	3.00	19.95
0.50	SHRDOW							
V17		0	0.36420E-03	-340.9	128.7	0.0	3.00	19.95
0.50	SHRDOW							
V18		0	0.36420E-03	-243.5	128.7	0.0	3.00	19.95
0.50	SHRDOW							
V19		0	0.36420E-03	-146.1	128.7	0.0	3.00	19.95
0.50	SHRDOW							
V20		0	0.36420E-03	-48.7	128.7	0.0	3.00	19.95
0.50	SHRDOW							
V21		0	0.36420E-03	48.7	128.7	0.0	3.00	19.95
0.50	SHRDOW							
V22		0	0.36420E-03	146.1	128.7	0.0	3.00	19.95
0.50	SHRDOW							
V23		0	0.36420E-03	243.5	128.7	0.0	3.00	19.95
0.50	SHRDOW							
V24		0	0.36420E-03	340.9	128.7	0.0	3.00	19.95
0.50	SHRDOW							
V25		0	0.36420E-03	-340.9	42.9	0.0	3.00	19.95
0.50	SHRDOW							
V26		0	0.36420E-03	-243.5	42.9	0.0	3.00	19.95
0.50	SHRDOW							
V27		0	0.36420E-03	-146.1	42.9	0.0	3.00	19.95
0.50	SHRDOW							
V28		0	0.36420E-03	-48.7	42.9	0.0	3.00	19.95
0.50	SHRDOW							
V29		0	0.36420E-03	48.7	42.9	0.0	3.00	19.95
0.50	SHRDOW							
V30		0	0.36420E-03	146.1	42.9	0.0	3.00	19.95
0.50	SHRDOW							
V31		0	0.36420E-03	243.5	42.9	0.0	3.00	19.95
0.50	SHRDOW							
V32		0	0.36420E-03	340.9	42.9	0.0	3.00	19.95
0.50	SHRDOW							
V33		0	0.36420E-03	-340.9	-42.9	0.0	3.00	19.95
0.50	SHRDOW							
V34		0	0.36420E-03	-243.5	-42.9	0.0	3.00	19.95
0.50	SHRDOW							
V35		0	0.36420E-03	-146.1	-42.9	0.0	3.00	19.95
0.50	SHRDOW							
V36		0	0.36420E-03	-48.7	-42.9	0.0	3.00	19.95
0.50	SHRDOW							
V37		0	0.36420E-03	48.7	-42.9	0.0	3.00	19.95
0.50	SHRDOW							
V38		0	0.36420E-03	146.1	-42.9	0.0	3.00	19.95
0.50	SHRDOW							
V39		0	0.36420E-03	243.5	-42.9	0.0	3.00	19.95
0.50	SHRDOW							

V40 0 0.36420E-03 EMERSON. OUT. txt 340.9 -42.9 0.0 3.00 19.95
 0.50 SHRDOW

*** I SCST3 - VERSION 02035 *** *** Emerson Ranch Constructi on
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 *** 18:46:22 ***

**MODELOPTs:

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 RURAL FLAT FLGPOL DFAULT

*** VOLUME SOURCE DATA ***

INIT.	EMISSION RATE	NUMBER	EMISSION RATE			BASE	RELEASE	INIT.	
SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	SY	SZ	
SCALAR VARY	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	
ID	BY								
V41	0	0.36420E-03	-340.9	-128.7	0.0	3.00	19.95		
0.50	SHRDOW								
V42	0	0.36420E-03	-243.4	-128.7	0.0	3.00	19.95		
0.50	SHRDOW								
V43	0	0.36420E-03	-146.1	-128.7	0.0	3.00	19.95		
0.50	SHRDOW								
V44	0	0.36420E-03	-48.7	-128.7	0.0	3.00	19.95		
0.50	SHRDOW								
V45	0	0.36420E-03	48.7	-128.7	0.0	3.00	19.95		
0.50	SHRDOW								
V46	0	0.36420E-03	146.1	-128.7	0.0	3.00	19.95		
0.50	SHRDOW								
V47	0	0.36420E-03	243.5	-128.7	0.0	3.00	19.95		
0.50	SHRDOW								
V48	0	0.36420E-03	340.9	-128.7	0.0	3.00	19.95		
0.50	SHRDOW								
V49	0	0.36420E-03	-340.9	-214.5	0.0	3.00	19.95		
0.50	SHRDOW								
V50	0	0.36420E-03	-243.5	-214.5	0.0	3.00	19.95		
0.50	SHRDOW								
V51	0	0.36420E-03	-146.1	-214.5	0.0	3.00	19.95		
0.50	SHRDOW								
V52	0	0.36420E-03	-48.7	-214.5	0.0	3.00	19.95		
0.50	SHRDOW								
V53	0	0.36420E-03	48.7	-214.5	0.0	3.00	19.95		
0.50	SHRDOW								
V54	0	0.36420E-03	146.1	-214.5	0.0	3.00	19.95		
0.50	SHRDOW								
V55	0	0.36420E-03	243.5	-214.5	0.0	3.00	19.95		
0.50	SHRDOW								
V56	0	0.36420E-03	340.9	-214.5	0.0	3.00	19.95		
0.50	SHRDOW								
V57	0	0.36420E-03	-340.9	-300.3	0.0	3.00	19.95		
0.50	SHRDOW								
V58	0	0.36420E-03	-243.5	-300.3	0.0	3.00	19.95		
0.50	SHRDOW								
V59	0	0.36420E-03	-146.1	-300.3	0.0	3.00	19.95		
0.50	SHRDOW								

EMERSON. OUT. txt

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V2	;	SOURCE TYPE = VOLUME	:						
HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR	
HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR	

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14

EMERSON.OUT.txt

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V3 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

EMERSON.OUT.txt

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00			
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

*** ISCST3 - VERSION 02035 ***

*** Emerson Ranch Constructi on

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**MODELOPTs:

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V4 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = WINTER; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00			
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14

EMERSON.OUT.txt

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V5		SOURCE TYPE = VOLUME									
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

WEEKDAY						SEASON = WINTER; DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.1000E+01						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						
WEEKDAY						SEASON = SPRING; DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.1000E+01						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						
WEEKDAY						SEASON = SUMMER; DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.1000E+01						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						
WEEKDAY						SEASON = FALL ; DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.1000E+01						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						
SATURDAY						SEASON = WINTER; DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						
SATURDAY						SEASON = SPRING; DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						
SATURDAY						SEASON = SUMMER; DAY OF WEEK =					

EMERSON.OUT.txt

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V6	;	SOURCE TYPE = VOLUME	:				
HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR	
HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR	

EMERSON.OUT.txt

 WEEKDAY SEASON = WINTER; DAY OF WEEK =
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
 .1000E+01 15 .1000E+01 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =
 WEEKDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
 .1000E+01 15 .1000E+01 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =
 WEEKDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
 .1000E+01 15 .1000E+01 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =
 WEEKDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
 .1000E+01 15 .1000E+01 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =
 SATURDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
 .0000E+00 15 .0000E+00 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =
 SATURDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
 .0000E+00 15 .0000E+00 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =
 SATURDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
 .0000E+00 15 .0000E+00 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =
 SATURDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14

EMERSON.OUT.txt

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** IS CST3 - VERSION 02035 ***

*** Emerson Ranch Constructi on

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V7 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

EMERSON.OUT.txt

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

*** ISCT3 - VERSION 02035 ***

*** Emerson Ranch Constructi on
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18:46:22

**MODELOPTs:

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V8 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR		

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			

EMERSON.OUT.txt

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V9 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SATURDAY

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V10		SOURCE TYPE = VOLUME								
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	

SEASON = WINTER; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SPRING; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SUMMER; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = FALL ; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = WINTER; DAY OF WEEK =										
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SPRING; DAY OF WEEK =										
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24

EMERSON.OUT.txt

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

EMERSON.OUT.txt

SOURCE ID = V11		SOURCE TYPE = VOLUME		VOLUME		HOUR		SCALAR		HOUR		SCALAR	
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
												SEASON = WINTER; DAY OF WEEK =	
WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
												SEASON = SPRING; DAY OF WEEK =	
WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
												SEASON = SUMMER; DAY OF WEEK =	
WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
												SEASON = FALL ; DAY OF WEEK =	
WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
												SEASON = WINTER; DAY OF WEEK =	
SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
												SEASON = SPRING; DAY OF WEEK =	
SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
												SEASON = SUMMER; DAY OF WEEK =	
SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
												SEASON = FALL ; DAY OF WEEK =	
SATURDAY													

EMERSON. OUT. txt

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V12 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22

EMERSON.OUT.txt

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V13 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6

EMERSON.OUT.txt

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** ISCST3 - VERSION 02035 ***

*** Emerson Ranch Constructi on
05/30/09

18: 46: 22

**MODELOPTs:

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CONC

RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND
BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V14 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR : HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** I SCST3 - VERSION 02035 ***

*** Emerson Ranch Constructi on
05/30/09

*** 18: 46: 22

**MODELOPTs:

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V15 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =
WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =
WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =
WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =
WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =
SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =
SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6

EMERSON.OUT.txt

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V16		SOURCE TYPE = VOLUME											
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR		
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR		

WEEKDAY						SEASON = WINTER;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
WEEKDAY						SEASON = SPRING;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
WEEKDAY						SEASON = SUMMER;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
WEEKDAY						SEASON = FALL ;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
SATURDAY						SEASON = WINTER;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
SATURDAY						SEASON = SPRING;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
SATURDAY						SEASON = SUMMER;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						

EMERSON.OUT.txt

```

.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = FALL ; DAY OF WEEK =
SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = WINTER; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = SPRING; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = SUMMER; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = FALL ; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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*** IS CST3 - VERSION 02035 ***      *** Emerson Ranch Construction
***                                ***      05/30/09
***                                ***
***                                ***      18:46:22

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**MODELOPTs:

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

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SOURCE ID = V17 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
  HOUR SCALAR HOUR SCALAR HOUR SCALAR
-----
SEASON = WINTER; DAY OF WEEK =
WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01

```


EMERSON.OUT.txt

.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** ISCT3 - VERSION 02035 ***

*** Emerson Ranch Constructi on
05/30/09

18:46:22

**MODELOPTs:

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CONC

RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V18 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

EMERSON.OUT.txt

.0000E+00 23 .0000E+00 24 .0000E+00
 SEASON = SUMMER; DAY OF WEEK =
 SUNDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
 .0000E+00 15 .0000E+00 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =
 SUNDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
 .0000E+00 15 .0000E+00 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

*** ISCT3 - VERSION 02035 ***

*** Emerson Ranch Constructi on
 05/30/09

 18:46:22

**MODELOPTs:

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND
 BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V19 ; SOURCE TYPE = VOLUME :
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
 HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =
 WEEKDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
 .1000E+01 15 .1000E+01 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =
 WEEKDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
 .1000E+01 15 .1000E+01 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =
 WEEKDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
 .1000E+01 15 .1000E+01 16 .0000E+00
 17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
 .0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =
 WEEKDAY
 1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
 .0000E+00 7 .0000E+00 8 .1000E+01

EMERSON. OUT. txt

SEASON = SPRING; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

*** ISCS T3 - VERSION 02035 ***

*** Emerson Ranch Constructi on
 05/30/09

 18: 46: 22

**MODELOPTs:

CONC

RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V21		SOURCE TYPE = VOLUME		:		HOUR		SCALAR		HOUR		SCALAR	
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
-----												SEASON = WINTER; DAY OF WEEK =	
WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14		15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22		23	.0000E+00	24	.0000E+00						
-----												SEASON = SPRING; DAY OF WEEK =	
WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14		15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22		23	.0000E+00	24	.0000E+00						
-----												SEASON = SUMMER; DAY OF WEEK =	
WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14		15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22		23	.0000E+00	24	.0000E+00						
-----												SEASON = FALL ; DAY OF WEEK =	
WEEKDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14		15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22		23	.0000E+00	24	.0000E+00						
-----												SEASON = WINTER; DAY OF WEEK =	
SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14		15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22		23	.0000E+00	24	.0000E+00						
-----												SEASON = SPRING; DAY OF WEEK =	
SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14		15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22		23	.0000E+00	24	.0000E+00						
-----												SEASON = SUMMER; DAY OF WEEK =	
SATURDAY													
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14		15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22		23	.0000E+00	24	.0000E+00						

EMERSON.OUT.txt

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** ISCST3 - VERSION 02035 *** *** Emerson Ranch Constructi on
*** 05/30/09

*** 18:46:22

**MODELOPTs:

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V22 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

EMERSON. OUT. txt

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

*** ISCST3 - VERSION 02035 ***

*** Emerson Ranch Constructi on

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**MODELOPTs:

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CONC

RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V23 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14

EMERSON.OUT.txt

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** ISCT3 - VERSION 02035 ***

*** Emerson Ranch Constructi on
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**MODELOPTs:

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CONC

RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V24 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

EMERSON.OUT.txt

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

*** ISCST3 - VERSION 02035 ***

*** Emerson Ranch Constructi on
05/30/09

18: 46: 22

**MODELOPTs:

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CONC

RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V25 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
------	--------	------	--------	------	--------	------	--------	------	--------

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = WINTER; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00			
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14

EMERSON.OUT.txt

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V26		SOURCE TYPE = VOLUME									
1	2	3	4	5	6	7	8	9	10	11	12
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	2	3	4	5	6	7	8	9	10	11	12
SEASON = WINTER; DAY OF WEEK =											
WEEKDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SEASON = SPRING; DAY OF WEEK =											
WEEKDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SEASON = SUMMER; DAY OF WEEK =											
WEEKDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SEASON = FALL ; DAY OF WEEK =											
WEEKDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SEASON = WINTER; DAY OF WEEK =											
SATURDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SEASON = SPRING; DAY OF WEEK =											
SATURDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SEASON = SUMMER; DAY OF WEEK =											

EMERSON.OUT.txt

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V27	;	SOURCE TYPE = VOLUME	:				
HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR	
HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR	

EMERSON.OUT.txt

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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CONC

RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V28 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR : HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

EMERSON.OUT.txt

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

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*** Emerson Ranch Constructi on
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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V29 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

SEASON = WINTER; DAY OF WEEK =									
WEEKDAY	1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6			
	.0000E+00	7 .0000E+00	8 .1000E+01						
	9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14			
	.1000E+01	15 .1000E+01	16 .0000E+00						
	17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22			
	.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00					

SEASON = SPRING; DAY OF WEEK =

WEEKDAY	1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6			
	.0000E+00	7 .0000E+00	8 .1000E+01						
	9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14			
	.1000E+01	15 .1000E+01	16 .0000E+00						
	17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22			
	.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00					

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY	1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6			
	.0000E+00	7 .0000E+00	8 .1000E+01						
	9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14			
	.1000E+01	15 .1000E+01	16 .0000E+00						

EMERSON.OUT.txt

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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*** Emerson Ranch Construction

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**MODELOPTs:

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V30 ; SOURCE TYPE = VOLUME :

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SATURDAY

*** I SCST3 - VERSION 02035 ***

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 *** Emerson Ranch Constructi on
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 CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V31		SOURCE TYPE = VOLUME								
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	

SEASON = WINTER; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SPRING; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SUMMER; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = FALL ; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = WINTER; DAY OF WEEK =										
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SPRING; DAY OF WEEK =										
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24

EMERSON.OUT.txt

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

EMERSON.OUT.txt

SOURCE ID = V32		SOURCE TYPE = VOLUME		VOLUME		SCALAR		SCALAR		
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	

SEASON = WINTER; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SPRING; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SUMMER; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = FALL ; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = WINTER; DAY OF WEEK =										
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SPRING; DAY OF WEEK =										
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SUMMER; DAY OF WEEK =										
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = FALL ; DAY OF WEEK =										
SATURDAY										

EMERSON.OUT.txt

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V33 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22

EMERSON.OUT.txt

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V34 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6

EMERSON.OUT.txt

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00			
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00			
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V35 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND
BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V36 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

WEEKDAY SEASON = WINTER; DAY OF WEEK =
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

WEEKDAY SEASON = SPRING; DAY OF WEEK =
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

WEEKDAY SEASON = SUMMER; DAY OF WEEK =
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

WEEKDAY SEASON = FALL ; DAY OF WEEK =
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SATURDAY SEASON = WINTER; DAY OF WEEK =
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SATURDAY SEASON = SPRING; DAY OF WEEK =
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V37		SOURCE TYPE = VOLUME		:									
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR		
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR								

WEEKDAY						SEASON = WINTER;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
WEEKDAY						SEASON = SPRING;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
WEEKDAY						SEASON = SUMMER;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
WEEKDAY						SEASON = FALL ;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01
14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
SATURDAY						SEASON = WINTER;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
SATURDAY						SEASON = SPRING;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						
SATURDAY						SEASON = SUMMER;		DAY OF WEEK =					
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6			
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00
14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00						

EMERSON.OUT.txt

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.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = FALL ; DAY OF WEEK =
SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = WINTER; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = SPRING; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = SUMMER; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = FALL ; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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*** ISCT3 - VERSION 02035 ***      *** Emerson Ranch Construction
***                               ***      05/30/09
***                               ***
***                               ***      18:46:22

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**MODELOPTs:

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CONC          RURAL FLAT  FLGPOL DFAULT

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* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

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SOURCE ID = V38 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR  HOUR SCALAR  HOUR SCALAR  HOUR SCALAR
  HOUR SCALAR  HOUR SCALAR  HOUR SCALAR
-----
SEASON = WINTER; DAY OF WEEK =
WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01

```


EMERSON.OUT.txt

.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** ISCT3 - VERSION 02035 ***

*** Emerson Ranch Constructi on

05/30/09

18:46:22

**MODELOPTs:

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CONC

RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V39 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

EMERSON.OUT.txt

.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

*** ISCT3 - VERSION 02035 ***

*** Emerson Ranch Constructi on
 05/30/09

 18:46:22

**MODELOPTs:

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V40 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
---	---	---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---	---	---

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.1000E+01						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.1000E+01						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.1000E+01						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.1000E+01						

EMERSON. OUT. txt

SEASON = SPRING; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

*** ISCS T3 - VERSION 02035 ***

*** Emerson Ranch Constructi on
 05/30/09

 18: 46: 22

**MODELOPTs:

CONC

RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V42		SOURCE TYPE = VOLUME		:						
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR					

WEEKDAY						SEASON = WINTER;		DAY OF WEEK =		
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24

WEEKDAY						SEASON = SPRING;		DAY OF WEEK =		
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24

WEEKDAY						SEASON = SUMMER;		DAY OF WEEK =		
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24

WEEKDAY						SEASON = FALL ;		DAY OF WEEK =		
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24

SATURDAY						SEASON = WINTER;		DAY OF WEEK =		
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24

SATURDAY						SEASON = SPRING;		DAY OF WEEK =		
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24

SATURDAY						SEASON = SUMMER;		DAY OF WEEK =		
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24

EMERSON.OUT.txt

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** ISCST3 - VERSION 02035 *** *** Emerson Ranch Constructi on
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*** 18:46:22

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V43 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

EMERSON. OUT. txt

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V44 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14

EMERSON.OUT.txt

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V45 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

EMERSON.OUT.txt

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V46 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

SEASON = WINTER; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00			
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14

EMERSON.OUT.txt

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** ISCT3 - VERSION 02035 ***

*** Emerson Ranch Construction
05/30/09

**MODELOPTs:

CONC

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V47		SOURCE TYPE = VOLUME									
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR						

WEEKDAY						SEASON = WINTER;		DAY OF WEEK =			
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
WEEKDAY						SEASON = SPRING;		DAY OF WEEK =			
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
WEEKDAY						SEASON = SUMMER;		DAY OF WEEK =			
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
WEEKDAY						SEASON = FALL ;		DAY OF WEEK =			
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SATURDAY						SEASON = WINTER;		DAY OF WEEK =			
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SATURDAY						SEASON = SPRING;		DAY OF WEEK =			
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SATURDAY						SEASON = SUMMER;		DAY OF WEEK =			
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

EMERSON.OUT.txt

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V48	;	SOURCE TYPE = VOLUME	:				
HOUR SCALAR	HOUR SCALAR	HOUR SCALAR	HOUR SCALAR	HOUR SCALAR	HOUR SCALAR	HOUR SCALAR	HOUR SCALAR
HOUR SCALAR	HOUR SCALAR	HOUR SCALAR	HOUR SCALAR	HOUR SCALAR	HOUR SCALAR	HOUR SCALAR	HOUR SCALAR

EMERSON.OUT.txt

```

-----
SEASON = WINTER; DAY OF WEEK =
WEEKDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

```

```

SEASON = SPRING; DAY OF WEEK =
WEEKDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

```

```

SEASON = SUMMER; DAY OF WEEK =
WEEKDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

```

```

SEASON = FALL ; DAY OF WEEK =
WEEKDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .1000E+01
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

```

```

SEASON = WINTER; DAY OF WEEK =
SATURDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

```

```

SEASON = SPRING; DAY OF WEEK =
SATURDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

```

```

SEASON = SUMMER; DAY OF WEEK =
SATURDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

```

```

SEASON = FALL ; DAY OF WEEK =
SATURDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00

```

EMERSON.OUT.txt

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V49 ; SOURCE TYPE = VOLUME ;
HOUR SCALAR HOUR SCALAR HOUR SCALAR : HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

EMERSON. OUT. txt

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V50	;	SOURCE TYPE = VOLUME	:						
HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR	
HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR	

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14

EMERSON.OUT.txt

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V51 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR : HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

EMERSON.OUT.txt

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V52		SOURCE TYPE = VOLUME									
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
----	----	----	----	----	----	----	----	----	----	----	----
						SEASON = WINTER;		DAY OF WEEK =			
WEEKDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
						SEASON = SPRING;		DAY OF WEEK =			
WEEKDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
						SEASON = SUMMER;		DAY OF WEEK =			
WEEKDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
						SEASON = FALL ;		DAY OF WEEK =			
WEEKDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
						SEASON = WINTER;		DAY OF WEEK =			
SATURDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
						SEASON = SPRING;		DAY OF WEEK =			
SATURDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

EMERSON.OUT.txt

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** ISCT3 - VERSION 02035 ***

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

EMERSON.OUT.txt

SOURCE ID = V53		SOURCE TYPE = VOLUME								
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	
SEASON = WINTER; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SPRING; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SUMMER; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = FALL ; DAY OF WEEK =										
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = WINTER; DAY OF WEEK =										
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SPRING; DAY OF WEEK =										
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = SUMMER; DAY OF WEEK =										
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
SEASON = FALL ; DAY OF WEEK =										

EMERSON.OUT.txt

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V54	;	SOURCE TYPE = VOLUME	:						
HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR	
HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR		HOUR SCALAR	

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			

EMERSON.OUT.txt

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V55 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

EMERSON.OUT.txt

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V56 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR				

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .1000E+01			
9 .1000E+01	10 .1000E+01	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
.1000E+01	15 .1000E+01	16 .0000E+00			

EMERSON.OUT.txt

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** ISCST3 - VERSION 02035 *** *** Emerson Ranch Construction
*** 05/30/09

*** 18:46:22

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V57 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =
WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =
WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =
WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =
WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =
SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =
SATURDAY

EMERSON.OUT.txt

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	.0000E+00		
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	.0000E+00		
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00	.0000E+00		

*** IS CST3 - VERSION 02035 ***

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RURAL FLAT FLGPOL DFAULT

EMERSON.OUT.txt

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V58		SOURCE TYPE = VOLUME								
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR					
						SEASON = WINTER;		DAY OF WEEK =		
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.0000E+00	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
						SEASON = SPRING;		DAY OF WEEK =		
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.0000E+00	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
						SEASON = SUMMER;		DAY OF WEEK =		
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.0000E+00	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
						SEASON = FALL ;		DAY OF WEEK =		
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.1000E+01	9	.1000E+01	10	.1000E+01	11	.1000E+01	12
13	.1000E+01	14	.0000E+00	15	.1000E+01	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
						SEASON = WINTER;		DAY OF WEEK =		
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
						SEASON = SPRING;		DAY OF WEEK =		
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24
						SEASON = SUMMER;		DAY OF WEEK =		
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24

EMERSON.OUT.txt

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V59 ; SOURCE TYPE = VOLUME ;
HOUR SCALAR HOUR SCALAR HOUR SCALAR : HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6

EMERSON.OUT.txt

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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*** Emerson Ranch Constructi on
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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND
BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V60 ; SOURCE TYPE = VOLUME ;
HOUR SCALAR HOUR SCALAR HOUR SCALAR : HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00

EMERSON.OUT.txt

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND
BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V61 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR : HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

SEASON = WINTER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6

EMERSON.OUT.txt

1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6
.0000E+00	7 .0000E+00	8 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00
9 .0000E+00	10 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
.0000E+00	15 .0000E+00	16 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00
17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
.0000E+00	23 .0000E+00	24 .0000E+00			

*** ISCST3 - VERSION 02035 ***

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RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V62		SOURCE TYPE = VOLUME					
SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR	SCALAR
1 .0000E+00	7 .0000E+00	2 .0000E+00	8 .0000E+00	3 .0000E+00	9 .1000E+01	4 .0000E+00	10 .1000E+01
9 .1000E+01	15 .1000E+01	10 .1000E+01	16 .0000E+00	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
17 .0000E+00	23 .0000E+00	18 .0000E+00	24 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
				SEASON = WINTER; DAY OF WEEK =			
WEEKDAY							
1 .0000E+00	7 .0000E+00	2 .0000E+00	8 .1000E+01	3 .0000E+00	9 .1000E+01	4 .0000E+00	10 .1000E+01
9 .1000E+01	15 .1000E+01	10 .1000E+01	16 .0000E+00	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
17 .0000E+00	23 .0000E+00	18 .0000E+00	24 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
				SEASON = SPRING; DAY OF WEEK =			
WEEKDAY							
1 .0000E+00	7 .0000E+00	2 .0000E+00	8 .1000E+01	3 .0000E+00	9 .1000E+01	4 .0000E+00	10 .1000E+01
9 .1000E+01	15 .1000E+01	10 .1000E+01	16 .0000E+00	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
17 .0000E+00	23 .0000E+00	18 .0000E+00	24 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
				SEASON = SUMMER; DAY OF WEEK =			
WEEKDAY							
1 .0000E+00	7 .0000E+00	2 .0000E+00	8 .1000E+01	3 .0000E+00	9 .1000E+01	4 .0000E+00	10 .1000E+01
9 .1000E+01	15 .1000E+01	10 .1000E+01	16 .0000E+00	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
17 .0000E+00	23 .0000E+00	18 .0000E+00	24 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
				SEASON = FALL ; DAY OF WEEK =			
WEEKDAY							
1 .0000E+00	7 .0000E+00	2 .0000E+00	8 .1000E+01	3 .0000E+00	9 .1000E+01	4 .0000E+00	10 .1000E+01
9 .1000E+01	15 .1000E+01	10 .1000E+01	16 .0000E+00	11 .1000E+01	12 .1000E+01	13 .1000E+01	14
17 .0000E+00	23 .0000E+00	18 .0000E+00	24 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22
				SEASON = WINTER; DAY OF WEEK =			
SATURDAY							
1 .0000E+00	7 .0000E+00	2 .0000E+00	8 .0000E+00	3 .0000E+00	9 .0000E+00	4 .0000E+00	10 .0000E+00
9 .0000E+00	15 .0000E+00	10 .0000E+00	16 .0000E+00	11 .0000E+00	12 .0000E+00	13 .0000E+00	14
17 .0000E+00	23 .0000E+00	18 .0000E+00	24 .0000E+00	19 .0000E+00	20 .0000E+00	21 .0000E+00	22

EMERSON. OUT. txt

```

.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = SPRING; DAY OF WEEK =
SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = SUMMER; DAY OF WEEK =
SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = FALL ; DAY OF WEEK =
SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = WINTER; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = SPRING; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = SUMMER; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
SEASON = FALL ; DAY OF WEEK =
SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

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*** I SCST3 - VERSI ON 02035 ***

*** Emerson Ranch Constructi on
 05/30/09

 18: 46: 22

**MODELOPTs:

CONC

RURAL FLAT FLGPOL DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = V63		SOURCE TYPE = VOLUME								
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR			
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR			

				SEASON = WINTER; DAY OF WEEK =						
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
	.0000E+00	7	.0000E+00	8	.1000E+01					
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
	.1000E+01	15	.1000E+01	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
	.0000E+00	23	.0000E+00	24	.0000E+00					
				SEASON = SPRING; DAY OF WEEK =						
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
	.0000E+00	7	.0000E+00	8	.1000E+01					
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
	.1000E+01	15	.1000E+01	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
	.0000E+00	23	.0000E+00	24	.0000E+00					
				SEASON = SUMMER; DAY OF WEEK =						
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
	.0000E+00	7	.0000E+00	8	.1000E+01					
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
	.1000E+01	15	.1000E+01	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
	.0000E+00	23	.0000E+00	24	.0000E+00					
				SEASON = FALL ; DAY OF WEEK =						
WEEKDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
	.0000E+00	7	.0000E+00	8	.1000E+01					
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
	.1000E+01	15	.1000E+01	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
	.0000E+00	23	.0000E+00	24	.0000E+00					
				SEASON = WINTER; DAY OF WEEK =						
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
	.0000E+00	7	.0000E+00	8	.0000E+00					
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
	.0000E+00	15	.0000E+00	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
	.0000E+00	23	.0000E+00	24	.0000E+00					
				SEASON = SPRING; DAY OF WEEK =						
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
	.0000E+00	7	.0000E+00	8	.0000E+00					
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
	.0000E+00	15	.0000E+00	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
	.0000E+00	23	.0000E+00	24	.0000E+00					
				SEASON = SUMMER; DAY OF WEEK =						
SATURDAY										
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6

EMERSON.OUT.txt

.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = WINTER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SPRING; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = SUMMER; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

SEASON = FALL ; DAY OF WEEK =

SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** ISCS T3 - VERSI ON 02035 ***

*** Emerson Ranch Constructi on
05/30/09

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**MODELOPTs:

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CONC RURAL FLAT FLGPOL DFAULT

* SOURCE EMI SSI ON RATE SCALARS WHI CH VARY SEASONALLY, DI URNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE I D = V64 ; SOURCE TYPE = VOLUME ;
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR HOUR SCALAR

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

DI RECTI ON (DEGREES)	DI STANCE (METERS)							
	1500.00	2000.00	600.00 2500.00	700.00 3000.00	800.00	900.00	1000.00	
200.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
205.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
210.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
215.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
220.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
225.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
230.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
235.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
240.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
245.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
250.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
255.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
260.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
265.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
270.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
275.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
280.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
285.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
290.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
295.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
300.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
305.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
310.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
315.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
320.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50
325.00			1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50		1.50	1.50	1.50	1.50	1.50	1.50

CATEGORIES ***
*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED
(METERS/SEC)

10. 80, 1. 54, 3. 09, 5. 14, 8. 23,

*** WIND PROFILE EXPONENTS ***

5	STABILITY	WIND SPEED CATEGORY			
	CATEGORY	1	2	3	4
	6				
. 70000E-01	A	. 70000E-01	. 70000E-01	. 70000E-01	. 70000E-01
. 70000E-01	B	. 70000E-01	. 70000E-01	. 70000E-01	. 70000E-01
. 10000E+00	C	. 10000E+00	. 10000E+00	. 10000E+00	. 10000E+00
. 15000E+00	D	. 15000E+00	. 15000E+00	. 15000E+00	. 15000E+00
. 35000E+00	E	. 35000E+00	. 35000E+00	. 35000E+00	. 35000E+00
. 55000E+00	F	. 55000E+00	. 55000E+00	. 55000E+00	. 55000E+00

GRADIENTS ***
*** VERTICAL POTENTIAL TEMPERATURE
(DEGREES KELVIN PER METER)

5	STABILITY	WIND SPEED CATEGORY			
	CATEGORY	1	2	3	4
	6				
. 00000E+00	A	. 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00
. 00000E+00	B	. 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00
. 00000E+00	C	. 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00
. 00000E+00	D	. 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00
. 20000E-01	E	. 20000E-01	. 20000E-01	. 20000E-01	. 20000E-01
. 35000E-01	F	. 35000E-01	. 35000E-01	. 35000E-01	. 35000E-01

*** ISCST3 - VERSION 02035 ***
*** Emerson Ranch Construction
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**MODELOPTs:

CONC PAGE 74
RURAL FLAT FLGPOL DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

EMERSON.OUT.txt

FILE: bet05300.asc

FORMAT: (4I 2, 2F9. 4, F6. 1, I 2, 2F7. 1, f9. 4, f10. 1, f8. 4, i 4, f7. 2)

SURFACE STATION NO. : 2901
 NAME: UNKNOWN

UPPER AIR STATION NO. : 2901
 NAME: UNKNOWN

YEAR: 2005

YEAR: 2005

IPCODE PRATE				FLOW	SPEED	TEMP	STAB	MIXING HEIGHT (M)		USTAR	M-0 LENGTH	Z-0
YR	MN	DY	HR	VECTOR	(M/S)	(K)	CLASS	RURAL	URBAN	(M/S)	(M)	(M)
				(mm/HR)								
05	01	01	01	28.3	3.08	280.2	5	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	02	343.0	2.50	280.2	6	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	03	24.2	2.32	279.7	6	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	04	342.7	2.46	279.3	5	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	05	347.3	2.64	279.0	4	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	06	8.5	2.95	279.0	5	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	07	348.2	2.15	279.6	6	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	08	317.5	2.32	278.3	5	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	09	320.8	2.46	279.2	4	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	10	322.8	3.84	281.4	4	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	11	321.1	3.40	282.7	4	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	12	343.4	3.93	284.2	3	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	13	356.5	3.98	285.2	2	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	14	12.4	3.67	285.7	2	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	15	23.0	4.38	284.6	3	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	16	24.3	3.67	284.0	4	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	17	18.6	4.38	283.0	4	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	18	21.3	2.95	281.7	4	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	19	38.0	2.82	281.2	4	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	20	351.1	1.97	281.2	5	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	21	328.5	2.59	281.2	4	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	22	333.4	2.19	280.0	5	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	23	12.7	3.04	279.4	4	300.0	300.0	0.0000	0.0	0.0000
0				0.00								
05	01	01	24	355.5	1.83	279.6	4	300.0	300.0	0.0000	0.0	0.0000

0 0.00

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** ISCST3 - VERSION 02035 *** Emerson Ranch Construction
*** 05/30/09 ***
*** 18:46:22 ***

**MODELOPTs:

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CONC RURAL FLAT FLGPOL DFAULT

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION

VALUES FOR SOURCE GROUP: ALL INCLUDING SOURCE(S): V1 , V2 , V3
, V4 , V5 , V6 , V7
, V8 , V9 , V10 , V11 , V12 , V13 , V14 , V15
, V16 , V17 , V18 , V19
, V20 , V21 , V22 , V23 , V24 , V25 , V26 , V27
, V28 , V29 , V30 , . . . ,

*** NETWORK ID: UPOL1 ; NETWORK TYPE: GRIDPOLR

** CONC OF DIESELP M IN MICROGRAMS/M**3

**

DI RECTI ON (DEGREES)	DI STANCE (METERS)					
	1500.00	2000.00	2500.00	3000.00	800.00	900.00 1000.00
360.00	0.00140	0.00091	0.00068	0.00054	0.00436	0.00334 0.00268
5.00	0.00119	0.00079	0.00054	0.00040	0.00392	0.00302 0.00243
10.00	0.00101	0.00056	0.00039	0.00028	0.00365	0.00279 0.00226
15.00	0.00084	0.00042	0.00025	0.00017	0.00352	0.00267 0.00213
20.00	0.00075	0.00040	0.00024	0.00015	0.00346	0.00259 0.00196
25.00	0.00075	0.00045	0.00032	0.00024	0.00337	0.00246 0.00187
30.00	0.00083	0.00052	0.00038	0.00031	0.00333	0.00245 0.00190
35.00	0.00101	0.00061	0.00042	0.00030	0.00345	0.00265 0.00213
40.00	0.00120	0.00070	0.00045	0.00032	0.00384	0.00304 0.00249
45.00	0.00139	0.00084	0.00059	0.00044	0.00431	0.00344 0.00284
50.00	0.00159	0.00102	0.00074	0.00057	0.00480	0.00383 0.00316
55.00	0.00173	0.00111	0.00079	0.00060	0.00513	0.00407 0.00335
60.00	0.00175	0.00112	0.00079	0.00058	0.00537	0.00422 0.00344

YRS) RESULTS ***

** CONC OF DIESELP M IN MICROGRAMS/M**3

**

GROUP ID ZFLAG)	NETWORK OF TYPE GRID-ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV,
ALL	1ST HIGHEST VALUE IS	0.05710 AT (	352.00, -402.00, 0.00,
1.50)	DC NA		
	2ND HIGHEST VALUE IS	0.05346 AT (	459.63, -385.67, 0.00,
1.50)	GP UPOL1		
	3RD HIGHEST VALUE IS	0.05156 AT (	491.49, -344.15, 0.00,
1.50)	GP UPOL1		
	4TH HIGHEST VALUE IS	0.04766 AT (	519.62, -300.00, 0.00,
1.50)	GP UPOL1		
	5TH HIGHEST VALUE IS	0.04741 AT (	424.26, -424.26, 0.00,
1.50)	GP UPOL1		
	6TH HIGHEST VALUE IS	0.04390 AT (	543.78, -253.57, 0.00,
1.50)	GP UPOL1		
	7TH HIGHEST VALUE IS	0.04090 AT (	563.82, -205.21, 0.00,
1.50)	GP UPOL1		
	8TH HIGHEST VALUE IS	0.04084 AT (	385.67, -459.63, 0.00,
1.50)	GP UPOL1		
	9TH HIGHEST VALUE IS	0.03854 AT (	573.41, -401.50, 0.00,
1.50)	GP UPOL1		
	10TH HIGHEST VALUE IS	0.03800 AT (	579.56, -155.29, 0.00,
1.50)	GP UPOL1		

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR
 BD = BOUNDARY

*** ISCST3 - VERSION 02035 *** *** Emerson Ranch Constructi on
 *** 05/30/09

*** 18:46:22

**MODELOPTs:

CONC PAGE 79
 RURAL FLAT FLGPOL DFAULT

*** Message Summary : ISCST3 Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
 A Total of 0 Warning Message(s)
 A Total of 3 Informational Message(s)
 A Total of 3 Calm Hours Identified

EMERSON.OUT.txt

```
***** FATAL ERROR MESSAGES *****  
*** NONE ***
```

```
***** WARNING MESSAGES *****  
*** NONE ***
```

```
*****  
*** I SCST3 Fi ni shes Successful ly ***  
*****
```

EMTRUCKS. OUT. txt

**

**

** ISCST3 Input Produced by:

** ISC-AERMOD View Ver. 5.8.1

** Lakes Environmental Software Inc.

** Date: 6/5/2009

** File: C:\Documents and Settings\Don Ballanti\Local Settings\My Documents\Business\Project Files\Emerson FEIR\emtrucks.INP

**

**

**

** ISCST3 Control Pathway

**

**

CO STARTING

TITLEONE C:\Documents and Settings\Don Ballanti\Local Settings\My Documents\B

MODELOPT DFAULT CONC RURAL

AVERTIME ANNUAL

POLLUTID DIESELP

TERRHGTS FLAT

RUNORNOT RUN

CO FINISHED

**

** ISCST3 Source Pathway

**

**

SO STARTING

** Source Locati on **

** Source ID - Type - X Coord. - Y Coord. **

LOCATI ON MAJ1IDLE POINT 210.000 254.000

** DESCRSRC Major 1 Loadi ng Dock Idle Emi ssi ons

LOCATI ON MAJ2IDLE POINT 17.000 109.000

** DESCRSRC Major 2 Loadi ng Dock Emi ssi ons

LOCATI ON MAJ2TRU POINT 17.000 109.000

** DESCRSRC Major 2 Loadi ng Dock TRU Emi ssi ons

** Li ne Source represented by Separated Volume Sources

** -----

** LINE Source ID = LINE1

** DESCRSRC

** Length of Side = 3.66

** Emi ssi on Rate = 0.000155

** Verti cal Di mensi on = 0.85

** SZINI T = 0.40

** Nodes = 5

** 363.50, 266.00, 0.00, 1.83, 0.0

** 91.44, 266.00, 0.00, 1.83, 3.37

** 17.30, 188.40, 0.00, 1.83, 3.33

** 8.20, 124.30, 0.00, 1.83, 3.35

** 8.20, 9.10, 0.00, 1.83, 3.35

** -----

LOCATI ON L0000001 VOLUME 361.671 266.000

LOCATI ON L0000002 VOLUME 354.417 266.000

LOCATI ON L0000003 VOLUME 347.163 266.000

LOCATI ON L0000004 VOLUME 339.909 266.000

LOCATI ON L0000005 VOLUME 332.655 266.000

LOCATI ON L0000006 VOLUME 325.401 266.000

LOCATI ON L0000007 VOLUME 318.146 266.000

LOCATI ON L0000008 VOLUME 310.892 266.000

EMTRUCKS. OUT. txt

LOCATI ON	L0000009	VOLUME	303.638	266.000
LOCATI ON	L0000010	VOLUME	296.384	266.000
LOCATI ON	L0000011	VOLUME	289.130	266.000
LOCATI ON	L0000012	VOLUME	281.876	266.000
LOCATI ON	L0000013	VOLUME	274.622	266.000
LOCATI ON	L0000014	VOLUME	267.368	266.000
LOCATI ON	L0000015	VOLUME	260.114	266.000
LOCATI ON	L0000016	VOLUME	252.859	266.000
LOCATI ON	L0000017	VOLUME	245.605	266.000
LOCATI ON	L0000018	VOLUME	238.351	266.000
LOCATI ON	L0000019	VOLUME	231.097	266.000
LOCATI ON	L0000020	VOLUME	223.843	266.000
LOCATI ON	L0000021	VOLUME	216.589	266.000
LOCATI ON	L0000022	VOLUME	209.335	266.000
LOCATI ON	L0000023	VOLUME	202.081	266.000
LOCATI ON	L0000024	VOLUME	194.826	266.000
LOCATI ON	L0000025	VOLUME	187.572	266.000
LOCATI ON	L0000026	VOLUME	180.318	266.000
LOCATI ON	L0000027	VOLUME	173.064	266.000
LOCATI ON	L0000028	VOLUME	165.810	266.000
LOCATI ON	L0000029	VOLUME	158.556	266.000
LOCATI ON	L0000030	VOLUME	151.302	266.000
LOCATI ON	L0000031	VOLUME	144.048	266.000
LOCATI ON	L0000032	VOLUME	136.793	266.000
LOCATI ON	L0000033	VOLUME	129.539	266.000
LOCATI ON	L0000034	VOLUME	122.285	266.000
LOCATI ON	L0000035	VOLUME	115.031	266.000
LOCATI ON	L0000036	VOLUME	107.777	266.000
LOCATI ON	L0000037	VOLUME	100.523	266.000
LOCATI ON	L0000038	VOLUME	93.269	266.000
LOCATI ON	L0000039	VOLUME	87.761	262.149

LOCATI ON	L0000040	VOLUME	82. 818	256. 976
LOCATI ON	L0000041	VOLUME	77. 875	251. 802
LOCATI ON	L0000042	VOLUME	72. 933	246. 629
LOCATI ON	L0000043	VOLUME	67. 990	241. 456
LOCATI ON	L0000044	VOLUME	63. 047	236. 282
LOCATI ON	L0000045	VOLUME	58. 105	231. 109
LOCATI ON	L0000046	VOLUME	53. 162	225. 936
LOCATI ON	L0000047	VOLUME	48. 219	220. 762
LOCATI ON	L0000048	VOLUME	43. 277	215. 589
LOCATI ON	L0000049	VOLUME	38. 334	210. 416
LOCATI ON	L0000050	VOLUME	33. 391	205. 242
LOCATI ON	L0000051	VOLUME	28. 449	200. 069
LOCATI ON	L0000052	VOLUME	23. 506	194. 896
LOCATI ON	L0000053	VOLUME	18. 563	189. 722
LOCATI ON	L0000054	VOLUME	16. 546	183. 088
LOCATI ON	L0000055	VOLUME	15. 535	175. 966
LOCATI ON	L0000056	VOLUME	14. 524	168. 844
LOCATI ON	L0000057	VOLUME	13. 513	161. 722
LOCATI ON	L0000058	VOLUME	12. 501	154. 600
LOCATI ON	L0000059	VOLUME	11. 490	147. 477
LOCATI ON	L0000060	VOLUME	10. 479	140. 355
LOCATI ON	L0000061	VOLUME	9. 468	133. 233
LOCATI ON	L0000062	VOLUME	8. 457	126. 111
LOCATI ON	L0000063	VOLUME	8. 200	118. 929
LOCATI ON	L0000064	VOLUME	8. 200	111. 729
LOCATI ON	L0000065	VOLUME	8. 200	104. 529
LOCATI ON	L0000066	VOLUME	8. 200	97. 329
LOCATI ON	L0000067	VOLUME	8. 200	90. 129
LOCATI ON	L0000068	VOLUME	8. 200	82. 929
LOCATI ON	L0000069	VOLUME	8. 200	75. 729
LOCATI ON	L0000070	VOLUME	8. 200	68. 529
LOCATI ON	L0000071	VOLUME	8. 200	61. 329

EMTRUCKS. OUT. txt

LOCATI ON L0000072 VOLUME 8. 200 54. 129
LOCATI ON L0000073 VOLUME 8. 200 46. 929
LOCATI ON L0000074 VOLUME 8. 200 39. 729
LOCATI ON L0000075 VOLUME 8. 200 32. 529
LOCATI ON L0000076 VOLUME 8. 200 25. 329
LOCATI ON L0000077 VOLUME 8. 200 18. 129
LOCATI ON L0000078 VOLUME 8. 200 10. 929

** End of Li ne Source

** Source Parameters **

SRCPARAM MAJ1IDLE 7. 41E-5 3. 840 366. 000 51. 71000 0. 100
SRCPARAM MAJ2IDLE 7. 41E-5 3. 840 366. 000 51. 71000 0. 100
SRCPARAM MAJ2TRU 0. 00056 3. 962 501. 000 49. 00000 0. 044
SRCPARAM L0000001 1. 9872E-06 1. 83 3. 37 0. 40
SRCPARAM L0000002 1. 9872E-06 1. 83 3. 37 0. 40
SRCPARAM L0000003 1. 9872E-06 1. 83 3. 37 0. 40
SRCPARAM L0000004 1. 9872E-06 1. 83 3. 37 0. 40
SRCPARAM L0000005 1. 9872E-06 1. 83 3. 37 0. 40
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EMTRUCKS. OUT. txt

SRCPARAM L0000052 1. 9872E-06 1. 83 3. 33 0. 40
SRCPARAM L0000053 1. 9872E-06 1. 83 3. 33 0. 40
SRCPARAM L0000054 1. 9872E-06 1. 83 3. 35 0. 40
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SRCPARAM L0000076 1. 9872E-06 1. 83 3. 35 0. 40
SRCPARAM L0000077 1. 9872E-06 1. 83 3. 35 0. 40
SRCPARAM L0000078 1. 9872E-06 1. 83 3. 35 0. 40

** Variabl e Emi ssi ons Type: "By Hour-of-Day"

** Variabl e Emi ssi on Scenari o: "Scenari o 1"

EMI SFACT L0000001 HROFDY 0 0 0 0 0 1

EMI SFACT L0000001 HROFDY 1 1 1 1 1 1
EMI SFACT L0000001 HROFDY 1 1 1 1 1 1
EMI SFACT L0000001 HROFDY 1 1 0 0 0 0
EMI SFACT L0000002 HROFDY 0 0 0 0 0 1
EMI SFACT L0000002 HROFDY 1 1 1 1 1 1
EMI SFACT L0000002 HROFDY 1 1 1 1 1 1
EMI SFACT L0000002 HROFDY 1 1 0 0 0 0
EMI SFACT L0000003 HROFDY 0 0 0 0 0 1
EMI SFACT L0000003 HROFDY 1 1 1 1 1 1
EMI SFACT L0000003 HROFDY 1 1 1 1 1 1
EMI SFACT L0000003 HROFDY 1 1 0 0 0 0
EMI SFACT L0000004 HROFDY 0 0 0 0 0 1
EMI SFACT L0000004 HROFDY 1 1 1 1 1 1
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EMI SFACT L0000006 HROFDY 0 0 0 0 0 1
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EMI SFACT L0000006 HROFDY 1 1 0 0 0 0
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EMI SFACT L0000009 HROFDY 0 0 0 0 0 1

EMTRUCKS. OUT. txt

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EMI SFACT L0000021 HROFDY 1 1 0 0 0 0
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EMI SFACT L0000022 HROFDY 1 1 0 0 0 0
EMI SFACT L0000023 HROFDY 0 0 0 0 0 1
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EMI SFACT L0000024 HROFDY 0 0 0 0 0 1
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EMI SFACT L0000024 HROFDY 1 1 0 0 0 0

EMTRUCKS. OUT. txt

EMI SFACT L0000025 HROFDY 0 0 0 0 0 1
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EMI SFACT L0000025 HROFDY 1 1 1 1 1 1
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EMI SFACT L0000030 HROFDY 0 0 0 0 0 1
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EMI SFACT L0000030 HROFDY 1 1 0 0 0 0
EMI SFACT L0000031 HROFDY 0 0 0 0 0 1
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EMI SFACT L0000031 HROFDY 1 1 0 0 0 0
EMI SFACT L0000032 HROFDY 0 0 0 0 0 1
EMI SFACT L0000032 HROFDY 1 1 1 1 1 1
EMI SFACT L0000032 HROFDY 1 1 1 1 1 1

EMI SFACT L0000032 HROFDY 1 1 0 0 0 0
EMI SFACT L0000033 HROFDY 0 0 0 0 0 1
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EMI SFACT L0000033 HROFDY 1 1 1 1 1 1
EMI SFACT L0000033 HROFDY 1 1 0 0 0 0
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EMI SFACT L0000034 HROFDY 1 1 1 1 1 1
EMI SFACT L0000034 HROFDY 1 1 1 1 1 1
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EMI SFACT L0000036 HROFDY 1 1 0 0 0 0
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EMI SFACT L0000037 HROFDY 1 1 1 1 1 1
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EMI SFACT L0000038 HROFDY 1 1 1 1 1 1
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EMI SFACT L0000040 HROFDY 1 1 1 1 1 1

EMTRUCKS. OUT. txt

EMI SFACT L0000040 HROFDY 1 1 0 0 0 0
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EMI SFACT L0000056 HROFDY 0 0 0 0 0 1
EMI SFACT L0000056 HROFDY 1 1 1 1 1 1

EMTRUCKS. OUT. txt

EMI SFACT L0000056 HROFDY 1 1 1 1 1 1
EMI SFACT L0000056 HROFDY 1 1 0 0 0 0
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EMI SFACT L0000058 HROFDY 1 1 1 1 1 1
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EMI SFACT L0000059 HROFDY 1 1 1 1 1 1
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EMI SFACT L0000060 HROFDY 1 1 1 1 1 1
EMI SFACT L0000060 HROFDY 1 1 0 0 0 0
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EMI SFACT L0000072 HROFDY 0 0 0 0 0 1

EMTRUCKS. OUT. txt

EMI SFACT L0000072 HROFDY 1 1 1 1 1 1
EMI SFACT L0000072 HROFDY 1 1 1 1 1 1
EMI SFACT L0000072 HROFDY 1 1 0 0 0 0
EMI SFACT L0000073 HROFDY 0 0 0 0 0 1
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EMI SFACT L0000073 HROFDY 1 1 1 1 1 1
EMI SFACT L0000073 HROFDY 1 1 0 0 0 0
EMI SFACT L0000074 HROFDY 0 0 0 0 0 1
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EMI SFACT L0000075 HROFDY 1 1 1 1 1 1
EMI SFACT L0000075 HROFDY 1 1 0 0 0 0
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EMI SFACT L0000078 HROFDY 1 1 0 0 0 0
EMI SFACT MAJ1I DLE HROFDY 0 0 0 0 0 1
EMI SFACT MAJ1I DLE HROFDY 1 1 1 1 1 1
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EMI SFACT MAJ1I DLE HROFDY 1 1 0 0 0 0

EMTRUCKS. OUT. txt

EMI SFACT MAJ2I DLE HROFDY 0 0 0 0 0 1
 EMI SFACT MAJ2I DLE HROFDY 1 1 1 1 1 1
 EMI SFACT MAJ2I DLE HROFDY 1 1 1 1 1 1
 EMI SFACT MAJ2I DLE HROFDY 1 1 0 0 0 0
 EMI SFACT MAJ2TRU HROFDY 0 0 0 0 0 1
 EMI SFACT MAJ2TRU HROFDY 1 1 1 1 1 1
 EMI SFACT MAJ2TRU HROFDY 1 1 1 1 1 1
 EMI SFACT MAJ2TRU HROFDY 1 1 0 0 0 0
 SRCGROUP ALL

SO FINISHED

**

** ISCST3 Receptor Pathway

**

**

RE STARTING

GRIDCART UCART1 STA

XYINC 85.50 56 5.00 278.00 50 5.00

GRIDCART UCART1 END

RE FINISHED

**

** ISCST3 Meteorology Pathway

**

**

ME STARTING

INPUTFIL bet05300. asc

ANEMHGHT 10 METERS

SURFDATA 2901 2005

UAI RDATA 2901 2005

EMTRUCKS. OUT. txt

-- SCAVENGING/DEPOSITION LOGIC --

**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates ANNUAL Averages Only

**This Run Includes: 81 Source(s); 1 Source Group(s); and 2800
Receptor(s)

**The Model Assumes A Pollutant Type of: DIESELPM

**Model Set To Continue RUNNING After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and

Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot.
Angle = 0.0
Emission Units = GRAMS/SEC ;
Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 1.4 MB of RAM.

**Input Runstream File: emtrucks.INP

**Output Print File: emtrucks.OUT

*** ISCST3 - VERSION 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
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**MODELOPTs:

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CONC

RURAL FLAT EMTRUCKS. OUT. txt
DFAULT

*** POINT SOURCE DATA ***

STACK SOURCE VEL. DIAMETER ID (M/SEC) (METERS)	NUMBER BUILDING PART. EXISTS CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG. K)	STACK EXIT
MAJ1DLE 51.71 0.10	0	0.74100E-04 NO HROFDY	210.0	254.0	0.0	3.84	366.00	
MAJ2DLE 51.71 0.10	0	0.74100E-04 NO HROFDY	17.0	109.0	0.0	3.84	366.00	
MAJ2TRU 49.00 0.04	0	0.56000E-03 NO HROFDY	17.0	109.0	0.0	3.96	501.00	

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**MODELOPTs:

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CONC

RURAL FLAT DFAULT

*** VOLUME SOURCE DATA ***

INIT. SOURCE SCALAR VARY ID (METERS)	NUMBER EMISSION RATE PART. EXISTS CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	SZ
L0000001	0	0.19872E-05	361.7	266.0	0.0	1.83	3.37	
0.40 HROFDY								
L0000002	0	0.19872E-05	354.4	266.0	0.0	1.83	3.37	
0.40 HROFDY								
L0000003	0	0.19872E-05	347.2	266.0	0.0	1.83	3.37	
0.40 HROFDY								
L0000004	0	0.19872E-05	339.9	266.0	0.0	1.83	3.37	
0.40 HROFDY								
L0000005	0	0.19872E-05	332.7	266.0	0.0	1.83	3.37	
0.40 HROFDY								
L0000006	0	0.19872E-05	325.4	266.0	0.0	1.83	3.37	
0.40 HROFDY								
L0000007	0	0.19872E-05	318.1	266.0	0.0	1.83	3.37	
0.40 HROFDY								
L0000008	0	0.19872E-05	310.9	266.0	0.0	1.83	3.37	
0.40 HROFDY								
L0000009	0	0.19872E-05	303.6	266.0	0.0	1.83	3.37	

EMTRUCKS. OUT. txt

0. 40 HROFDY								
L0000010	0	0. 19872E-05	296. 4	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000011	0	0. 19872E-05	289. 1	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000012	0	0. 19872E-05	281. 9	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000013	0	0. 19872E-05	274. 6	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000014	0	0. 19872E-05	267. 4	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000015	0	0. 19872E-05	260. 1	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000016	0	0. 19872E-05	252. 9	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000017	0	0. 19872E-05	245. 6	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000018	0	0. 19872E-05	238. 4	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000019	0	0. 19872E-05	231. 1	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000020	0	0. 19872E-05	223. 8	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000021	0	0. 19872E-05	216. 6	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000022	0	0. 19872E-05	209. 3	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000023	0	0. 19872E-05	202. 1	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000024	0	0. 19872E-05	194. 8	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000025	0	0. 19872E-05	187. 6	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000026	0	0. 19872E-05	180. 3	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000027	0	0. 19872E-05	173. 1	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000028	0	0. 19872E-05	165. 8	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000029	0	0. 19872E-05	158. 6	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000030	0	0. 19872E-05	151. 3	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000031	0	0. 19872E-05	144. 0	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000032	0	0. 19872E-05	136. 8	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000033	0	0. 19872E-05	129. 5	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000034	0	0. 19872E-05	122. 3	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000035	0	0. 19872E-05	115. 0	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000036	0	0. 19872E-05	107. 8	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000037	0	0. 19872E-05	100. 5	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000038	0	0. 19872E-05	93. 3	266. 0	0. 0	1. 83	3. 37	
0. 40 HROFDY								
L0000039	0	0. 19872E-05	87. 8	262. 1	0. 0	1. 83	3. 33	
0. 40 HROFDY								
L0000040	0	0. 19872E-05	82. 8	257. 0	0. 0	1. 83	3. 33	
0. 40 HROFDY								

EMTRUCKS. OUT. txt

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**MODELOPTs:

CONC RURAL FLAT PAGE 4 DFAULT

*** VOLUME SOURCE DATA ***

INIT.	EMISSION RATE	NUMBER	EMISSION RATE			BASE	RELEASE	INIT.	
SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	SY	SZ	
SCALAR VARY			(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	
ID	CATS.								
(METERS)	BY								
L0000041	0	0.19872E-05	77.9	251.8	0.0	1.83	3.33		
0.40 HROFDY									
L0000042	0	0.19872E-05	72.9	246.6	0.0	1.83	3.33		
0.40 HROFDY									
L0000043	0	0.19872E-05	68.0	241.5	0.0	1.83	3.33		
0.40 HROFDY									
L0000044	0	0.19872E-05	63.0	236.3	0.0	1.83	3.33		
0.40 HROFDY									
L0000045	0	0.19872E-05	58.1	231.1	0.0	1.83	3.33		
0.40 HROFDY									
L0000046	0	0.19872E-05	53.2	225.9	0.0	1.83	3.33		
0.40 HROFDY									
L0000047	0	0.19872E-05	48.2	220.8	0.0	1.83	3.33		
0.40 HROFDY									
L0000048	0	0.19872E-05	43.3	215.6	0.0	1.83	3.33		
0.40 HROFDY									
L0000049	0	0.19872E-05	38.3	210.4	0.0	1.83	3.33		
0.40 HROFDY									
L0000050	0	0.19872E-05	33.4	205.2	0.0	1.83	3.33		
0.40 HROFDY									
L0000051	0	0.19872E-05	28.4	200.1	0.0	1.83	3.33		
0.40 HROFDY									
L0000052	0	0.19872E-05	23.5	194.9	0.0	1.83	3.33		
0.40 HROFDY									
L0000053	0	0.19872E-05	18.6	189.7	0.0	1.83	3.33		
0.40 HROFDY									
L0000054	0	0.19872E-05	16.5	183.1	0.0	1.83	3.35		
0.40 HROFDY									
L0000055	0	0.19872E-05	15.5	176.0	0.0	1.83	3.35		
0.40 HROFDY									
L0000056	0	0.19872E-05	14.5	168.8	0.0	1.83	3.35		
0.40 HROFDY									
L0000057	0	0.19872E-05	13.5	161.7	0.0	1.83	3.35		
0.40 HROFDY									
L0000058	0	0.19872E-05	12.5	154.6	0.0	1.83	3.35		
0.40 HROFDY									
L0000059	0	0.19872E-05	11.5	147.5	0.0	1.83	3.35		
0.40 HROFDY									
L0000060	0	0.19872E-05	10.5	140.4	0.0	1.83	3.35		
0.40 HROFDY									

EMTRUCKS. OUT. txt

L0000061	0	0. 19872E-05	9.5	133.2	0.0	1.83	3.35
0.40 HROFDY							
L0000062	0	0. 19872E-05	8.5	126.1	0.0	1.83	3.35
0.40 HROFDY							
L0000063	0	0. 19872E-05	8.2	118.9	0.0	1.83	3.35
0.40 HROFDY							
L0000064	0	0. 19872E-05	8.2	111.7	0.0	1.83	3.35
0.40 HROFDY							
L0000065	0	0. 19872E-05	8.2	104.5	0.0	1.83	3.35
0.40 HROFDY							
L0000066	0	0. 19872E-05	8.2	97.3	0.0	1.83	3.35
0.40 HROFDY							
L0000067	0	0. 19872E-05	8.2	90.1	0.0	1.83	3.35
0.40 HROFDY							
L0000068	0	0. 19872E-05	8.2	82.9	0.0	1.83	3.35
0.40 HROFDY							
L0000069	0	0. 19872E-05	8.2	75.7	0.0	1.83	3.35
0.40 HROFDY							
L0000070	0	0. 19872E-05	8.2	68.5	0.0	1.83	3.35
0.40 HROFDY							
L0000071	0	0. 19872E-05	8.2	61.3	0.0	1.83	3.35
0.40 HROFDY							
L0000072	0	0. 19872E-05	8.2	54.1	0.0	1.83	3.35
0.40 HROFDY							
L0000073	0	0. 19872E-05	8.2	46.9	0.0	1.83	3.35
0.40 HROFDY							
L0000074	0	0. 19872E-05	8.2	39.7	0.0	1.83	3.35
0.40 HROFDY							
L0000075	0	0. 19872E-05	8.2	32.5	0.0	1.83	3.35
0.40 HROFDY							
L0000076	0	0. 19872E-05	8.2	25.3	0.0	1.83	3.35
0.40 HROFDY							
L0000077	0	0. 19872E-05	8.2	18.1	0.0	1.83	3.35
0.40 HROFDY							
L0000078	0	0. 19872E-05	8.2	10.9	0.0	1.83	3.35
0.40 HROFDY							

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 RURAL FLAT DEFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL MAJ1IDLE, MAJ2IDLE, MAJ2TRU , L0000001, L0000002, L0000003, L0000004,
 L0000005, L0000006, L0000007, L0000008, L0000009,

L0000010, L0000011, L0000012, L0000013, L0000014, L0000015, L0000016,
 L0000017, L0000018, L0000019, L0000020, L0000021,

L0000022, L0000023, L0000024, L0000025, L0000026, L0000027, L0000028,
 L0000029, L0000030, L0000031, L0000032, L0000033,

EMTRUCKS. OUT. txt

L0000034, L0000035, L0000036, L0000037, L0000038, L0000039, L0000040,
L0000041, L0000042, L0000043, L0000044, L0000045,

L0000046, L0000047, L0000048, L0000049, L0000050, L0000051, L0000052,
L0000053, L0000054, L0000055, L0000056, L0000057,

L0000058, L0000059, L0000060, L0000061, L0000062, L0000063, L0000064,
L0000065, L0000066, L0000067, L0000068, L0000069,

L0000070, L0000071, L0000072, L0000073, L0000074, L0000075, L0000076,
L0000077, L0000078,

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**MODELOPTs:

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CONC RURAL FLAT DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR

OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
------	--------	------	--------	------	--------	------	--------

SOURCE ID = MAJ1IDLE ;		SOURCE TYPE = POINT ;					
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00
5	.00000E+00	6	.10000E+01				
7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01				
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01				
19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00				

SOURCE ID = MAJ2IDLE ;		SOURCE TYPE = POINT ;					
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00
5	.00000E+00	6	.10000E+01				
7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01				
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01				
19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00				

SOURCE ID = MAJ2TRU ;		SOURCE TYPE = POINT ;					
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00
5	.00000E+00	6	.10000E+01				
7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01				
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01				
19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00				

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SOURCE ID = L000009 ; SOURCE TYPE = VOLUME :
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
 5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
 11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
 17 .10000E+01 18 .10000E+01 19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
 23 .00000E+00 24 .00000E+00

SOURCE ID = L000010 ; SOURCE TYPE = VOLUME :
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
 5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
 11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
 17 .10000E+01 18 .10000E+01 19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
 23 .00000E+00 24 .00000E+00

SOURCE ID = L000011 ; SOURCE TYPE = VOLUME :
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
 5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
 11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
 17 .10000E+01 18 .10000E+01 19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
 23 .00000E+00 24 .00000E+00

SOURCE ID = L000012 ; SOURCE TYPE = VOLUME :
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
 5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
 11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
 17 .10000E+01 18 .10000E+01 19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
 23 .00000E+00 24 .00000E+00

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CONC RURAL FLAT DEFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR
 OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
------	--------	------	--------	------	--------	------	--------

EMTRUCKS. OUT. txt

OF THE DAY * * SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
------	--------	------	--------	------	--------	------	--------

SOURCE ID = L0000018 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00				
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01	13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00								

SOURCE ID = L0000019 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00				
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01	13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00								

SOURCE ID = L0000020 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00				
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01	13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00								

SOURCE ID = L0000021 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00				
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01	13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00								

SOURCE ID = L0000022 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00				
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01	13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01								

19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
 23 . 00000E+00 24 . 00000E+00

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CONC RURAL FLAT DEFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR
 OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
------	--------	------	--------	------	--------	------	--------

SOURCE ID = L000023 ; SOURCE TYPE = VOLUME :

1	. 00000E+00	2	. 00000E+00	3	. 00000E+00	4	. 00000E+00
5	. 00000E+00	6	. 10000E+01	9	. 10000E+01	10	. 10000E+01
7	. 10000E+01	8	. 10000E+01	11	. 10000E+01	12	. 10000E+01
13	. 10000E+01	14	. 10000E+01	15	. 10000E+01	16	. 10000E+01
17	. 10000E+01	18	. 10000E+01	19	. 10000E+01	20	. 10000E+01
21	. 00000E+00	22	. 00000E+00	23	. 00000E+00	24	. 00000E+00

SOURCE ID = L000024 ; SOURCE TYPE = VOLUME :

1	. 00000E+00	2	. 00000E+00	3	. 00000E+00	4	. 00000E+00
5	. 00000E+00	6	. 10000E+01	9	. 10000E+01	10	. 10000E+01
7	. 10000E+01	8	. 10000E+01	11	. 10000E+01	12	. 10000E+01
13	. 10000E+01	14	. 10000E+01	15	. 10000E+01	16	. 10000E+01
17	. 10000E+01	18	. 10000E+01	19	. 10000E+01	20	. 10000E+01
21	. 00000E+00	22	. 00000E+00	23	. 00000E+00	24	. 00000E+00

SOURCE ID = L000025 ; SOURCE TYPE = VOLUME :

1	. 00000E+00	2	. 00000E+00	3	. 00000E+00	4	. 00000E+00
5	. 00000E+00	6	. 10000E+01	9	. 10000E+01	10	. 10000E+01
7	. 10000E+01	8	. 10000E+01	11	. 10000E+01	12	. 10000E+01
13	. 10000E+01	14	. 10000E+01	15	. 10000E+01	16	. 10000E+01
17	. 10000E+01	18	. 10000E+01	19	. 10000E+01	20	. 10000E+01
21	. 00000E+00	22	. 00000E+00	23	. 00000E+00	24	. 00000E+00

SOURCE ID = L000026 ; SOURCE TYPE = VOLUME :

1	. 00000E+00	2	. 00000E+00	3	. 00000E+00	4	. 00000E+00
5	. 00000E+00	6	. 10000E+01	9	. 10000E+01	10	. 10000E+01
7	. 10000E+01	8	. 10000E+01	11	. 10000E+01	12	. 10000E+01
13	. 10000E+01	14	. 10000E+01	15	. 10000E+01	16	. 10000E+01
17	. 10000E+01	18	. 10000E+01				

EMTRUCKS. OUT. txt

23 19 .10000E+01 24 20 .10000E+01 21 .00000E+00 22 .00000E+00
 .00000E+00 .00000E+00

SOURCE ID = L000027 ; SOURCE TYPE = VOLUME :
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
 5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
 11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
 17 .10000E+01 18 .10000E+01 19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
 23 .00000E+00 24 .00000E+00

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CONC PAGE 12
 RURAL FLAT DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR
 OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
---	---	---	---	---	---	---	---

SOURCE ID = L000028 ; SOURCE TYPE = VOLUME :
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
 5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
 11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
 17 .10000E+01 18 .10000E+01 19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
 23 .00000E+00 24 .00000E+00

SOURCE ID = L000029 ; SOURCE TYPE = VOLUME :
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
 5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
 11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
 17 .10000E+01 18 .10000E+01 19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
 23 .00000E+00 24 .00000E+00

SOURCE ID = L000030 ; SOURCE TYPE = VOLUME :
 1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
 5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
 11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
 17 .10000E+01 18 .10000E+01

EMTRUCKS. OUT. txt

19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
23 . 00000E+00 24 . 00000E+00

SOURCE ID = L000031 ; SOURCE TYPE = VOLUME :
1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
11 . 10000E+01 12 . 10000E+01 13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
17 . 10000E+01 18 . 10000E+01 19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
23 . 00000E+00 24 . 00000E+00

SOURCE ID = L000032 ; SOURCE TYPE = VOLUME :
1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
11 . 10000E+01 12 . 10000E+01 13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
17 . 10000E+01 18 . 10000E+01 19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
23 . 00000E+00 24 . 00000E+00

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**MODELOPTs:

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CONC RURAL FLAT DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR
OF THE DAY *

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

SOURCE ID = L000033 ; SOURCE TYPE = VOLUME :
1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
11 . 10000E+01 12 . 10000E+01 13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
17 . 10000E+01 18 . 10000E+01 19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
23 . 00000E+00 24 . 00000E+00

SOURCE ID = L000034 ; SOURCE TYPE = VOLUME :
1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
11 . 10000E+01 12 . 10000E+01 13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
17 . 10000E+01 18 . 10000E+01

EMTRUCKS. OUT. txt

23 19 .10000E+01 24 20 .10000E+01 21 .00000E+00 22 .00000E+00
.00000E+00 .00000E+00

SOURCE ID = L0000035 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
17 .10000E+01 18 .10000E+01 19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
23 .00000E+00 24 .00000E+00

SOURCE ID = L0000036 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
17 .10000E+01 18 .10000E+01 19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
23 .00000E+00 24 .00000E+00

SOURCE ID = L0000037 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
17 .10000E+01 18 .10000E+01 19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
23 .00000E+00 24 .00000E+00

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**MODELOPTs:

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CONC RURAL FLAT DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR
OF THE DAY *

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

SOURCE ID = L0000038 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
5 .00000E+00 6 .10000E+01 7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
11 .10000E+01 12 .10000E+01 13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
17 .10000E+01 18 .10000E+01

EMTRUCKS. OUT. txt

23 19 .10000E+01 24 20 .10000E+01 21 .00000E+00 22 .00000E+00
.00000E+00 .00000E+00

SOURCE ID = L000039 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
5 .00000E+00 6 .10000E+01
7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
11 .10000E+01 12 .10000E+01
13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
17 .10000E+01 18 .10000E+01
19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
23 .00000E+00 24 .00000E+00

SOURCE ID = L000040 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
5 .00000E+00 6 .10000E+01
7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
11 .10000E+01 12 .10000E+01
13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
17 .10000E+01 18 .10000E+01
19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
23 .00000E+00 24 .00000E+00

SOURCE ID = L000041 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
5 .00000E+00 6 .10000E+01
7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
11 .10000E+01 12 .10000E+01
13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
17 .10000E+01 18 .10000E+01
19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
23 .00000E+00 24 .00000E+00

SOURCE ID = L000042 ; SOURCE TYPE = VOLUME :
1 .00000E+00 2 .00000E+00 3 .00000E+00 4 .00000E+00
5 .00000E+00 6 .10000E+01
7 .10000E+01 8 .10000E+01 9 .10000E+01 10 .10000E+01
11 .10000E+01 12 .10000E+01
13 .10000E+01 14 .10000E+01 15 .10000E+01 16 .10000E+01
17 .10000E+01 18 .10000E+01
19 .10000E+01 20 .10000E+01 21 .00000E+00 22 .00000E+00
23 .00000E+00 24 .00000E+00

*** ISCST3 - VERSION 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
Settings\My Documents\B *** 06/05/09

*** 18:04:26

**MODELOPTs:

PAGE 15

CONC RURAL FLAT DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR
OF THE DAY *

HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR
HOUR SCALAR HOUR SCALAR

EMTRUCKS. OUT. txt

```

SOURCE ID = L000043 ; SOURCE TYPE = VOLUME :
  1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00
 5 .0000E+00  6 .1000E+01  7 .1000E+01  8 .1000E+01  9 .1000E+01 10 .1000E+01
11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .1000E+01 19 .1000E+01 20 .1000E+01 21 .0000E+00 22 .0000E+00
23 .0000E+00 24 .0000E+00

```

```

SOURCE ID = L000044 ; SOURCE TYPE = VOLUME :
  1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00
 5 .0000E+00  6 .1000E+01  7 .1000E+01  8 .1000E+01  9 .1000E+01 10 .1000E+01
11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .1000E+01 19 .1000E+01 20 .1000E+01 21 .0000E+00 22 .0000E+00
23 .0000E+00 24 .0000E+00

```

```

SOURCE ID = L000045 ; SOURCE TYPE = VOLUME :
  1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00
 5 .0000E+00  6 .1000E+01  7 .1000E+01  8 .1000E+01  9 .1000E+01 10 .1000E+01
11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .1000E+01 19 .1000E+01 20 .1000E+01 21 .0000E+00 22 .0000E+00
23 .0000E+00 24 .0000E+00

```

```

SOURCE ID = L000046 ; SOURCE TYPE = VOLUME :
  1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00
 5 .0000E+00  6 .1000E+01  7 .1000E+01  8 .1000E+01  9 .1000E+01 10 .1000E+01
11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .1000E+01 19 .1000E+01 20 .1000E+01 21 .0000E+00 22 .0000E+00
23 .0000E+00 24 .0000E+00

```

```

SOURCE ID = L000047 ; SOURCE TYPE = VOLUME :
  1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00
 5 .0000E+00  6 .1000E+01  7 .1000E+01  8 .1000E+01  9 .1000E+01 10 .1000E+01
11 .1000E+01 12 .1000E+01 13 .1000E+01 14 .1000E+01 15 .1000E+01 16 .1000E+01
17 .1000E+01 18 .1000E+01 19 .1000E+01 20 .1000E+01 21 .0000E+00 22 .0000E+00
23 .0000E+00 24 .0000E+00

```

*** ISCS T3 - VERSION 02035 ***
 Settings\My Documents\B ***

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 06/05/09

18: 04: 26

**MODELOPTs:

CONC RURAL FLAT DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR

OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
------	--------	------	--------	------	--------	------	--------

SOURCE ID = L000048 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00
5	.00000E+00	6	.10000E+01	9	.10000E+01	10	.10000E+01
7	.10000E+01	8	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01
21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

SOURCE ID = L000049 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00
5	.00000E+00	6	.10000E+01	9	.10000E+01	10	.10000E+01
7	.10000E+01	8	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01
21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

SOURCE ID = L000050 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00
5	.00000E+00	6	.10000E+01	9	.10000E+01	10	.10000E+01
7	.10000E+01	8	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01
21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

SOURCE ID = L000051 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00
5	.00000E+00	6	.10000E+01	9	.10000E+01	10	.10000E+01
7	.10000E+01	8	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01
21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

SOURCE ID = L000052 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00
5	.00000E+00	6	.10000E+01	9	.10000E+01	10	.10000E+01
7	.10000E+01	8	.10000E+01				

EMTRUCKS. OUT. txt

```

11 . 10000E+01 12 . 10000E+01
13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
17 . 10000E+01 18 . 10000E+01
19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
23 . 00000E+00 24 . 00000E+00
    
```

```

SOURCE ID = L0000061 ; SOURCE TYPE = VOLUME :
  1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
  5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
 11 . 10000E+01 12 . 10000E+01 13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
 17 . 10000E+01 18 . 10000E+01 19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
 23 . 00000E+00 24 . 00000E+00
    
```

```

SOURCE ID = L0000062 ; SOURCE TYPE = VOLUME :
  1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
  5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
 11 . 10000E+01 12 . 10000E+01 13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
 17 . 10000E+01 18 . 10000E+01 19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
 23 . 00000E+00 24 . 00000E+00
    
```

```

*** ISCS T3 - VERSION 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
Settings\My Documents\B *** 06/05/09
***
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**MODELOPTs:

PAGE 19

CONC RURAL FLAT DEFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
---	---	---	---	---	---	---	---

```

SOURCE ID = L0000063 ; SOURCE TYPE = VOLUME :
  1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
  5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
 11 . 10000E+01 12 . 10000E+01 13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
 17 . 10000E+01 18 . 10000E+01 19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
 23 . 00000E+00 24 . 00000E+00
    
```

```

SOURCE ID = L0000064 ; SOURCE TYPE = VOLUME :
  1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
  5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
    
```

EMTRUCKS. OUT. txt

```

11 . 10000E+01 12 . 10000E+01
13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
17 . 10000E+01 18 . 10000E+01
19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
23 . 00000E+00 24 . 00000E+00

```

```

SOURCE ID = L0000065 ; SOURCE TYPE = VOLUME :
 1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
 5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
11 . 10000E+01 12 . 10000E+01 13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
17 . 10000E+01 18 . 10000E+01 19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
23 . 00000E+00 24 . 00000E+00

```

```

SOURCE ID = L0000066 ; SOURCE TYPE = VOLUME :
 1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
 5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
11 . 10000E+01 12 . 10000E+01 13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
17 . 10000E+01 18 . 10000E+01 19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
23 . 00000E+00 24 . 00000E+00

```

```

SOURCE ID = L0000067 ; SOURCE TYPE = VOLUME :
 1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
 5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01
11 . 10000E+01 12 . 10000E+01 13 . 10000E+01 14 . 10000E+01 15 . 10000E+01 16 . 10000E+01
17 . 10000E+01 18 . 10000E+01 19 . 10000E+01 20 . 10000E+01 21 . 00000E+00 22 . 00000E+00
23 . 00000E+00 24 . 00000E+00

```

```

*** ISCS T3 - VERSI ON 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
Settings\My Documents\B *** 06/05/09
***

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**MODELOPTs:

PAGE 20

CONC RURAL FLAT DEFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
---	---	---	---	---	---	---	---

```

SOURCE ID = L0000068 ; SOURCE TYPE = VOLUME :
 1 . 00000E+00 2 . 00000E+00 3 . 00000E+00 4 . 00000E+00
 5 . 00000E+00 6 . 10000E+01 7 . 10000E+01 8 . 10000E+01 9 . 10000E+01 10 . 10000E+01

```


EMTRUCKS. OUT. txt

11	. 10000E+01	12	. 10000E+01				
	13 . 10000E+01		14 . 10000E+01	15	. 10000E+01	16	. 10000E+01
17	. 10000E+01	18	. 10000E+01				
	19 . 10000E+01		20 . 10000E+01	21	. 00000E+00	22	. 00000E+00
23	. 00000E+00	24	. 00000E+00				

SOURCE ID = L0000069 ; SOURCE TYPE = VOLUME :

1	. 00000E+00	2	. 00000E+00	3	. 00000E+00	4	. 00000E+00
5	. 00000E+00	6	. 10000E+01				
	7 . 10000E+01		8 . 10000E+01	9	. 10000E+01	10	. 10000E+01
11	. 10000E+01	12	. 10000E+01				
	13 . 10000E+01		14 . 10000E+01	15	. 10000E+01	16	. 10000E+01
17	. 10000E+01	18	. 10000E+01				
	19 . 10000E+01		20 . 10000E+01	21	. 00000E+00	22	. 00000E+00
23	. 00000E+00	24	. 00000E+00				

SOURCE ID = L0000070 ; SOURCE TYPE = VOLUME :

1	. 00000E+00	2	. 00000E+00	3	. 00000E+00	4	. 00000E+00
5	. 00000E+00	6	. 10000E+01				
	7 . 10000E+01		8 . 10000E+01	9	. 10000E+01	10	. 10000E+01
11	. 10000E+01	12	. 10000E+01				
	13 . 10000E+01		14 . 10000E+01	15	. 10000E+01	16	. 10000E+01
17	. 10000E+01	18	. 10000E+01				
	19 . 10000E+01		20 . 10000E+01	21	. 00000E+00	22	. 00000E+00
23	. 00000E+00	24	. 00000E+00				

SOURCE ID = L0000071 ; SOURCE TYPE = VOLUME :

1	. 00000E+00	2	. 00000E+00	3	. 00000E+00	4	. 00000E+00
5	. 00000E+00	6	. 10000E+01				
	7 . 10000E+01		8 . 10000E+01	9	. 10000E+01	10	. 10000E+01
11	. 10000E+01	12	. 10000E+01				
	13 . 10000E+01		14 . 10000E+01	15	. 10000E+01	16	. 10000E+01
17	. 10000E+01	18	. 10000E+01				
	19 . 10000E+01		20 . 10000E+01	21	. 00000E+00	22	. 00000E+00
23	. 00000E+00	24	. 00000E+00				

SOURCE ID = L0000072 ; SOURCE TYPE = VOLUME :

1	. 00000E+00	2	. 00000E+00	3	. 00000E+00	4	. 00000E+00
5	. 00000E+00	6	. 10000E+01				
	7 . 10000E+01		8 . 10000E+01	9	. 10000E+01	10	. 10000E+01
11	. 10000E+01	12	. 10000E+01				
	13 . 10000E+01		14 . 10000E+01	15	. 10000E+01	16	. 10000E+01
17	. 10000E+01	18	. 10000E+01				
	19 . 10000E+01		20 . 10000E+01	21	. 00000E+00	22	. 00000E+00
23	. 00000E+00	24	. 00000E+00				

*** ISCST3 - VERSION 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
 Settings\My Documents\B *** 06/05/09

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**MODELOPTs:

CONC RURAL FLAT PAGE 21 DEFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR
 OF THE DAY *

EMTRUCKS. OUT. txt

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
------	--------	------	--------	------	--------	------	--------

SOURCE ID = L0000073 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00				
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01	13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00								

SOURCE ID = L0000074 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00				
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01	13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00								

SOURCE ID = L0000075 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00				
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01	13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00								

SOURCE ID = L0000076 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00				
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01	13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00								

SOURCE ID = L0000077 ; SOURCE TYPE = VOLUME :

1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00				
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01	9	.10000E+01	10	.10000E+01
11	.10000E+01	12	.10000E+01	13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01	21	.00000E+00	22	.00000E+00
23	.00000E+00	24	.00000E+00								

Settings\My Documents\B *** EMTRUCKS. OUT. txt
 06/05/09

 *** 18: 04: 26
 **MODELOPTs:
 CONC RURAL FLAT PAGE 22
 DFAULT

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00
5	.00000E+00	6	.10000E+01	7	.10000E+01	8	.10000E+01
9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01
17	.10000E+01	18	.10000E+01	19	.10000E+01	20	.10000E+01
21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

*** ISCAST3 - VERSION 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
 Settings\My Documents\B *** 06/05/09

 *** 18: 04: 26
 **MODELOPTs:
 CONC RURAL FLAT PAGE 23
 DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART

*** X-COORDINATES OF GRID ***
 (METERS)

120.5,	85.5,	90.5,	95.5,	100.5,	105.5,	110.5,	115.5,
	125.5,	130.5,	135.5,	140.5,	145.5,	150.5,	155.5,
170.5,	175.5,	180.5,	185.5,	190.5,	195.5,	200.5,	205.5,
220.5,	225.5,	230.5,	235.5,	240.5,	245.5,	250.5,	255.5,
270.5,	275.5,	280.5,	285.5,	290.5,	295.5,	300.5,	305.5,
320.5,	325.5,	330.5,	335.5,	340.5,	345.5,	350.5,	355.5,

*** Y-COORDINATES OF GRID ***
 (METERS)

278.0,	283.0,	288.0,	293.0,	298.0,	303.0,	308.0,
--------	--------	--------	--------	--------	--------	--------

EMTRUCKS. OUT. txt

. 70000E-01	. 70000E-01	. 10000E+00	. 10000E+00	. 10000E+00	. 10000E+00
. 10000E+00	C . 10000E+00	. 15000E+00	. 15000E+00	. 15000E+00	. 15000E+00
. 15000E+00	D . 15000E+00	. 35000E+00	. 35000E+00	. 35000E+00	. 35000E+00
. 35000E+00	E . 35000E+00	. 55000E+00	. 55000E+00	. 55000E+00	. 55000E+00
. 55000E+00	F . 55000E+00				

*** VERTICAL POTENTIAL TEMPERATURE

GRADIENTS ***

(DEGREES KELVIN PER METER)

5	STABILITY	WIND SPEED CATEGORY			
	CATEGORY	1	2	3	4
. 00000E+00	A . 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00
. 00000E+00	B . 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00
. 00000E+00	C . 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00
. 00000E+00	D . 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00	. 00000E+00
. 20000E-01	E . 20000E-01	. 20000E-01	. 20000E-01	. 20000E-01	. 20000E-01
. 35000E-01	F . 35000E-01	. 35000E-01	. 35000E-01	. 35000E-01	. 35000E-01

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*** 18:04:26

**MODELOPTs:

PAGE 25

CONC RURAL FLAT DFAULT

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: bet05300. asc

FORMAT: (4I 2, 2F9. 4, F6. 1, I 2, 2F7. 1, f9. 4, f10. 1, f8. 4, i 4, f7. 2)

SURFACE STATION NO.: 2901
 NAME: UNKNOWN
 YEAR: 2005

UPPER AIR STATION NO.: 2901
 NAME: UNKNOWN
 YEAR: 2005

IPCODE	PRATE	FLOW	SPEED	TEMP	STAB	MIXING HEIGHT (M)		USTAR	M-0	LENGTH	Z-0	
						RURAL	URBAN					
YR	MN	DY	HR	VECTOR	(M/S)	(K)	CLASS	(M/S)	(M)	(M)		
05	01	01	01	28.3	3.08	280.2	5	300.0	300.0	0.0000	0.0	0.0000
0	0.00											
05	01	01	02	343.0	2.50	280.2	6	300.0	300.0	0.0000	0.0	0.0000

EMTRUCKS. OUT. txt

0	0.00											
05 01 01 03	24.2	2.32	279.7	6	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 04	342.7	2.46	279.3	5	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 05	347.3	2.64	279.0	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 06	8.5	2.95	279.0	5	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 07	348.2	2.15	279.6	6	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 08	317.5	2.32	278.3	5	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 09	320.8	2.46	279.2	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 10	322.8	3.84	281.4	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 11	321.1	3.40	282.7	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 12	343.4	3.93	284.2	3	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 13	356.5	3.98	285.2	2	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 14	12.4	3.67	285.7	2	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 15	23.0	4.38	284.6	3	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 16	24.3	3.67	284.0	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 17	18.6	4.38	283.0	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 18	21.3	2.95	281.7	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 19	38.0	2.82	281.2	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 20	351.1	1.97	281.2	5	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 21	328.5	2.59	281.2	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 22	333.4	2.19	280.0	5	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 23	12.7	3.04	279.4	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											
05 01 01 24	355.5	1.83	279.6	4	300.0	300.0	0.0000	0.0	0.0000			
0	0.00											

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

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**MODELOPTs:

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CONC RURAL FLAT DEFAULT

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MAJ1DLE, MAJ2DLE,
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EMTRUCKS. OUT. txt

MAJ2TRU , L0000001, L0000002, L0000003, L0000004,
 L0000005, L0000006, L0000007, L0000008, L0000009, L0000010, L0000011,
 L0000012, L0000013, L0000014, L0000015, L0000016,
 L0000017, L0000018, L0000019, L0000020, L0000021, L0000022, L0000023,
 L0000024, L0000025, L0000026, L0000027, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRI DCART

** CONC OF DIESELP M IN MICROGRAMS/M**3

**

Y-COORD (METERS)					X-COORD (METERS)	
	110. 50	115. 50	120. 50	125. 50	100. 50	105. 50
523. 00		0. 00169	0. 00170	0. 00171	0. 00171	0. 00171
0. 00170	0. 00169	0. 00168	0. 00167			
518. 00	0. 00173	0. 00174	0. 00175	0. 00175	0. 00175	0. 00175
0. 00174	0. 00173	0. 00172	0. 00171			
513. 00	0. 00178	0. 00179	0. 00180	0. 00180	0. 00180	0. 00179
0. 00178	0. 00177	0. 00176	0. 00175			
508. 00	0. 00183	0. 00184	0. 00184	0. 00184	0. 00184	0. 00183
0. 00182	0. 00181	0. 00180	0. 00179			
503. 00	0. 00188	0. 00189	0. 00189	0. 00189	0. 00189	0. 00188
0. 00187	0. 00185	0. 00184	0. 00184			
498. 00	0. 00193	0. 00194	0. 00194	0. 00194	0. 00194	0. 00192
0. 00191	0. 00190	0. 00189	0. 00189			
493. 00	0. 00198	0. 00199	0. 00199	0. 00199	0. 00199	0. 00197
0. 00196	0. 00195	0. 00194	0. 00194			
488. 00	0. 00204	0. 00205	0. 00204	0. 00204	0. 00204	0. 00203
0. 00201	0. 00200	0. 00199	0. 00199			
483. 00	0. 00210	0. 00210	0. 00210	0. 00210	0. 00209	0. 00208
0. 00206	0. 00205	0. 00205	0. 00204			
478. 00	0. 00216	0. 00216	0. 00216	0. 00216	0. 00215	0. 00214
0. 00212	0. 00211	0. 00210	0. 00210			
473. 00	0. 00223	0. 00223	0. 00222	0. 00222	0. 00221	0. 00220
0. 00218	0. 00217	0. 00217	0. 00216			
468. 00	0. 00229	0. 00229	0. 00228	0. 00228	0. 00227	0. 00226
0. 00224	0. 00223	0. 00223	0. 00223			
463. 00	0. 00237	0. 00236	0. 00235	0. 00235	0. 00234	0. 00232
0. 00231	0. 00230	0. 00230	0. 00230			
458. 00	0. 00244	0. 00244	0. 00242	0. 00242	0. 00241	0. 00239
0. 00238	0. 00237	0. 00237	0. 00237			
453. 00	0. 00252	0. 00251	0. 00250	0. 00250	0. 00248	0. 00247
0. 00246	0. 00245	0. 00245	0. 00244			
448. 00	0. 00260	0. 00259	0. 00258	0. 00258	0. 00256	0. 00255
0. 00254	0. 00253	0. 00253	0. 00252			
443. 00	0. 00269	0. 00268	0. 00266	0. 00266	0. 00265	0. 00263
0. 00262	0. 00261	0. 00261	0. 00260			
438. 00	0. 00278	0. 00277	0. 00275	0. 00275	0. 00274	0. 00272
0. 00271	0. 00270	0. 00270	0. 00269			
433. 00	0. 00288	0. 00287	0. 00285	0. 00285	0. 00283	0. 00282
0. 00281	0. 00280	0. 00279	0. 00278			
428. 00	0. 00298	0. 00297	0. 00295	0. 00295	0. 00293	0. 00292
0. 00291	0. 00290	0. 00289	0. 00288			
423. 00	0. 00308	0. 00308	0. 00306	0. 00306	0. 00304	0. 00303
0. 00302	0. 00301	0. 00299	0. 00298			
418. 00	0. 00319	0. 00319	0. 00317	0. 00317	0. 00316	0. 00314
0. 00313	0. 00312	0. 00310	0. 00308			
413. 00	0. 00331	0. 00330	0. 00329	0. 00329	0. 00328	0. 00327

EMTRUCKS. OUT. txt

0. 00182	0. 00181	0. 00179	0. 00176			
498. 00	| 0. 00189	0. 00189	0. 00189	0. 00189	0. 00189	0. 00188
0. 00187	0. 00185	0. 00183	0. 00181			
493. 00	| 0. 00194	0. 00194	0. 00194	0. 00194	0. 00194	0. 00193
0. 00191	0. 00190	0. 00187	0. 00185			
488. 00	| 0. 00199	0. 00199	0. 00199	0. 00199	0. 00199	0. 00198
0. 00196	0. 00194	0. 00192	0. 00189			
483. 00	| 0. 00205	0. 00205	0. 00205	0. 00205	0. 00204	0. 00203
0. 00201	0. 00199	0. 00197	0. 00194			
478. 00	| 0. 00210	0. 00211	0. 00210	0. 00210	0. 00210	0. 00208
0. 00207	0. 00204	0. 00202	0. 00199			
473. 00	| 0. 00217	0. 00217	0. 00216	0. 00215	0. 00214	
0. 00212	0. 00210	0. 00207	0. 00204			
468. 00	| 0. 00223	0. 00223	0. 00222	0. 00221	0. 00220	
0. 00218	0. 00215	0. 00213	0. 00210			
463. 00	| 0. 00230	0. 00229	0. 00229	0. 00228	0. 00226	
0. 00224	0. 00221	0. 00218	0. 00215			
458. 00	| 0. 00237	0. 00236	0. 00235	0. 00234	0. 00232	
0. 00230	0. 00227	0. 00224	0. 00221			
453. 00	| 0. 00244	0. 00243	0. 00242	0. 00241	0. 00239	
0. 00236	0. 00234	0. 00231	0. 00228			
448. 00	| 0. 00252	0. 00251	0. 00249	0. 00248	0. 00246	
0. 00243	0. 00240	0. 00237	0. 00234			
443. 00	| 0. 00260	0. 00258	0. 00257	0. 00255	0. 00253	
0. 00250	0. 00247	0. 00244	0. 00241			
438. 00	| 0. 00268	0. 00266	0. 00265	0. 00263	0. 00260	
0. 00258	0. 00255	0. 00252	0. 00249			
433. 00	| 0. 00277	0. 00275	0. 00273	0. 00271	0. 00268	
0. 00265	0. 00263	0. 00260	0. 00256			
428. 00	| 0. 00286	0. 00284	0. 00281	0. 00279	0. 00276	
0. 00274	0. 00271	0. 00268	0. 00265			
423. 00	| 0. 00296	0. 00293	0. 00291	0. 00288	0. 00285	
0. 00282	0. 00279	0. 00276	0. 00273			
418. 00	| 0. 00306	0. 00303	0. 00300	0. 00297	0. 00294	
0. 00291	0. 00288	0. 00285	0. 00282			
413. 00	| 0. 00317	0. 00314	0. 00310	0. 00307	0. 00304	
0. 00301	0. 00298	0. 00295	0. 00292			
408. 00	| 0. 00328	0. 00325	0. 00321	0. 00318	0. 00314	
0. 00311	0. 00308	0. 00305	0. 00302			
403. 00	| 0. 00340	0. 00336	0. 00332	0. 00329	0. 00325	
0. 00322	0. 00319	0. 00316	0. 00313			
398. 00	| 0. 00353	0. 00349	0. 00345	0. 00340	0. 00337	
0. 00333	0. 00330	0. 00328	0. 00325			
393. 00	| 0. 00367	0. 00362	0. 00357	0. 00353	0. 00349	
0. 00346	0. 00343	0. 00340	0. 00337			
388. 00	| 0. 00382	0. 00376	0. 00371	0. 00366	0. 00362	
0. 00359	0. 00356	0. 00353	0. 00350			
383. 00	| 0. 00398	0. 00392	0. 00386	0. 00381	0. 00376	
0. 00373	0. 00370	0. 00367	0. 00365			
378. 00	| 0. 00416	0. 00409	0. 00402	0. 00397	0. 00392	
0. 00388	0. 00385	0. 00383	0. 00381			
373. 00	| 0. 00435	0. 00427	0. 00420	0. 00414	0. 00409	
0. 00405	0. 00402	0. 00400	0. 00398			
368. 00	| 0. 00456	0. 00448	0. 00440	0. 00433	0. 00427	
0. 00423	0. 00420	0. 00418	0. 00417			
363. 00	| 0. 00478	0. 00470	0. 00462	0. 00454	0. 00448	
0. 00444	0. 00441	0. 00439	0. 00438			
358. 00	| 0. 00501	0. 00494	0. 00486	0. 00478	0. 00472	
0. 00467	0. 00464	0. 00462	0. 00461			
353. 00	| 0. 00526	0. 00520	0. 00512	0. 00505	0. 00498	
0. 00493	0. 00490	0. 00488	0. 00487			
348. 00	| 0. 00552	0. 00547	0. 00541	0. 00535	0. 00528	
0. 00523	0. 00519	0. 00516	0. 00515			

EMTRUCKS. OUT. txt

343.00	0.00578	0.00576	0.00573	0.00568	0.00562
0.00556	0.00551	0.00548	0.00545		
338.00	0.00605	0.00607	0.00606	0.00604	0.00599
0.00593	0.00587	0.00582	0.00578		
333.00	0.00633	0.00639	0.00642	0.00643	0.00640
0.00634	0.00626	0.00619	0.00612		
328.00	0.00663	0.00672	0.00679	0.00683	0.00683
0.00678	0.00669	0.00659	0.00650		

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**MODELOPTs:

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CONC RURAL FLAT DFAULT

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION

 VALUES FOR SOURCE GROUP: ALL INCLUDING SOURCE(S): MAJ11DLE, MAJ21DLE,
 MAJ2TRU , L000001, L000002, L000003, L000004,
 L000005, L000006, L000007, L000008, L000009, L000010, L000011,
 L000012, L000013, L000014, L000015, L000016,
 L000017, L000018, L000019, L000020, L000021, L000022, L000023,
 L000024, L000025, L000026, L000027, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART

** CONC OF DIESELPM IN MICROGRAMS/M**3

**

Y-COORD (METERS)	X-COORD (METERS)					
	160.50	130.50	165.50	135.50	140.50	145.50 150.50
323.00	0.00694	0.00707	0.00718	0.00725	0.00727	
0.00723	0.00714	0.00702	0.00692			
318.00	0.00730	0.00744	0.00757	0.00767	0.00772	
0.00770	0.00763	0.00751	0.00739			
313.00	0.00772	0.00786	0.00799	0.00809	0.00816	
0.00818	0.00815	0.00805	0.00792			
308.00	0.00822	0.00833	0.00843	0.00853	0.00861	
0.00867	0.00868	0.00862	0.00850			
303.00	0.00877	0.00886	0.00893	0.00901	0.00910	
0.00918	0.00923	0.00921	0.00912			
298.00	0.00939	0.00945	0.00952	0.00959	0.00966	
0.00974	0.00979	0.00981	0.00977			
293.00	0.01007	0.01013	0.01020	0.01026	0.01032	
0.01038	0.01043	0.01046	0.01045			
288.00	0.01082	0.01089	0.01097	0.01103	0.01108	
0.01112	0.01114	0.01116	0.01115			
283.00	0.01162	0.01172	0.01180	0.01186	0.01190	
0.01192	0.01192	0.01191	0.01187			
278.00	0.01237	0.01247	0.01255	0.01261	0.01264	
0.01264	0.01263	0.01259	0.01254			

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**MODELOPTs:

CONC RURAL FLAT DFAULT

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL
INCLUDING SOURCE(S): MAJ11DLE, MAJ21DLE,
MAJ2TRU , L0000001, L0000002, L0000003, L0000004,
L0000005, L0000006, L0000007, L0000008, L0000009, L0000010, L0000011,
L0000012, L0000013, L0000014, L0000015, L0000016,
L0000017, L0000018, L0000019, L0000020, L0000021, L0000022, L0000023,
L0000024, L0000025, L0000026, L0000027, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART

** CONC OF DIESELPM IN MICROGRAMS/M**3

**

Y-COORD (METERS)						X-COORD (METERS)	
	200. 50	205. 50	210. 50	215. 50	185. 50	180. 50	175. 50
523. 00		0. 00159	0. 00157	0. 00155	0. 00153	0. 00151	
0. 00150	0. 00148	0. 00147	0. 00146				
518. 00		0. 00163	0. 00161	0. 00159	0. 00157	0. 00155	
0. 00153	0. 00151	0. 00150	0. 00149				
513. 00		0. 00166	0. 00164	0. 00162	0. 00160	0. 00158	
0. 00156	0. 00155	0. 00153	0. 00152				
508. 00		0. 00170	0. 00168	0. 00166	0. 00164	0. 00162	
0. 00160	0. 00158	0. 00157	0. 00155				
503. 00		0. 00174	0. 00172	0. 00170	0. 00167	0. 00165	
0. 00164	0. 00162	0. 00160	0. 00159				
498. 00		0. 00178	0. 00176	0. 00173	0. 00171	0. 00169	
0. 00168	0. 00166	0. 00164	0. 00163				
493. 00		0. 00182	0. 00180	0. 00178	0. 00176	0. 00174	
0. 00172	0. 00170	0. 00168	0. 00166				
488. 00		0. 00187	0. 00184	0. 00182	0. 00180	0. 00178	
0. 00176	0. 00174	0. 00172	0. 00170				
483. 00		0. 00191	0. 00189	0. 00187	0. 00184	0. 00182	
0. 00180	0. 00179	0. 00177	0. 00175				
478. 00		0. 00196	0. 00194	0. 00191	0. 00189	0. 00187	
0. 00185	0. 00183	0. 00181	0. 00179				
473. 00		0. 00201	0. 00199	0. 00196	0. 00194	0. 00192	
0. 00190	0. 00188	0. 00186	0. 00184				
468. 00		0. 00207	0. 00204	0. 00202	0. 00200	0. 00197	
0. 00195	0. 00193	0. 00191	0. 00188				
463. 00		0. 00212	0. 00210	0. 00207	0. 00205	0. 00203	
0. 00200	0. 00198	0. 00196	0. 00193				
458. 00		0. 00218	0. 00216	0. 00213	0. 00211	0. 00208	
0. 00206	0. 00204	0. 00201	0. 00199				
453. 00		0. 00225	0. 00222	0. 00219	0. 00217	0. 00214	
0. 00212	0. 00209	0. 00207	0. 00205				
448. 00		0. 00231	0. 00228	0. 00226	0. 00223	0. 00221	
0. 00218	0. 00215	0. 00213	0. 00211				
443. 00		0. 00238	0. 00235	0. 00232	0. 00230	0. 00227	
0. 00224	0. 00222	0. 00220	0. 00218				
438. 00		0. 00246	0. 00243	0. 00240	0. 00237	0. 00234	
0. 00231	0. 00229	0. 00227	0. 00225				

EMTRUCKS. OUT. txt

433.00	0.00239	0.00253	0.00250	0.00247	0.00244	0.00241
0.00239	0.00236	0.00234	0.00233			
428.00	0.00245	0.00261	0.00258	0.00255	0.00252	0.00249
0.00247	0.00245	0.00243	0.00241			
423.00	0.00253	0.00270	0.00267	0.00264	0.00261	0.00258
0.00255	0.00253	0.00252	0.00251			
418.00	0.00263	0.00279	0.00276	0.00273	0.00270	0.00267
0.00265	0.00263	0.00262	0.00261			
413.00	0.00273	0.00289	0.00285	0.00282	0.00279	0.00277
0.00275	0.00273	0.00272	0.00272			
408.00	0.00285	0.00299	0.00296	0.00293	0.00290	0.00288
0.00286	0.00285	0.00284	0.00284			
403.00	0.00297	0.00310	0.00307	0.00304	0.00301	0.00300
0.00298	0.00297	0.00296	0.00296			
398.00	0.00310	0.00322	0.00319	0.00316	0.00314	0.00312
0.00311	0.00310	0.00310	0.00310			
393.00	0.00325	0.00334	0.00332	0.00329	0.00328	0.00326
0.00325	0.00325	0.00324	0.00324			
388.00	0.00340	0.00348	0.00346	0.00344	0.00342	0.00341
0.00340	0.00340	0.00340	0.00339			
383.00	0.00357	0.00363	0.00361	0.00360	0.00358	0.00357
0.00357	0.00356	0.00356	0.00355			
378.00	0.00374	0.00379	0.00378	0.00376	0.00375	0.00375
0.00374	0.00374	0.00373	0.00371			
373.00	0.00393	0.00397	0.00396	0.00395	0.00394	0.00393
0.00393	0.00392	0.00390	0.00388			
368.00	0.00412	0.00416	0.00415	0.00415	0.00414	0.00413
0.00412	0.00410	0.00408	0.00406			
363.00	0.00432	0.00437	0.00437	0.00436	0.00435	0.00434
0.00432	0.00429	0.00427	0.00424			
358.00	0.00452	0.00461	0.00460	0.00459	0.00457	0.00455
0.00452	0.00449	0.00447	0.00445			
353.00	0.00474	0.00486	0.00485	0.00483	0.00480	0.00477
0.00474	0.00471	0.00468	0.00466			
348.00	0.00497	0.00514	0.00512	0.00509	0.00505	0.00501
0.00497	0.00494	0.00492	0.00490			
343.00	0.00524	0.00543	0.00540	0.00536	0.00531	0.00527
0.00524	0.00520	0.00518	0.00515			
338.00	0.00553	0.00574	0.00570	0.00565	0.00560	0.00556
0.00553	0.00549	0.00545	0.00542			
333.00	0.00584	0.00607	0.00602	0.00597	0.00593	0.00588
0.00584	0.00580	0.00575	0.00571			
328.00	0.00618	0.00643	0.00638	0.00633	0.00628	0.00623
0.00618	0.00612	0.00607	0.00603			

*** I SCST3 - VERSION 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
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**MODELOPTs:

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PAGE 31
 CONC RURAL FLAT DFAULT

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION

 VALUES FOR SOURCE GROUP: ALL
 INCLUDING SOURCE(S): MAJ11 DLE, MAJ21 DLE,
 MAJ2TRU , L000001, L000002, L000003, L000004,
 L000005, L000006, L000007, L000008, L000009, L000010, L000011,
 L000012, L000013, L000014, L000015, L000016,
 L000017, L000018, L000019, L000020, L000021, L000022, L000023,
 L000024, L000025, L000026, L000027, . . . ,

** CONC OF DIESELP M IN MICROGRAMS/M**3

**

Y-COORD (METERS)	205.50	175.50	210.50	180.50	215.50	185.50	X-COORD (METERS)	190.50	195.50
323.00	0.00684	0.00678	0.00672	0.00666	0.00660				
0.00654	0.00648	0.00643	0.00639						
318.00	0.00729	0.00721	0.00714	0.00707	0.00700				
0.00694	0.00688	0.00682	0.00679						
313.00	0.00779	0.00768	0.00760	0.00752	0.00745				
0.00738	0.00732	0.00727	0.00723						
308.00	0.00834	0.00821	0.00811	0.00802	0.00795				
0.00788	0.00782	0.00777	0.00773						
303.00	0.00896	0.00880	0.00868	0.00859	0.00851				
0.00844	0.00838	0.00832	0.00828						
298.00	0.00964	0.00947	0.00932	0.00922	0.00913				
0.00906	0.00900	0.00894	0.00889						
293.00	0.01036	0.01021	0.01004	0.00992	0.00983				
0.00975	0.00968	0.00961	0.00956						
288.00	0.01109	0.01098	0.01082	0.01068	0.01058				
0.01050	0.01043	0.01036	0.01030						
283.00	0.01182	0.01175	0.01162	0.01148	0.01138				
0.01129	0.01122	0.01115	0.01109						
278.00	0.01249	0.01241	0.01231	0.01220	0.01209				
0.01200	0.01193	0.01187	0.01181						

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*** 18:04:26

**MODELOPTs:

PAGE 32

CONC RURAL FLAT DEFAULT

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION
 VALUES FOR SOURCE GROUP: ALL
 INCLUDING SOURCE(S): MAJ1IDLE, MAJ2IDLE,
 MAJ2TRU , L0000001, L0000002, L0000003, L0000004,
 L0000005, L0000006, L0000007, L0000008, L0000009, L0000010, L0000011,
 L0000012, L0000013, L0000014, L0000015, L0000016,
 L0000017, L0000018, L0000019, L0000020, L0000021, L0000022, L0000023,
 L0000024, L0000025, L0000026, L0000027, . . . ,

** CONC OF DIESELP M IN MICROGRAMS/M**3

**

Y-COORD (METERS)	250.50	220.50	255.50	225.50	260.50	230.50	X-COORD (METERS)	235.50	240.50
245.50									

EMTRUCKS. OUT. txt

523.00	|	0.00144	0.00143	0.00142	0.00141	0.00140
0.00138	|	0.00137	0.00135	0.00134		
518.00	|	0.00148	0.00146	0.00145	0.00144	0.00142
0.00141	|	0.00139	0.00138	0.00137		
513.00	|	0.00151	0.00149	0.00148	0.00147	0.00145
0.00144	|	0.00142	0.00141	0.00139		
508.00	|	0.00154	0.00153	0.00151	0.00150	0.00148
0.00147	|	0.00145	0.00144	0.00142		
503.00	|	0.00158	0.00156	0.00155	0.00153	0.00151
0.00150	|	0.00148	0.00147	0.00146		
498.00	|	0.00161	0.00160	0.00158	0.00156	0.00154
0.00153	|	0.00151	0.00150	0.00149		
493.00	|	0.00165	0.00163	0.00161	0.00160	0.00158
0.00156	|	0.00155	0.00154	0.00153		
488.00	|	0.00169	0.00167	0.00165	0.00163	0.00162
0.00160	|	0.00159	0.00158	0.00158		
483.00	|	0.00173	0.00171	0.00169	0.00167	0.00166
0.00164	|	0.00163	0.00163	0.00162		
478.00	|	0.00177	0.00175	0.00173	0.00171	0.00170
0.00169	|	0.00168	0.00168	0.00167		
473.00	|	0.00181	0.00179	0.00177	0.00176	0.00175
0.00174	|	0.00173	0.00173	0.00173		
468.00	|	0.00186	0.00184	0.00182	0.00181	0.00180
0.00179	|	0.00179	0.00178	0.00178		
463.00	|	0.00191	0.00189	0.00187	0.00186	0.00185
0.00185	|	0.00185	0.00184	0.00184		
458.00	|	0.00197	0.00195	0.00193	0.00192	0.00191
0.00191	|	0.00191	0.00191	0.00190		
453.00	|	0.00203	0.00201	0.00199	0.00199	0.00198
0.00198	|	0.00198	0.00197	0.00197		
448.00	|	0.00209	0.00207	0.00206	0.00206	0.00205
0.00205	|	0.00205	0.00205	0.00204		
443.00	|	0.00216	0.00215	0.00214	0.00213	0.00213
0.00213	|	0.00212	0.00212	0.00212		
438.00	|	0.00223	0.00222	0.00222	0.00222	0.00221
0.00221	|	0.00221	0.00220	0.00219		
433.00	|	0.00232	0.00231	0.00231	0.00230	0.00230
0.00230	|	0.00229	0.00229	0.00228		
428.00	|	0.00241	0.00240	0.00240	0.00240	0.00239
0.00239	|	0.00238	0.00238	0.00236		
423.00	|	0.00250	0.00250	0.00250	0.00250	0.00249
0.00249	|	0.00248	0.00247	0.00245		
418.00	|	0.00260	0.00260	0.00260	0.00260	0.00260
0.00259	|	0.00258	0.00257	0.00255		
413.00	|	0.00272	0.00271	0.00271	0.00271	0.00271
0.00270	|	0.00269	0.00267	0.00264		
408.00	|	0.00283	0.00283	0.00283	0.00283	0.00282
0.00281	|	0.00279	0.00277	0.00274		
403.00	|	0.00296	0.00296	0.00296	0.00295	0.00294
0.00293	|	0.00290	0.00287	0.00284		
398.00	|	0.00310	0.00310	0.00309	0.00308	0.00307
0.00304	|	0.00302	0.00298	0.00294		
393.00	|	0.00324	0.00323	0.00323	0.00321	0.00319
0.00317	|	0.00313	0.00310	0.00306		
388.00	|	0.00339	0.00338	0.00337	0.00335	0.00332
0.00330	|	0.00326	0.00322	0.00318		
383.00	|	0.00354	0.00353	0.00351	0.00349	0.00346
0.00343	|	0.00340	0.00336	0.00331		
378.00	|	0.00370	0.00368	0.00366	0.00364	0.00361
0.00358	|	0.00354	0.00350	0.00345		
373.00	|	0.00386	0.00385	0.00383	0.00380	0.00378
0.00374	|	0.00370	0.00365	0.00360		
368.00	|	0.00404	0.00402	0.00400	0.00398	0.00395

EMTRUCKS. OUT. txt
 *** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION

VALUES FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): MAJ1 DLE, MAJ2 DLE,
 MAJ2TRU , L0000001, L0000002, L0000003, L0000004,
 L0000005, L0000006, L0000007, L0000008, L0000009, L0000010, L0000011,
 L0000012, L0000013, L0000014, L0000015, L0000016,
 L0000017, L0000018, L0000019, L0000020, L0000021, L0000022, L0000023,
 L0000024, L0000025, L0000026, L0000027, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART

** CONC OF DIESELPM IN MICROGRAMS/M**3

**

Y-COORD (METERS)					X-COORD (METERS)	
	290.50	295.50	300.50	305.50	280.50	285.50
323.00		0.00591	0.00584	0.00575	0.00566	0.00557
0.00547	0.00538	0.00528	0.00517			
318.00		0.00629	0.00621	0.00613	0.00605	0.00596
0.00588	0.00579	0.00569	0.00558			
313.00		0.00671	0.00663	0.00656	0.00649	0.00641
0.00634	0.00626	0.00616	0.00604			
308.00		0.00719	0.00712	0.00706	0.00699	0.00693
0.00686	0.00678	0.00668	0.00656			
303.00		0.00776	0.00770	0.00764	0.00758	0.00752
0.00744	0.00735	0.00725	0.00714			
298.00		0.00841	0.00836	0.00832	0.00826	0.00819
0.00811	0.00801	0.00791	0.00779			
293.00		0.00916	0.00912	0.00907	0.00901	0.00894
0.00886	0.00877	0.00867	0.00855			
288.00		0.00999	0.00995	0.00990	0.00985	0.00979
0.00972	0.00963	0.00953	0.00941			
283.00		0.01086	0.01083	0.01079	0.01075	0.01070
0.01063	0.01055	0.01045	0.01033			
278.00		0.01166	0.01165	0.01163	0.01159	0.01154
0.01148	0.01140	0.01129	0.01118			

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**MODELOPTs:

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 CONC RURAL FLAT DFAULT

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION

VALUES FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): MAJ1 DLE, MAJ2 DLE,
 MAJ2TRU , L0000001, L0000002, L0000003, L0000004,
 L0000005, L0000006, L0000007, L0000008, L0000009, L0000010, L0000011,
 L0000012, L0000013, L0000014, L0000015, L0000016,
 L0000017, L0000018, L0000019, L0000020, L0000021, L0000022, L0000023,
 L0000024, L0000025, L0000026, L0000027, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART

EMTRUCKS. OUT. txt

** CONC OF DI ESELP M I N MI CROGRAMS/M**3

**

Y-COORD (METERS)	X-COORD (METERS)							
	335. 50	340. 50	310. 50	345. 50	315. 50	320. 50	325. 50	330. 50
523. 00			0. 00130		0. 00130		0. 00130	0. 00130
0. 00131	0. 00131		0. 00131		0. 00131			
518. 00			0. 00133		0. 00133		0. 00133	0. 00134
0. 00134	0. 00134		0. 00134		0. 00134			
513. 00			0. 00137		0. 00137		0. 00137	0. 00137
0. 00137	0. 00138		0. 00138		0. 00137			
508. 00			0. 00140		0. 00140		0. 00140	0. 00141
0. 00141	0. 00141		0. 00141		0. 00141			
503. 00			0. 00144		0. 00144		0. 00144	0. 00144
0. 00145	0. 00145		0. 00144		0. 00144			
498. 00			0. 00148		0. 00148		0. 00148	0. 00148
0. 00148	0. 00148		0. 00147		0. 00146			
493. 00			0. 00152		0. 00152		0. 00152	0. 00152
0. 00152	0. 00151		0. 00150		0. 00149			
488. 00			0. 00156		0. 00156		0. 00156	0. 00156
0. 00155	0. 00154		0. 00153		0. 00152			
483. 00			0. 00160		0. 00160		0. 00160	0. 00159
0. 00159	0. 00157		0. 00156		0. 00155			
478. 00			0. 00165		0. 00165		0. 00164	0. 00163
0. 00162	0. 00160		0. 00159		0. 00158			
473. 00			0. 00170		0. 00169		0. 00168	0. 00166
0. 00165	0. 00163		0. 00162		0. 00161			
468. 00			0. 00174		0. 00173		0. 00172	0. 00169
0. 00168	0. 00167		0. 00165		0. 00164			
463. 00			0. 00179		0. 00177		0. 00176	0. 00173
0. 00172	0. 00170		0. 00169		0. 00168			
458. 00			0. 00183		0. 00181		0. 00180	0. 00176
0. 00175	0. 00174		0. 00173		0. 00172			
453. 00			0. 00187		0. 00185		0. 00183	0. 00180
0. 00179	0. 00179		0. 00178		0. 00177			
448. 00			0. 00191		0. 00189		0. 00188	0. 00185
0. 00184	0. 00183		0. 00183		0. 00182			
443. 00			0. 00196		0. 00194		0. 00192	0. 00190
0. 00189	0. 00188		0. 00188		0. 00187			
438. 00			0. 00201		0. 00199		0. 00197	0. 00195
0. 00194	0. 00194		0. 00193		0. 00192			
433. 00			0. 00206		0. 00204		0. 00203	0. 00201
0. 00200	0. 00199		0. 00198		0. 00196			
428. 00			0. 00212		0. 00210		0. 00209	0. 00207
0. 00206	0. 00205		0. 00203		0. 00201			
423. 00			0. 00218		0. 00217		0. 00215	0. 00213
0. 00212	0. 00210		0. 00208		0. 00205			
418. 00			0. 00225		0. 00224		0. 00222	0. 00219
0. 00217	0. 00215		0. 00212		0. 00208			
413. 00			0. 00233		0. 00231		0. 00230	0. 00225
0. 00223	0. 00219		0. 00216		0. 00211			
408. 00			0. 00241		0. 00239		0. 00237	0. 00231
0. 00227	0. 00223		0. 00219		0. 00214			
403. 00			0. 00249		0. 00247		0. 00244	0. 00236
0. 00232	0. 00227		0. 00222		0. 00216			
398. 00			0. 00258		0. 00254		0. 00251	0. 00241
0. 00236	0. 00230		0. 00225		0. 00219			
393. 00			0. 00266		0. 00262		0. 00257	0. 00246
0. 00240	0. 00234		0. 00228		0. 00223			

EMTRUCKS. OUT. txt

388.00	0.00244	0.00275	0.00269	0.00263	0.00257	0.00251
0.00244	0.00238	0.00232	0.00227			
383.00	0.00249	0.00283	0.00276	0.00270	0.00263	0.00256
0.00249	0.00243	0.00237	0.00232			
378.00	0.00255	0.00291	0.00284	0.00276	0.00269	0.00261
0.00255	0.00249	0.00243	0.00239			
373.00	0.00262	0.00300	0.00292	0.00283	0.00275	0.00268
0.00262	0.00256	0.00251	0.00247			
368.00	0.00270	0.00310	0.00300	0.00292	0.00284	0.00276
0.00270	0.00265	0.00260	0.00256			
363.00	0.00280	0.00320	0.00311	0.00302	0.00293	0.00286
0.00280	0.00275	0.00270	0.00267			
358.00	0.00292	0.00333	0.00323	0.00314	0.00305	0.00298
0.00292	0.00287	0.00282	0.00278			
353.00	0.00306	0.00347	0.00337	0.00328	0.00320	0.00312
0.00306	0.00301	0.00296	0.00291			
348.00	0.00322	0.00365	0.00354	0.00345	0.00336	0.00329
0.00322	0.00316	0.00310	0.00305			
343.00	0.00340	0.00385	0.00374	0.00365	0.00356	0.00347
0.00340	0.00333	0.00326	0.00320			
338.00	0.00359	0.00409	0.00398	0.00388	0.00378	0.00368
0.00359	0.00351	0.00343	0.00336			
333.00	0.00380	0.00437	0.00425	0.00414	0.00402	0.00391
0.00380	0.00370	0.00361	0.00353			
328.00	0.00404	0.00469	0.00456	0.00444	0.00430	0.00417
0.00404	0.00392	0.00381	0.00371			

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**MODELOPTs:

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CONC RURAL FLAT DFAULT

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION

 VALUES FOR SOURCE GROUP: ALL
 INCLUDING SOURCE(S): MAJ11DLE, MAJ21DLE,
 MAJ2TRU , L000001, L000002, L000003, L000004,
 L000005, L000006, L000007, L000008, L000009, L000010, L000011,
 L000012, L000013, L000014, L000015, L000016,
 L000017, L000018, L000019, L000020, L000021, L000022, L000023,
 L000024, L000025, L000026, L000027, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART

** CONC OF DIESELPM IN MICROGRAMS/M**3
 **

Y-COORD (METERS)	310.50	315.50	320.50	X-COORD (METERS)	325.50	330.50
335.50	340.50	345.50	350.50			
323.00	0.00505	0.00492	0.00477	0.00462	0.00446	
0.00431	0.00416	0.00403	0.00391			
318.00	0.00545	0.00531	0.00515	0.00498	0.00479	
0.00461	0.00444	0.00428	0.00414			
313.00	0.00591	0.00575	0.00558	0.00539	0.00518	
0.00497	0.00476	0.00457	0.00440			

EMTRUCKS. OUT. txt

308.00	0.00642	0.00626	0.00608	0.00587	0.00564
0.00540	0.00515	0.00492	0.00471		
303.00	0.00700	0.00684	0.00665	0.00643	0.00619
0.00591	0.00562	0.00533	0.00507		
298.00	0.00766	0.00750	0.00731	0.00709	0.00683
0.00652	0.00618	0.00583	0.00551		
293.00	0.00841	0.00825	0.00807	0.00784	0.00757
0.00725	0.00687	0.00645	0.00604		
288.00	0.00927	0.00910	0.00891	0.00868	0.00841
0.00808	0.00768	0.00722	0.00671		
283.00	0.01019	0.01002	0.00982	0.00959	0.00932
0.00899	0.00860	0.00811	0.00753		
278.00	0.01104	0.01088	0.01069	0.01047	0.01020
0.00989	0.00951	0.00903	0.00844		

*** I SCST3 - VERSION 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
 Settings\My Documents\B *** 06/05/09

*** 18:04:26

**MODELOPTs:

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CONC RURAL FLAT DFAULT

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION

 VALUES FOR SOURCE GROUP: ALL INCLUDING SOURCE(S): MAJ11DLE, MAJ21DLE,
 MAJ2TRU , L0000001, L0000002, L0000003, L0000004,
 L0000005, L0000006, L0000007, L0000008, L0000009, L0000010, L0000011,
 L0000012, L0000013, L0000014, L0000015, L0000016,
 L0000017, L0000018, L0000019, L0000020, L0000021, L0000022, L0000023,
 L0000024, L0000025, L0000026, L0000027, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART

** CONC OF DIESELPM IN MICROGRAMS/M**3

**

Y-COORD (METERS)	355.50	360.50	X-COORD (METERS)
523.00	0.00131	0.00131	
518.00	0.00134	0.00134	
513.00	0.00137	0.00136	
508.00	0.00140	0.00139	
503.00	0.00143	0.00141	
498.00	0.00145	0.00144	
493.00	0.00148	0.00146	
488.00	0.00150	0.00149	
483.00	0.00153	0.00152	
478.00	0.00156	0.00155	
473.00	0.00160	0.00159	
468.00	0.00163	0.00162	
463.00	0.00167	0.00166	
458.00	0.00172	0.00171	
453.00	0.00176	0.00175	
448.00	0.00181	0.00179	
443.00	0.00185	0.00184	
438.00	0.00190	0.00187	
433.00	0.00194	0.00191	

EMTRUCKS. OUT. txt

428.00	0.00198	0.00194
423.00	0.00201	0.00196
418.00	0.00203	0.00199
413.00	0.00206	0.00201
408.00	0.00208	0.00203
403.00	0.00211	0.00205
398.00	0.00214	0.00208
393.00	0.00217	0.00212
388.00	0.00222	0.00217
383.00	0.00228	0.00223
378.00	0.00235	0.00230
373.00	0.00243	0.00239
368.00	0.00252	0.00248
363.00	0.00263	0.00259
358.00	0.00274	0.00270
353.00	0.00287	0.00282
348.00	0.00300	0.00295
343.00	0.00314	0.00308
338.00	0.00329	0.00322
333.00	0.00345	0.00337
328.00	0.00362	0.00353

*** ISCST3 - VERSION 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
 Settings\My Documents\B *** 06/05/09

*** 18:04:26

**MODELOPTs:

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CONC RURAL FLAT DEFAULT

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION
 VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): MAJ1IDLE, MAJ2IDLE,
 MAJ2TRU , L000001, L000002, L000003, L000004,
 L000005, L000006, L000007, L000008, L000009, L000010, L000011,
 L000012, L000013, L000014, L000015, L000016,
 L000017, L000018, L000019, L000020, L000021, L000022, L000023,
 L000024, L000025, L000026, L000027, . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART

** CONC OF DIESELP IN MICROGRAMS/M**3

Y-COORD (METERS)	355.50	360.50	X-COORD (METERS)
------------------	--------	--------	------------------

323.00	0.00381	0.00370
318.00	0.00402	0.00390
313.00	0.00426	0.00412
308.00	0.00453	0.00437
303.00	0.00485	0.00466
298.00	0.00523	0.00500
293.00	0.00568	0.00540
288.00	0.00624	0.00588
283.00	0.00694	0.00645
278.00	0.00775	0.00711

*** ISCST3 - VERSION 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
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Settings\My Documents\B *** EMTRUCKS. OUT. txt
06/05/09

*** 18: 04: 26
**MODELOPTs:

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CONC RURAL FLAT DFAULT

*** THE SUMMARY OF MAXIMUM ANNUAL (1
YRS) RESULTS ***

** CONC OF DIESELP M I N M I C R O G R A M S / M **3

**

GROUP ID ZFLAG)	NETWORK OF TYPE GRID-ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV,
ALL	1ST HIGHEST VALUE IS	0. 01264 AT (	155. 50, 278. 00, 0. 00,
0. 00)	GC UCART1		
	2ND HIGHEST VALUE IS	0. 01264 AT (	150. 50, 278. 00, 0. 00,
0. 00)	GC UCART1		
	3RD HIGHEST VALUE IS	0. 01263 AT (	160. 50, 278. 00, 0. 00,
0. 00)	GC UCART1		
	4TH HIGHEST VALUE IS	0. 01261 AT (	145. 50, 278. 00, 0. 00,
0. 00)	GC UCART1		
	5TH HIGHEST VALUE IS	0. 01259 AT (	165. 50, 278. 00, 0. 00,
0. 00)	GC UCART1		
	6TH HIGHEST VALUE IS	0. 01255 AT (	140. 50, 278. 00, 0. 00,
0. 00)	GC UCART1		
	7TH HIGHEST VALUE IS	0. 01254 AT (	170. 50, 278. 00, 0. 00,
0. 00)	GC UCART1		
	8TH HIGHEST VALUE IS	0. 01249 AT (	175. 50, 278. 00, 0. 00,
0. 00)	GC UCART1		
	9TH HIGHEST VALUE IS	0. 01247 AT (	135. 50, 278. 00, 0. 00,
0. 00)	GC UCART1		
	10TH HIGHEST VALUE IS	0. 01241 AT (	180. 50, 278. 00, 0. 00,
0. 00)	GC UCART1		

*** RECEPTOR TYPES: GC = GRI DCART
GP = GRI DPOLR
DC = DI SCCART
DP = DI SCPOLR
BD = BOUNDARY

*** ISCST3 - VERSION 02035 *** *** C:\Documents and Settings\Don Ballanti\Local
Settings\My Documents\B *** 06/05/09

*** 18: 04: 26
**MODELOPTs:

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CONC RURAL FLAT DFAULT

*** Message Summary : ISCST3 Model Execution ***

----- Summary of Total Messages -----
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EMTRUCKS. OUT. txt

A Total of 0 Fatal Error Message(s)
A Total of 2 Warning Message(s)
A Total of 3 Informational Message(s)
A Total of 3 Calm Hours Identified

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
S0 W320 136 PPARAM : Input Parameter May Be Out-of-Range for Parameter VS
S0 W320 137 PPARAM : Input Parameter May Be Out-of-Range for Parameter VS

*** I SCST3 Finishes Successfully ***

Project: Emerson Recirculated
 Spreadsheet to Calculate Greenhouse Gases

PROJECT INFORMATION:
 Residential Units 578 Dwelling Units
 Commercial (sq. feet) 278,000

SUMMARY OF EMISSIONS		
Source	Tons/Year CO2e	Metric Tons/Year CO2e
Transportation	21,062.20	19,103.42
Area Sources	3,727.52	3,380.86
Electrical Usage	2,000.45	1,814.41
Water Conveyance	45.22	41.01
Wastewater Treatment	77.97	70.71
Total	26,913.36	24,410.42

TRANSPORTATION EMISSIONS

ANNUAL TRANSPORTATION CO2 EMISSIONS FROM URBEMIS:

20983.47 TONS/YEAR CO2
 21062.20 TONS/YEAR CO2e

CH4 EMISSIONS
 TONS/YEAR CO2e
 12.38

N2O EMISSIONS
 TONS/YEAR CO2e
 66.35

AREA SOURCE EMISSIONS

ANNUAL AREA SOURCE CO2 EMISSIONS FROM URBEMIS:

3710.82 TONS/YEAR CO2
 3727.52 TONS/YEAR CO2e

TONS/YEAR CO2e
 1.06

TONS/YEAR CO2e
 15.64

Sources:

CH4 and N2O emission factors from Table 3 in BAAQMD's "Source Inventory of Bay Area Greenhouse Gas Emissions", December 2008.
 CH4 assumed to have a Global Warming Potential of 21 times that of CO2.
 N2O assumed to have a Global Warming Potential of 310 times that of CO2.

ELECTRICITY CONSUMPTION

LAND USE	UNITS/SQ.FOOTAGE	RATE	ANNUAL USAGE (kwh)
Residences	578	7,000 kwh/unit/year	4,046,000.00
Commercial	278,046	16,750.00 kwh/1000 sq. feet	4,657,270.50

Total 8,703,270.50 kwh
 CO2 Emission Rate 0.455810 lbs /kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 2,000.45 tons CO2e

From Appendix G, LGOP \

WATER CONVEYANCE

ANNUAL USAGE (Gallons)

135,680,000.00

Embedded Energy Rate 1,450 kwh/million gallons

Electrical Consumption 196,736.00 kwh
 CO2 Emission Rate 0.455810 lbs /kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 45.22 tons CO2e

Sources:

BAAQMD, Draft CEQA Guidelines, December 2009
 CARB, Local Government Operations Protocol Version 1.0, September 2008.

WASTEWATER TREATMENT

ANNUAL USAGE (Gallons)

135,680,000.00

Embedded Energy Rate 2,500 kwh/million gallons

Electrical Consumption 339,200.00 kwh
 CO2 Emission Rate 0.455810 lbs /kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 77.97 tons CO2e

Sources:

BAAQMD, Draft CEQA Guidelines, December 2009
 CARB, Local Government Operations Protocol Version 1.0, September 2008.

Project: Emerson Alt. 1
 Spreadsheet to Calculate Greenhouse Gases

PROJECT INFORMATION:
 Residential Units 564 Dwelling Units
 Commercial (sq. feet) 50,000

SUMMARY OF EMISSIONS		
Source	Tons/Year CO2e	Metric Tons/Year CO2e
Transportation	8,137.38	7,380.60
Area Sources	1,346.55	1,221.32
Electrical Usage	1,099.95	997.65
Water Conveyance	38.99	35.37
Wastewater Treatment	67.23	60.98
Total	10,690.11	9,695.93

TRANSPORTATION EMISSIONS

ANNUAL TRANSPORTATION CO2 EMISSIONS FROM URBEMIS:

8106.96 TONS/YEAR CO2
 8137.38 TONS/YEAR CO2e

CH4 EMISSIONS
 TONS/YEAR CO2e
 4.78

N2O EMISSIONS
 TONS/YEAR CO2e
 25.63

AREA SOURCE EMISSIONS

ANNUAL AREA SOURCE CO2 EMISSIONS FROM URBEMIS:

1340.52 TONS/YEAR CO2
 1346.55 TONS/YEAR CO2e

TONS/YEAR CO2e
 0.38

TONS/YEAR CO2e
 5.65

Sources:

CH4 and N2O emission factors from Table 3 in BAAQMD's "Source Inventory of Bay Area Greenhouse Gas Emissions", December 2008.
 CH4 assumed to have a Global Warming Potential of 21 times that of CO2.
 N2O assumed to have a Global Warming Potential of 310 times that of CO2.

ELECTRICITY CONSUMPTION

LAND USE	UNITS/SQ.FOOTAGE	RATE	ANNUAL USAGE (kwh)
Residences	564	7,000 kwh/unit/year	3,948,000.00
Commercial	50,000	16,750.00 kwh/1000 sq. feet	837,500.00

Total
 CO2 Emission Rate 4,785,500.00 kwh
 CH4 Emission Rate 0.455810 lbs/kwh
 N2O Emission Rate 0.000023 lbs/kwh
 Annual Emission 0.000011 lbs/kwh
 1,099.95 tons CO2e

From Appendix G, LGOP \

WATER CONVEYANCE

ANNUAL USAGE (Gallons)

117,000,000.00

Embedded Energy Rate 1,450 kwh/million gallons
 Electrical Consumption 169,650.00 kwh
 CO2 Emission Rate 0.455810 lbs/kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 38.99 tons CO2e

Sources:

BAAQMD, Draft CEQA Guidelines, December 2009
 CARB, Local Government Operations Protocol Version 1.0, September 2008.

WASTEWATER TREATMENT

ANNUAL USAGE (Gallons)

117,000,000.00

Embedded Energy Rate 2,500 kwh/million gallons
 Electrical Consumption 292,500.00 kwh
 CO2 Emission Rate 0.455810 lbs/kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 67.23 tons CO2e

Sources:

BAAQMD, Draft CEQA Guidelines, December 2009
 CARB, Local Government Operations Protocol Version 1.0, September 2008.

Project: Emerson Alt 2
 Spreadsheet to Calculate Greenhouse Gases

PROJECT INFORMATION:
 Residential Units 863 Dwelling Units
 Commercial (sq. feet) 0

SUMMARY OF EMISSIONS		
Source	Tons/Year CO2e	Metric Tons/Year CO2e
Transportation	9,072.24	8,228.52
Area Sources	2,668.84	2,420.64
Electrical Usage	1,388.53	1,259.39
Water Conveyance	56.92	51.63
Wastewater Treatment	98.14	89.01
Total	13,284.67	12,049.20

TRANSPORTATION EMISSIONS

ANNUAL TRANSPORTATION CO2 EMISSIONS FROM URBEMIS:

9038.33 TONS/YEAR CO2
 9072.24 TONS/YEAR CO2e

CH4 EMISSIONS
 TONS/YEAR CO2e
 5.33

N2O EMISSIONS
 TONS/YEAR CO2e
 28.58

AREA SOURCE EMISSIONS

ANNUAL AREA SOURCE CO2 EMISSIONS FROM URBEMIS:

2656.88 TONS/YEAR CO2
 2668.84 TONS/YEAR CO2e

TONS/YEAR CO2e
 0.76

TONS/YEAR CO2e
 11.20

Sources:

CH4 and N2O emission factors from Table 3 in BAAQMD's "Source Inventory of Bay Area Greenhouse Gas Emissions", December 2008.
 CH4 assumed to have a Global Warming Potential of 21 times that of CO2.
 N2O assumed to have a Global Warming Potential of 310 times that of CO2.

ELECTRICITY CONSUMPTION

LAND USE	UNITS/SQ.FOOTAGE	RATE	ANNUAL USAGE (kwh)
Residences	863	7,000 kwh/unit/year	6,041,000.00
Commercial	0	16,750.00 kwh/1000 sq. feet	0.00

Total
 CO2 Emission Rate 6,041,000.00 kwh
 0.455810 lbs /kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 1,388.53 tons CO2e

From Appendix G, LGOP \

WATER CONVEYANCE

ANNUAL USAGE (Gallons)

170,790,000.00

Embedded Energy Rate 1,450 kwh/million gallons

Electrical Consumption 247,645.50 kwh
 CO2 Emission Rate 0.455810 lbs /kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 56.92 tons CO2e

Sources:

BAAQMD, Draft CEQA Guidelines, December 2009
 CARB, Local Government Operations Protocol Version 1.0, September 2008.

WASTEWATER TREATMENT

ANNUAL USAGE (Gallons)

170,790,000.00

Embedded Energy Rate 2,500 kwh/million gallons

Electrical Consumption 426,975.00 kwh
 CO2 Emission Rate 0.455810 lbs /kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 98.14 tons CO2e

Sources:

BAAQMD, Draft CEQA Guidelines, December 2009
 CARB, Local Government Operations Protocol Version 1.0, September 2008.

Project: Emerson Alt 3
 Spreadsheet to Calculate Greenhouse Gases

PROJECT INFORMATION:
 Residential Units 522 Dwelling Units
 Commercial (sq. feet) 278,000

SUMMARY OF EMISSIONS		
Source	Tons/Year CO2e	Metric Tons/Year CO2e
Transportation	21,451.68	19,456.67
Area Sources	2,490.92	2,259.27
Electrical Usage	1,910.17	1,732.53
Water Conveyance	42.69	38.72
Wastewater Treatment	73.60	66.75
Total	25,969.05	23,553.93

TRANSPORTATION EMISSIONS

ANNUAL TRANSPORTATION CO2 EMISSIONS FROM URBEMIS:

21371.49 TONS/YEAR CO2
 21451.68 TONS/YEAR CO2e

CH4 EMISSIONS
 TONS/YEAR CO2e
 12.61

N2O EMISSIONS
 TONS/YEAR CO2e
 67.58

AREA SOURCE EMISSIONS

ANNUAL AREA SOURCE CO2 EMISSIONS FROM URBEMIS:

2479.76 TONS/YEAR CO2
 2490.92 TONS/YEAR CO2e

TONS/YEAR CO2e
 0.71

TONS/YEAR CO2e
 10.45

Sources:

CH4 and N2O emission factors from Table 3 in BAAQMD's "Source Inventory of Bay Area Greenhouse Gas Emissions", December 2008.
 CH4 assumed to have a Global Warming Potential of 21 times that of CO2.
 N2O assumed to have a Global Warming Potential of 310 times that of CO2.

ELECTRICITY CONSUMPTION

LAND USE	UNITS/SQ.FOOTAGE	RATE	ANNUAL USAGE (kwh)
Residences	522	7,000 kwh/unit/year	3,654,000.00
Commercial	278,000	16,750.00 kwh/1000 sq. feet	4,656,500.00

Total
 CO2 Emission Rate 8,310,500.00 kwh
 CH4 Emission Rate 0.455810 lbs/kwh
 N2O Emission Rate 0.000023 lbs/kwh
 Annual Emission 0.000011 lbs/kwh
 1,910.17 tons CO2e

From Appendix G, LGOP V

WATER CONVEYANCE

ANNUAL USAGE (Gallons)

128,075,000.00

Embedded Energy Rate 1,450 kwh/million gallons
 Electrical Consumption 185,708.75 kwh
 CO2 Emission Rate 0.455810 lbs/kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 42.69 tons CO2e

Sources:

BAAQMD, Draft CEQA Guidelines, December 2009
 CARB, Local Government Operations Protocol Version 1.0, September 2008.
 Includes school water usage of 15 gallons/day per student.

WASTEWATER TREATMENT

ANNUAL USAGE (Gallons)

128,075,000.00

Embedded Energy Rate 2,500 kwh/million gallons
 Electrical Consumption 320,187.50 kwh
 CO2 Emission Rate 0.455810 lbs/kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 73.60 tons CO2e

Sources:

BAAQMD, Draft CEQA Guidelines, December 2009
 CARB, Local Government Operations Protocol Version 1.0, September 2008.
 Includes waste water generation of 15 gallons per day per student.

Project: Emerson Alt 4
 Spreadsheet to Calculate Greenhouse Gases

PROJECT INFORMATION:
 Residential Units 858 Dwelling Units
 Commercial (sq. feet) 122,000

SUMMARY OF EMISSIONS		
Source	Tons/Year CO2e	Metric Tons/Year CO2e
Transportation	15,638.84	14,184.43
Area Sources	2,910.88	2,640.17
Electrical Usage	1,850.18	1,678.11
Water Conveyance	59.46	53.93
Wastewater Treatment	102.51	92.98
Total	20,561.88	18,649.62

TRANSPORTATION EMISSIONS

ANNUAL TRANSPORTATION CO2 EMISSIONS FROM URBEMIS:

15580.38 TONS/YEAR CO2
 15638.84 TONS/YEAR CO2e

CH4 EMISSIONS
 TONS/YEAR CO2e
 9.19

N2O EMISSIONS
 TONS/YEAR CO2e
 49.27

AREA SOURCE EMISSIONS

ANNUAL AREA SOURCE CO2 EMISSIONS FROM URBEMIS:

2897.84 TONS/YEAR CO2
 2910.88 TONS/YEAR CO2e

TONS/YEAR CO2e
 0.83

TONS/YEAR CO2e
 12.22

Sources:

CH4 and N2O emission factors from Table 3 in BAAQMD's "Source Inventory of Bay Area Greenhouse Gas Emissions", December 2008.
 CH4 assumed to have a Global Warming Potential of 21 times that of CO2.
 N2O assumed to have a Global Warming Potential of 310 times that of CO2.

ELECTRICITY CONSUMPTION

LAND USE	UNITS/SQ.FOOTAGE	RATE	ANNUAL USAGE (kwh)
Residences	858	7,000 kwh/unit/year	6,006,000.00
Commercial	122,000	16,750.00 kwh/1000 sq. feet	2,043,500.00

Total
 8,049,500.00 kwh
 CO2 Emission Rate 0.455810 lbs /kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 1,850.18 tons CO2e

From Appendix G, LGOP \

WATER CONVEYANCE

ANNUAL USAGE (Gallons)

178,400,000.00

Embedded Energy Rate 1,450 kwh/million gallons

Electrical Consumption 258,680.00 kwh
 CO2 Emission Rate 0.455810 lbs /kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 59.46 tons CO2e

Sources:

BAAQMD, Draft CEQA Guidelines, December 2009
 CARB, Local Government Operations Protocol Version 1.0, September 2008.

WASTEWATER TREATMENT

ANNUAL USAGE (Gallons)

178,400,000.00

Embedded Energy Rate 2,500 kwh/million gallons

Electrical Consumption 446,000.00 kwh
 CO2 Emission Rate 0.455810 lbs /kwh
 CH4 Emission Rate 0.000023 lbs/kwh
 N2O Emission Rate 0.000011 lbs/kwh
 Annual Emission 102.51 tons CO2e

Sources:

BAAQMD, Draft CEQA Guidelines, December 2009
 CARB, Local Government Operations Protocol Version 1.0, September 2008.

APPENDIX F 1

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality

505 Petaluma Boulevard South
Petaluma, California 94952

Tel: 707-766-7700
www.illingworthrodkin.com

Fax: 707-766-7790
illro@illingworthrodkin.com

M E M O

Date: March 24, 2010

To: Rod Stinson
Raney Planning & Management, Inc.
rods@raneymanagement.com

From: Michael S. Thill
Illingworth & Rodkin, Inc.

SUBJECT: Revised Traffic Forecasts for the Emerson Property Project

Based on the comments received on the Draft EIR for the Emerson Property project (proposed project), the Traffic Impact Report and data were updated. The update included additional traffic counts and revised assumptions for the traffic modeling, which resulted in increased traffic volume estimates for the proposed project. Because noise impacts are a function of traffic volume, the increase in traffic volume triggered the need for a re-evaluation of the Environmental Noise Assessment prepared for the project. The re-evaluation was needed to determine if the updated volumes would substantially change the impacts, conclusions, and/or mitigation of the Environmental Noise Assessment. At your request, Illingworth & Rodkin, Inc. has reviewed the January 2010 traffic data you supplied for the Emerson Property project. The results of the re-evaluation are presented below.

Methodology

The re-evaluation compared the updated traffic data to the June 2008 traffic data previously analyzed by our firm. This comparison was made to determine if the updated traffic volumes expected along area roadways would adversely affect the results of our previous analysis. Traffic data were reviewed for the AM peak hour and the PM peak hour. Since the L_{dn} is approximately equal to the hourly average noise level resulting during the PM peak hour, the PM peak hour traffic volumes were used to calculate the increase in the L_{dn} .

Traffic noise levels are a function primarily of traffic volume and traffic speed. It was assumed that future traffic speeds along area roadways would remain the same. Changes in overall noise levels resulting in a change in volume are calculated using a logarithmic relationship of traffic volume to noise level changes. Table 1 summarizes the results of our calculations.

Our review of the traffic data indicates that traffic volumes on area roadways have changed under the existing, existing plus approved, existing plus approved plus project, cumulative, and

cumulative plus project traffic scenarios. The largest relative changes were noted along Cypress Road under the existing plus approved and existing plus approved plus project traffic scenarios. In all instances, the relative increase or decrease in traffic volumes, as compared to the volumes supplied to us in June 2008, continue to yield the same conclusions made in regard to project and cumulative traffic noise impacts. The proposed project alone is not expected to substantially increase traffic noise levels on area roadways as the noise increase attributable to the project is expected to be 2 dBA L_{dn} or less (a substantial permanent noise increase would result if the project would result in an increase of 3 dBA L_{dn} or greater). The project, however, will continue to make a “cumulatively considerable” contribution to substantial cumulative noise increases expected on Cypress Road (defined as an increase of 1 dBA L_{dn} that is attributable to the project where noise levels are substantially increased).

Please feel free to contact us if you have any questions or concerns.

MST:mst

Table 1 Roadway Link Volumes and Associated Noise Level Increases Attributable to the Project

	Intersection	2008 Link Volumes				Noise Increase (dB) above Existing Conditions				Noise Increase (dB) above Existing Conditions Attributable to the Project				2010 Link Volumes				Noise Increase (dB) above Existing Conditions				Noise Increase (dB) above Existing Conditions Attributable to the Project				
		North	East	South	West	North	East	South	West	North	East	South	West	North	East	South	West	North	East	South	West	North	East	South	West	
Existing Traffic	1 Cypress Rd & Main St.	1248	1132	1082	454									1228	1070	1115	441									
	2 Cypress Rd & Frank Hengel Wy	24	1052	0	1066									294	1094	108	1394									
	3 Cypress Rd & Sellers Ave	30	804	394	886									6	764	316	846									
	5 Cypress Rd & Knightsen Ave	0	598	287	713									0	598	287	713									
Approved PM	1 Cypress Rd & Main St.	2171	1503	1441	541	2	1	1	1					1563	1914	1475	632	1	3	1	2					
	2 Cypress Rd & Frank Hengel Wy	24	1466	0	1480	0	1	NA	1					301	1920	110	2227	0	2	0	2					
	3 Cypress Rd & Sellers Ave	458	1348	725	1477	12	2	3	2					193	1531	438	1668	15	3	1	3					
	5 Cypress Rd & Knightsen Ave	0	1285	311	1418	NA	3	0	3					0	1125	337	1210	NA	3	1	2					
Approved + Project	1 Cypress Rd & Main St.	2693	2435	2115	677	3	3	3	2	1	2	2	1	2123	3170	1953	840	2	5	2	3	1	2	1	1	
	2 Cypress Rd & Frank Hengel Wy	24	2398	0	2412	0	4	NA	4	0	2	NA	2	301	3176	110	3483	0	5	0	4	0	2	0	2	
	3 Cypress Rd & Sellers Ave	854	1411	891	1920	15	2	4	3	3	0	1	1	637	1630	667	2194	20	3	3	4	5	0	2	1	
	5 Cypress Rd & Knightsen Ave	0	1349	311	1482	NA	4	0	3	NA	0	0	0	0	1204	356	1308	NA	3	1	3	NA	0	0	0	
Cumulative	1 Cypress Rd & Main St.	3190	3340	2070	1080	4	5	3	4					3010	2148	1980	934	4	3	2	3					
	2 Cypress Rd & Frank Hengel Wy	30	2834	0	2850	1	4	NA	4					34	2043	110	2147	-9	3	0	2					
	3 Cypress Rd & Sellers Ave	510	4173	2031	3102	12	7	7	5					382	3523	2109	2402	18	7	8	5					
	5 Cypress Rd & Knightsen Ave	0	4100	309	4221	NA	8	0	8					0	3200	309	3321	NA	7	0	7					
Cumulative + Project	1 Cypress Rd & Main St.	3451	3738	2367	920	4	5	3	3	0	0	1	-1	3580	3404	2458	1142	5	5	3	4	1	2	1	1	
	2 Cypress Rd & Frank Hengel Wy	30	3766	0	3782	1	6	NA	5	0	1	NA	1	34	3299	0	3403	-9	5	NA	4	0	2	NA	2	
	3 Cypress Rd & Sellers Ave	778	4236	2275	3495	14	7	8	6	2	0	0	1	825	3660	2300	2929	21	7	9	5	3	0	0	1	
	5 Cypress Rd & Knightsen Ave	0	4164	309	4285	NA	8	0	8	NA	0	0	0	0	3317	328	3457	NA	7	1	7	NA	0	0	0	

APPENDIX F2

Turning Movement Count

Collected By:

60 Minute Counts

DATE	TIME	INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
			1	0	0	17	0	0	0	0	17	0	22	15	0
			2	0	0	25	0	0	0	0	34	0	15	37	0
			3	0	0	0	0	0	0	0	59	0	0	51	0
			4	0	0	0	0	0	0	0	59	0	0	51	0
			5	0	0	0	0	0	0	0	182	0	0	158	0
			6	0	0	0	0	0	0	0	305	0	0	265	0
			7	0	0	10	0	0	0	0	42	0	9	37	0
			8	0	0	59	0	0	0	0	53	0	51	46	0
OLD		1	9	0	0	256	305	0	0	0	111	0	222	97	265
			10	0	0	0	0	0	0	0	673	0	0	583	0
OLD		2	11	0	0	0	0	0	0	0	673	0	0	583	0
			12	0	0	0	53	0	241	278	394	0	0	342	61
			13	0	0	0	42	0	193	223	225	0	0	210	49
OLD		3	14	72	51	0	13	44	149	172	33	62	0	38	15
			15	0	0	0	0	0	0	0	46	0	0	53	0
OLD		5	16	10	0	0	0	0	0	0	37	9	0	42	0
			17	0	0	0	0	0	0	0	37	0	0	42	0
			18	0	0	0	0	0	42	37	0	0	0	0	0
			19	0	0	0	102	0	0	0	0	0	0	0	29
			20	0	0	34	0	0	0	0	102	0	0	29	88
			21	0	0	42	0	0	0	0	136	0	37	118	0
			22	0	10	0	0	9	0	0	178	0	0	154	0
			23	0	0	0	0	0	51	59	119	0	0	103	0
			24	0	137	0	0	118	103	119	0	0	0	0	0
			25	0	123	0	0	106	0	0	0	0	0	0	0
			26	0	137	0	0	118	0	0	0	0	0	0	0
			27	0	113	0	0	98	21	24	0	0	0	0	0
			28	0	113	23	0	98	0	0	0	0	20	0	0
OLD		11	29	0	59	0	35	51	20	23	0	0	0	0	41
			30	0	85	0	0	74	44	51	0	0	0	0	0
			31	0	59	0	0	51	0	0	0	0	0	0	0

Alt A DATE	TIME	INTID	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		
		1			9					9			8	5		0	0	-8	0	0	0	0	0	0	-14	-10	0	
		2			13					17			5	13		0	0	-12	0	0	0	0	0	-17	0	-10	-24	0
		3								31				18		0	0	0	0	0	0	0	0	0	0	-33	0	
		4								31				18		0	0	0	0	0	0	0	0	0	0	-33	0	
		5								94				54		0	0	0	0	0	0	0	0	0	0	-104	0	
		6								157				90		0	0	0	0	0	0	0	0	0	0	-175	0	
		7			5					22			3	13		0	0	-5	0	0	0	0	0	0	-6	-24	0	
		8			30					27			17	16		0	0	-29	0	0	0	0	0	0	-34	-30	0	
OLD	1	9			132	157				57			76	33	90	0	0	-124	-148	0	0	0	0	-54	0	-146	-64	-175
		10								346				199		0	0	0	0	0	0	0	0	0	0	-384	0	
OLD	2	11								346				199		0	0	0	0	0	0	0	0	0	0	-384	0	
		12				18			82	143	203			117	31	0	0	0	-35	0	-159	-135	-191	0	0	-225	-30	
		13				14			66	114	106			82	25	0	0	0	-28	0	-127	-109	-119	0	0	-128	-24	
OLD	3	14	37	26		4	15	51	88	11	21			19	8	-35	-25	0	-9	-29	-98	-84	-22	-41	0	-19	-7	
		15								16				27		0	0	0	0	0	0	0	0	0	0	-26	0	
OLD	5	16	5							13	3			22		-5	0	0	0	0	0	0	0	-24	-6	0	-20	0
		17								13				22		0	0	0	0	0	0	0	0	0	0	-20	0	
		18							22	13						0	0	0	0	0	0	-20	-24	0	0	0	0	
		19				52									10	0	0	0	-50	0	0	0	0	0	0	0	-19	
		20				17				52				10	30	0	0	-17	0	0	0	0	0	0	0	-19	-58	
		21				22				70				13	40	0	0	-20	0	0	0	0	0	0	-24	-78	0	
		22			5			3		92				53		0	-5	0	0	-6	0	0	0	0	0	-101	0	
		23							17	30	61			35		0	0	0	0	0	-34	-29	-58	0	0	-68	0	
		24			70			40	35	61					0	-67	0	0	0	-78	-68	-58	0	0	0	0	0	
		25			63			36							0	-60	0	0	0	-70	0	0	0	0	0	0	0	
		26			70			40							0	-67	0	0	0	-78	0	0	0	0	0	0	0	
		27			58			33	7	12					0	-55	0	0	0	-65	-14	-12	0	0	0	0	0	
		28			58	12		33					7		0	-55	-11	0	0	-65	0	0	0	0	-13	0	0	
OLD	11	29			31	12		18	7	12				21	0	-28	0	-23	-33	-13	-11	0	0	0	0	0	-20	
		30			44			25	15	26					0	-41	0	0	0	-49	-29	-25	0	0	0	0	0	
		31			31			18							0	-28	0	0	0	-33	0	0	0	0	0	0	0	

APPENDIX R



**Balance
Hydrologics, Inc.**[®]

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Berkeley • Auburn • Santa Cruz • San Rafael • Truckee

November 20, 2008

Mr. Reed Oñate
DeNova Homes, Inc.
333 Civic Drive
Pleasanton, California 94523

RE: Emerson Ranch – Subdivision 9032, Hydrologic and Hydraulic Analyses

Dear Mr. Oñate:

This letter report summarizes work performed by Balance Hydrologics, Inc. to review changes in site design as they affect stormwater management planning and design set forth in the Preliminary Stormwater Management Plan (SWMP) for the Emerson Property, City of Oakley, California dated October 27, 2005. The tentative map for the project now includes a reconfiguration of residential lots, a larger commercial area and modifications of the park and multi-purpose lake. The incorporation of these changes and the modeling results are presented below.

Site Design Changes

Changes to the site design from the design analyzed in the 2005 SWMP include expansion of the commercial area from roughly 9.4 acres to 23.7 acres and a corresponding reduction in the residential area. The number of residential units has decreased from 624 to 578; however, the density within the residential area has increased.

Water quality considerations

Water quality volume was recalculated based on the revised site plan. Using the Contra Costa County BMP Sizing Worksheet for Emerson Lake, the Emerson post-project area of 140 acres would require 3.7 acre-feet of water quality volume. Additional water quality volume is provided for the 184-acre off-site southern area which would require 0.9 acre-feet of water quality volume based on existing conditions. Note that the lake is sized to provide water quality treatment for the 184-acre off-site area in current conditions only. Future development in the off-site area must provide water quality treatment before discharging to the Emerson Lake.

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Lake sizing

There are also changes in the configuration of the multi-purpose lake. The total volume of the lake has increased from 57.6 acre-feet to 63.6 acre-feet at the design maximum water surface elevation (WSE) of 4.0 feet NGVD. The permanent pond with a volume of 42.1 acre-feet is set at elevation -0.5 feet NGVD, 5.0 feet below the lowest point on the adjacent streets. The surface area of the permanent pond is 4.5 acres while the surface area at the maximum WSE is 5.1 acres. There is an active storage volume of 21.5 acre-feet of which the lower 4.6 acre-feet (approximately to elevation 0.5 feet) serves as water quality detention required for the combined acreage of the project and the off-site south-of-Cypress area (in existing conditions) as noted above. The remaining 16.9 acre-feet is available for flood storage. The average depth of the permanent pond is roughly 11 feet with a depth range of 10 to 15 feet to prevent growth of emergent aquatic plants. The bottom elevation averages -11.4 feet NGVD. As stated in the 2005 SWMP, the lake will be lined to separate the stored water from the underlying water table. The water quality volume will be pumped at a rate of 1.7 cfs to discharge the water quality volume of 4.6 acre-feet over 48 hours. When the lake fills above the water quality volume a larger pump will initiate pumping resulting in a combined pumping rate of 35 cfs and will pump until the WSE returns to the water quality elevation of 0.5 feet.

As outlined in the 2005 SWMP, detained stormwater will be pumped from the lake to the previously permitted and constructed outfall at Emerson Slough.

Hydrologic and Hydraulic Modeling

Hydrologic and hydraulic modeling was prepared using the HEC-HMS platform with methods and guidelines from Contra Costa County Flood Control (CCCFC). Parameters and stage-storage-discharge relationships were prepared based on the revised site plan and land use. The model uses storm rainfall amounts consistent with the County Duration-Frequency-Depth curves for 11.5 inches mean annual precipitation and in agreement with those used in the original County Hydro-6 runs for the project. The distribution percentage curve used is S-Curve 1P from previous east county modeling prepared by CCCFC. Water quality requirements were also reviewed in light of the land use changes.

Hydrologic Parameters

The changes in land use and associated parameters affecting hydrologic and hydraulic modeling of the stormwater management features at the site were reviewed and modified. The revised parameters were entered into the HEC-HMS model. The land use changes noted above produced only minor changes in hydrologic parameters with the exception of the N-value for the post-project condition used in the lag-time calculation. This value was overstated in the previous calculations resulting in a correspondingly

Mr. Offate
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overstated lag-time. There were also minor adjustments to the infiltration rates for both pre- and post-project conditions. The hydrologic parameters are presented in Table 1.

Stormwater detention

The model includes two detention areas. The elevation-area-volume relationships for the multi-purpose lake are presented in Table 2. Discharge from the lake is as described above with pumping at 1.7 cfs for WSE from -0.5 feet to 0.5 feet and a total pumping rate of 35 cfs above WSE 0.5 feet.

In addition to the multi-purpose lake, there is an existing ponding area south of Cypress Road which is entered into the model. The low point south of the roadway is 8.7 feet; with 5.62 acre-feet of storage available in the existing ponding area (up to the elevation of Cypress Road). In current conditions, there is an under-sized 18-inch pipe under Cypress Road. If this is overwhelmed, water would pond in the field until it overtops the road at elevation 9.9 feet. The project proposes to route runoff from this area to the multi-purpose lake through a 60-inch pipe under Cypress Road. The inlet to the pipe is modeled as a 7-foot by 2-foot box inlet with a flow line at 8.7 feet no additional restriction is applied to this inlet¹.

Modeling Results

Modeling results for the lake, from the 10-year and 100-year 3-, 6-, 12-, 24- and 96-hour storm events, are presented in Table 3. With the increase in available storage in the lake, the model indicates that all storm events can be contained at or below the design maximum WSE of 4.0 feet. The controlling event is the 100-year 12-hour event with a maximum WSE of 4.0 feet in the multi-purpose lake. The model also indicates that the maximum ponding south of Cypress Road reaches 9.7 feet (a ponding depth of one foot) in the 100-year 12-hour event, with slightly more ponding, to elevation 9.8 feet, in the 100-year 3-hour event. The elevation-area-volume relationships for the south-of-Cypress ponding are presented in Table 4, while the model output for this area is presented in Table 5. Runoff hydrographs from the project site and the south-of-Cypress area, as well as discharge from the south-of-Cypress ponding are shown in Figure 1. Lake inflow (combined runoff from the project site and discharge from the south-of-Cypress ponding) and outflow are shown in Figure 2. Selected output from the HEC-HMS model is provided in Appendix A. A CD containing the model is enclosed.

Closing

Based on the results of the modeling, we believe that the reconfiguration of the lake will meet the water quality and detention requirements of the revised site plan and of the off-site area in its existing condition.

¹ Peak discharge from the south-of Cypress area is 61 cfs in the 100-year 12-hour event as shown in Figure 1. Note also that the peak occurs roughly one hour later than the peak for the Emerson Ranch project, allowing the lake and the 35 cfs pump to manage the additional inflow.

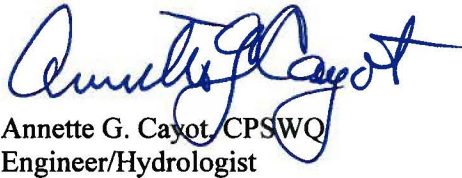
Mr. Ofiate
November 20, 2008
Page 4

It is important to note that any future development projects in the 184-acre south-of-Cypress area would be required to mitigate timing differences, increases in peak discharge to values at or below those noted herein, and to adequately treat stormwater according to the applicable treatment design criteria at the time of development.


We would be happy to further discuss or explain our findings as needed.

Sincerely,

BALANCE HYDROLOGICS, Inc.


Annette G. Cayot, CPSWQ
Engineer/Hydrologist




Edward D. Ballman, P.E.
Civil Engineer/Hydrologist



Enclosures: Tables 1 - 5
Figures 1 and 2
Appendix A

cc: Karrie Mosca, Carlson, Barbee & Gibson, Inc.

TABLES

Table 1. Existing and post-project hydrologic parameters of sub-watersheds at Emerson Property, City of Oakley, California

	Mean seasonal rainfall (in) <i>(in)</i>	Lag-time <i>(hr)</i>	Infiltration rate <i>(in/hr)</i>	Hydro N- value	Area <i>(ac)</i>	Channel length <i>(mi)</i>	Channel length from centroid <i>(mi)</i>	Change in elevation <i>(ft)</i>
Existing Conditions								
Emerson Ranch project site	11.5	0.80	0.17	0.070	140	0.82	0.51	7.1
Off-site south of Cypress Road	11.5	0.75	0.15	0.072	184	0.85	0.48	11.9
Post-project Conditions								
Emerson Ranch project site	11.5	0.15	0.074	0.030	140	0.42	0.13	4.3
Off-site south of Cypress Road	No Change							

Table 2. Hydrologic properties of the proposed lake at the Emerson Property, City of Oakley, California

Elevation <i>(feet NGVD)</i>	Surface Area		Storage Volume	
	<i>(ft²)</i>	<i>(acre)</i>	<i>(ft³)</i>	<i>(ac-ft)</i>
-11.4	133,000	3.05	0	0.0
-10.0	142,000	3.26	192,000	4.4
-8.0	155,000	3.56	489,000	11.2
-6.0	168,000	3.86	812,000	18.6
-4.0	182,000	4.18	1,162,000	26.7
-2.0	196,000	4.50	1,540,000	35.4
permanent pond -0.5	198,000	4.55	1,835,000	42.1
0.0	198,000	4.55	1,934,000	44.4
0.54	201,000	4.61	2,042,000	46.9
4.0	220,000	5.05	2,771,000	63.6
4.5	223,000	5.12	2,882,000	66.2

Table 3. Maximum predicted lake water surface elevations for various design storms, Emerson Property, City of Oakley

Design Storm	Maximum storage (acre-feet)	Maximum event storage¹ (acre-feet)	Maximum water surface (feet NGVD)
10-year events			
3-hour	50.0	7.8	1.2
6-hour	50.2	8.0	1.2
12-hour	51.1	9.0	1.4
24-hour	47.8	5.7	0.8
96-hour	47.2	5.0	0.6
100-year events			
3-hour	57.9	15.8	2.8
6-hour	59.2	17.1	3.1
12-hour	63.6	21.5	4.0
24-hour	56.8	14.7	2.6
96-hour	51.8	9.7	1.6

Notes:

All values based on the respective Contra Costa County Flood Control design storms. The maximum water surface elevation is associated with the 12-hour storm for both the 10-year and 100-year events.

¹: Maximum event storage is the water quality volume (4.6 ac-ft) plus the flood control detention volume.

Table 4. Elevation - area - storage for the existing ponding south of Cypress Road, Emerson Ranch project, City of Oakley,

Elevation <i>(feet NGVD)</i>	Surface Area		Storage Volume	
	<i>(ft²)</i>	<i>(acre)</i>	<i>(ft³)</i>	<i>(ac-ft)</i>
8.7	0	0.00	0	0.0
9.0	89,000	2.04	13,000	0.3
9.5	261,000	5.99	101,000	2.3
9.9	459,000	10.54	245,000	5.6
10.0	605,000	13.89	298,000	6.8
11.0	1,050,000	24.10	1,126,000	25.8

Table 5. South-of-Cypress depression - model output for various design storms, Emerson Ranch project, City of Oakley, California

Design Storm	Maximum storage (acre-feet)	Peak outflow (cfs)	Maximum water surface elevation (feet NGVD)	Maximum depth of ponding (feet)
10-year events				
3-hour	2.5	39.0	9.5	0.8
6-hour	2.1	33.7	9.5	0.8
12-hour	2.3	36.9	9.5	0.8
24-hour	1.5	22.6	9.3	0.6
96-hour	1.1	16.3	9.2	0.5
100-year events				
3-hour	4.5	63.2	9.8	1.1
6-hour	4.0	56.7	9.7	1.0
12-hour	4.3	61.2	9.7	1.0
24-hour	2.9	44.1	9.6	0.9
96-hour	2.1	33.6	9.5	0.8

Notes:

All values based on the respective Contra Costa County Flood Control design storms. The maximum water surface elevation is associated with the 3-hour storm for both the 10-year and 100-year events, however the maximum for the receiving Emerson lake is the 12-hour storm for both 10- and 100-year events.

FIGURES

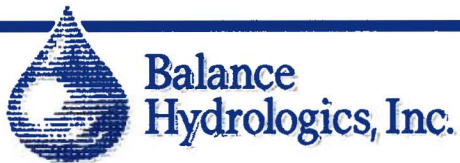
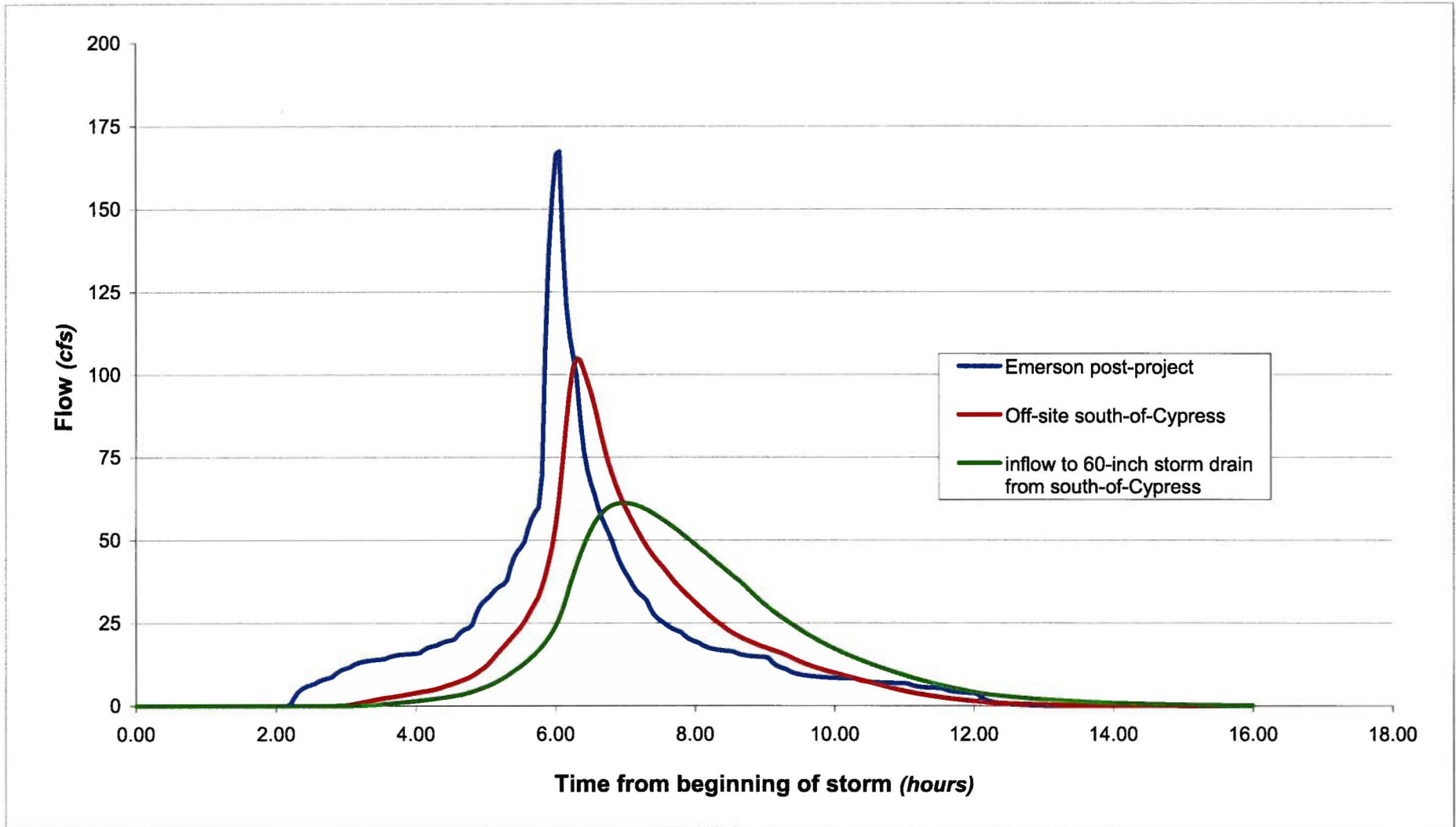


Figure 1. Runoff hydrographs for 100-year 12-hour event, Emerson Ranch project, City of Oakley, California

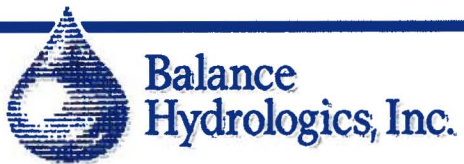
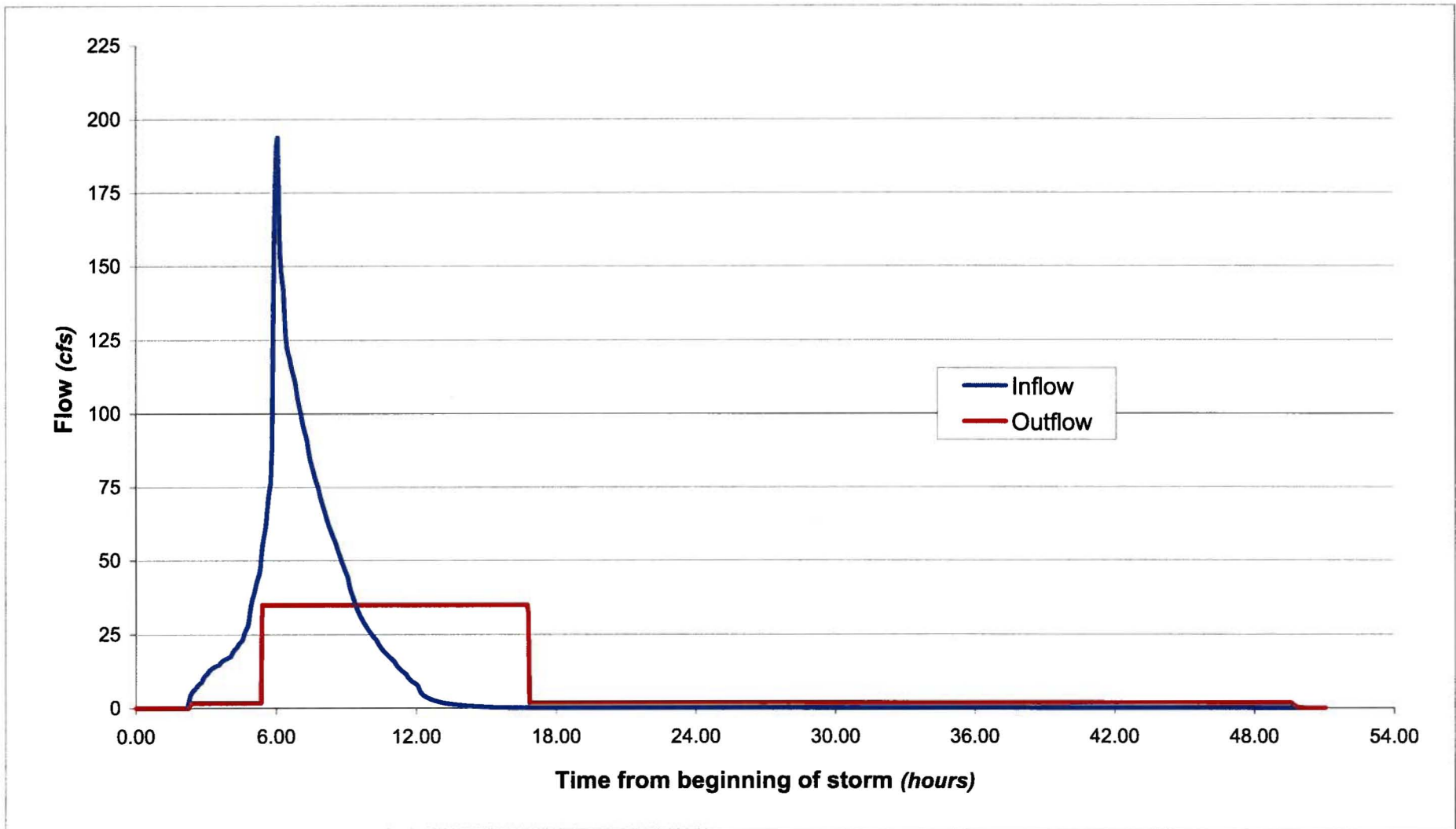


Figure 2. Lake inflow and outflow hydrographs for the 100-year 12-hour event, Emerson Ranch project, City of Oakley, California

APPENDIX A

HEC-HMS model selected output

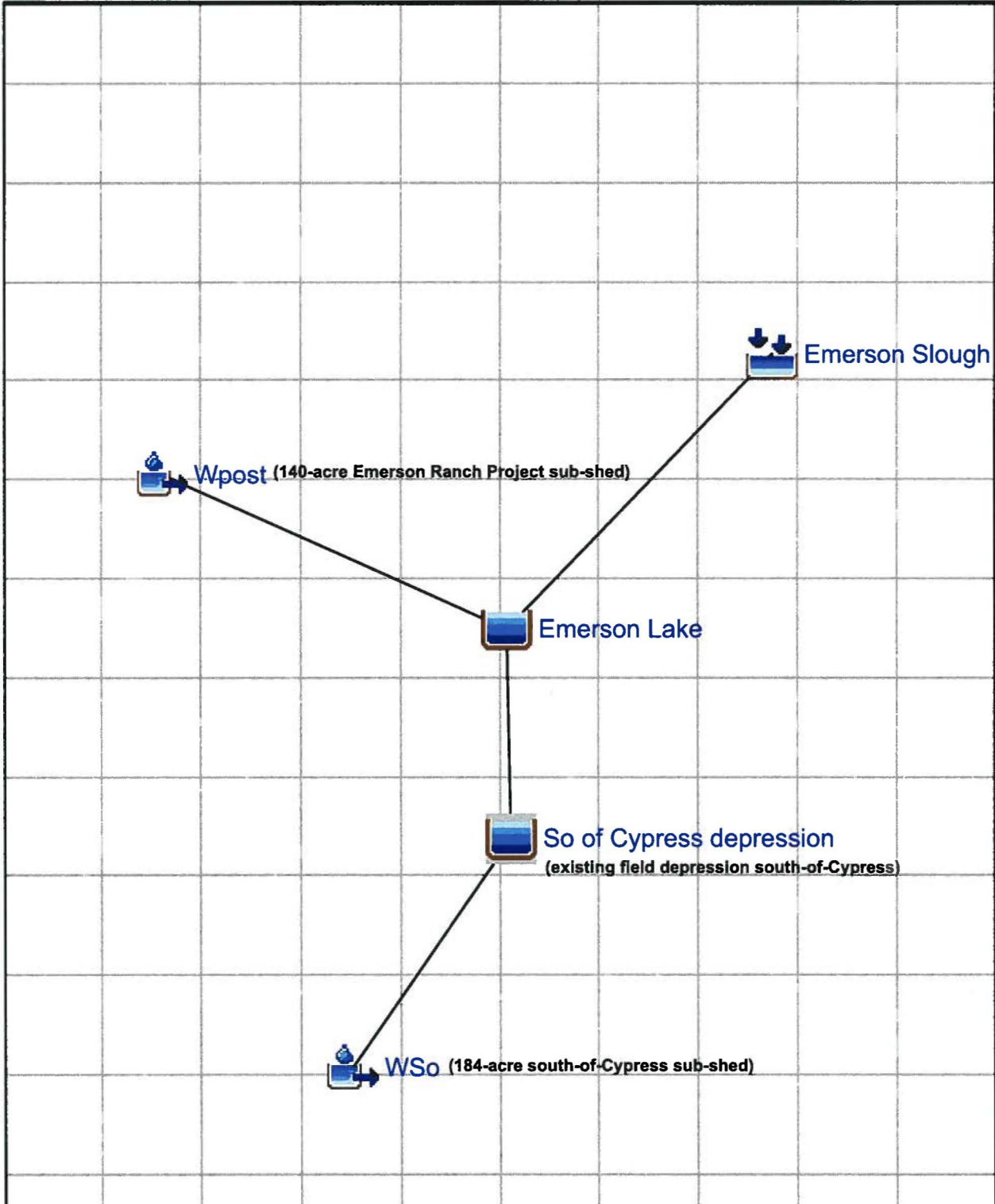


HEC-HMS

Project : Emerson VTM

Basin Model : Emerson - Post 2008

Oct 31 15:44:20 PDT 2008



Project: Emerson VTM
Simulation Run: 08 Post 010y 03h Reservoir: Emerson Lake
Start of Run: 01Jan2020, 00:00 Basin Model: Emerson - Post 2008
End of Run: 03Jan2020, 00:00 Meteorologic Model: 010y 03h
Compute Time: 31Oct2008, 15:24:10 Control Specifications: 02-day

Volume Units: AC-FT

Computed Results

Peak Inflow :	134.96 (CFS)	Date/Time of Peak Inflow :	01Jan2020, 02:48
Peak Outflow :	35.00 (CFS)	Date/Time of Peak Outflow :	01Jan2020, 02:45
Total Inflow :	15.65 (AC-FT)	Peak Storage :	49.96 (AC-FT)
Total Outflow :	15.64 (AC-FT)	Peak Elevation :	1.20 (FT)

Project: Emerson VTM

Simulation Run: 08 Post 010y 06h Reservoir: Emerson Lake

Start of Run: 01Jan2020, 00:00 Basin Model: Emerson - Post 2008
End of Run: 02Jan2020, 00:00 Meteorologic Model: 010y 06h
Compute Time: 31Oct2008, 15:24:14 Control Specifications: 01-day

Volume Units: AC-FT

Computed Results

Peak Inflow :	116.98 (CFS)	Date/Time of Peak Inflow :	01Jan2020, 04:18
Peak Outflow :	35.00 (CFS)	Date/Time of Peak Outflow :	01Jan2020, 04:15
Total Inflow :	16.40 (AC-FT)	Peak Storage :	50.19 (AC-FT)
Total Outflow :	13.56 (AC-FT)	Peak Elevation :	1.25 (FT)

Project: Emerson VTM
Simulation Run: 08 Post 010y 12h Reservoir: Emerson Lake
Start of Run: 01Jan2020, 00:00 Basin Model: Emerson - Post 2008
End of Run: 04Jan2020, 00:00 Meteorologic Model: 010y 12h
Compute Time: 31Oct2008, 15:24:18 Control Specifications: 03-day

Volume Units: AC-FT

Computed Results

Peak Inflow :	120.57 (CFS)	Date/Time of Peak Inflow :	01Jan2020, 06:03
Peak Outflow :	35.00 (CFS)	Date/Time of Peak Outflow :	01Jan2020, 06:03
Total Inflow :	19.22 (AC-FT)	Peak Storage :	51.15 (AC-FT)
Total Outflow :	19.21 (AC-FT)	Peak Elevation :	1.44 (FT)

Project: Emerson VTM

Simulation Run: 08 Post 010y 24h Reservoir: Emerson Lake

Start of Run:	01Jan2020, 00:00	Basin Model:	Emerson - Post 2008
End of Run:	04Jan2020, 00:00	Meteorologic Model:	010y 24h
Compute Time:	31Oct2008, 15:24:21	Control Specifications:	03-day

Volume Units: AC-FT

Computed Results

Peak Inflow :	68.44 (CFS)	Date/Time of Peak Inflow :	01Jan2020, 08:03
Peak Outflow :	35.00 (CFS)	Date/Time of Peak Outflow :	01Jan2020, 08:15
Total Inflow :	14.26 (AC-FT)	Peak Storage :	47.79 (AC-FT)
Total Outflow :	14.25 (AC-FT)	Peak Elevation :	0.76 (FT)

Project: Emerson VTM
Simulation Run: 08 Post 010y 96h Reservoir: Emerson Lake
Start of Run: 01Jan2020, 00:00 Basin Model: Emerson - Post 2008
End of Run: 06Jan2020, 00:00 Meteorologic Model: 010y 96h
Compute Time: 31Oct2008, 15:24:25 Control Specifications: 05-day

Volume Units: AC-FT

Computed Results

Peak Inflow :	44.40 (CFS)	Date/Time of Peak Inflow :	03Jan2020, 18:00
Peak Outflow :	35.00 (CFS)	Date/Time of Peak Outflow :	03Jan2020, 18:00
Total Inflow :	13.78 (AC-FT)	Peak Storage :	47.16 (AC-FT)
Total Outflow :	13.77 (AC-FT)	Peak Elevation :	0.63 (FT)

Project: Emerson VTM
Simulation Run: 08 Post 100y 03h Reservoir: Emerson Lake
Start of Run: 01Jan2020, 00:00 Basin Model: Emerson - Post 2008
End of Run: 02Jan2020, 00:00 Meteorologic Model: 100y 03h
Compute Time: 31Oct2008, 15:24:29 Control Specifications: 01-day

Volume Units: AC-FT

Computed Results

Peak Inflow :	212.13 (CFS)	Date/Time of Peak Inflow :	01Jan2020, 02:45
Peak Outflow :	35.00 (CFS)	Date/Time of Peak Outflow :	01Jan2020, 02:15
Total Inflow :	27.60 (AC-FT)	Peak Storage :	57.93 (AC-FT)
Total Outflow :	24.87 (AC-FT)	Peak Elevation :	2.84 (FT)

Project: Emerson VTM
Simulation Run: 08 Post 100y 06h Reservoir: Emerson Lake
Start of Run: 01Jan2020, 00:00 Basin Model: Emerson - Post 2008
End of Run: 02Jan2020, 00:00 Meteorologic Model: 100y 06h
Compute Time: 31Oct2008, 15:24:32 Control Specifications: 01-day

Volume Units: AC-FT

Computed Results

Peak Inflow :	187.34 (CFS)	Date/Time of Peak Inflow :	01Jan2020, 04:18
Peak Outflow :	35.00 (CFS)	Date/Time of Peak Outflow :	01Jan2020, 02:42
Total Inflow :	32.60 (AC-FT)	Peak Storage :	59.24 (AC-FT)
Total Outflow :	29.58 (AC-FT)	Peak Elevation :	3.10 (FT)

Project: Emerson VTM

Simulation Run: 08 Post 100y 12h Reservoir: Emerson Lake

Start of Run: 01Jan2020, 00:00 Basin Model: Emerson - Post 2008
End of Run: 04Jan2020, 00:00 Meteorologic Model: 100y 12h
Compute Time: 31Oct2008, 15:24:36 Control Specifications: 03-day

Volume Units: AC-FT

Computed Results

Peak Inflow :	193.98 (CFS)	Date/Time of Peak Inflow :	01Jan2020, 06:03
Peak Outflow :	35.00 (CFS)	Date/Time of Peak Outflow :	01Jan2020, 05:24
Total Inflow :	38.17 (AC-FT)	Peak Storage :	63.60 (AC-FT)
Total Outflow :	38.16 (AC-FT)	Peak Elevation :	4.00 (FT)

Project: Emerson VTM
Simulation Run: 08 Post 100y 24h Reservoir: Emerson Lake
Start of Run: 01Jan2020, 00:00 Basin Model: Emerson - Post 2008
End of Run: 04Jan2020, 00:00 Meteorologic Model: 100y 24h
Compute Time: 31Oct2008, 15:24:40 Control Specifications: 03-day

Volume Units: AC-FT

Computed Results

Peak Inflow :	118.72 (CFS)	Date/Time of Peak Inflow :	01Jan2020, 08:03
Peak Outflow :	35.00 (CFS)	Date/Time of Peak Outflow :	01Jan2020, 07:18
Total Inflow :	34.05 (AC-FT)	Peak Storage :	56.79 (AC-FT)
Total Outflow :	34.05 (AC-FT)	Peak Elevation :	2.60 (FT)

Project: Emerson VTM

Simulation Run: 08 Post 100y 96h Reservoir: Emerson Lake

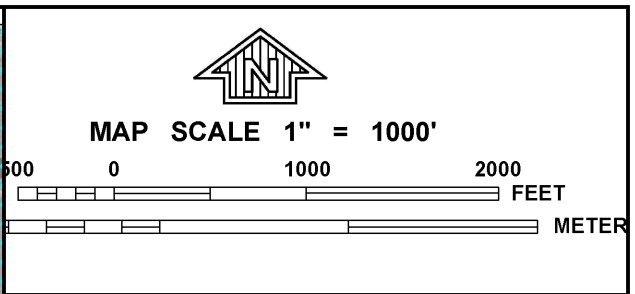
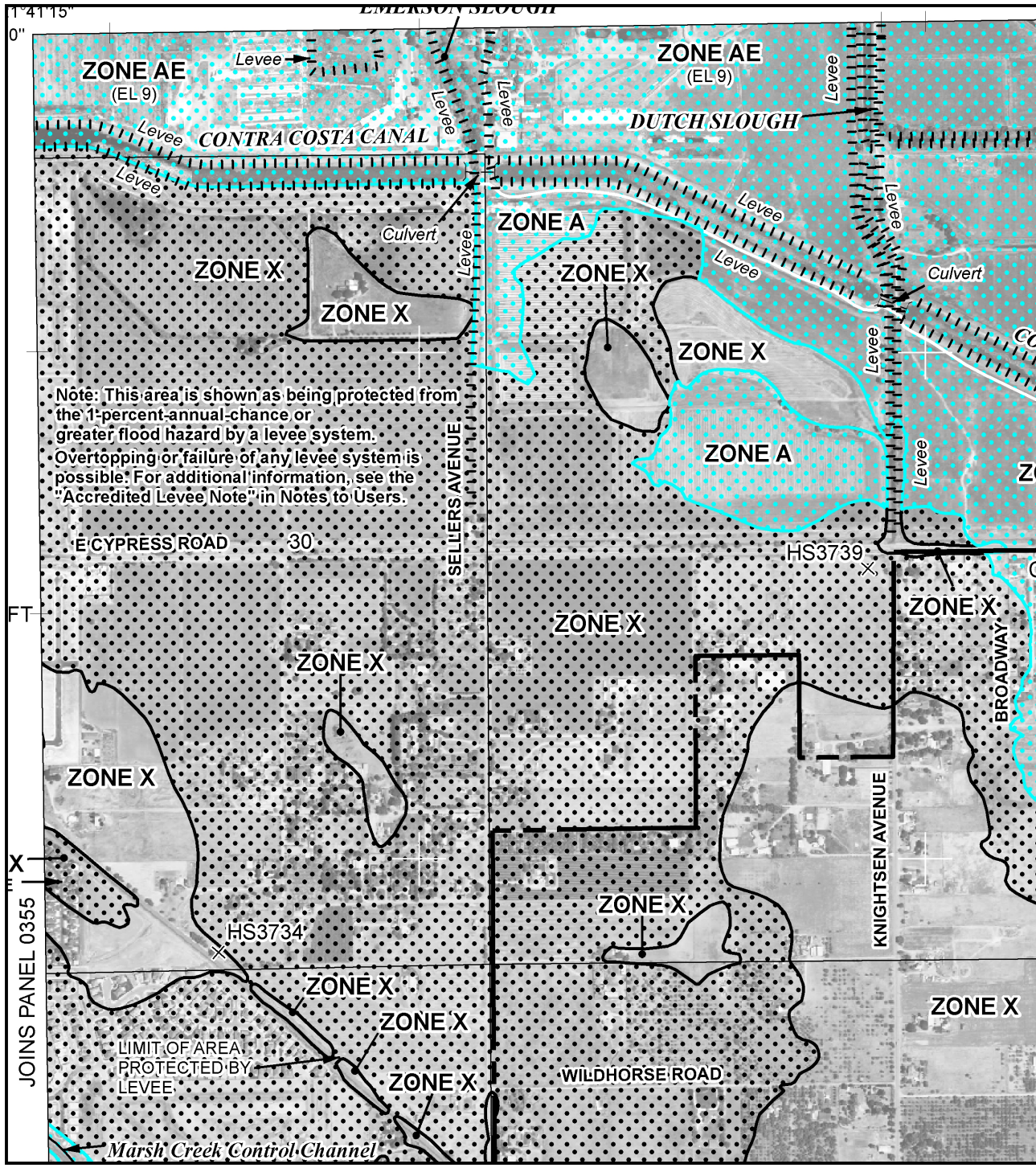
Start of Run: 01Jan2020, 00:00 Basin Model: Emerson - Post 2008
End of Run: 06Jan2020, 00:00 Meteorologic Model: 100y 96h
Compute Time: 31Oct2008, 15:28:41 Control Specifications: 05-day

Volume Units: AC-FT

Computed Results

Peak Inflow :	79.84 (CFS)	Date/Time of Peak Inflow :	03Jan2020, 18:00
Peak Outflow :	35.00 (CFS)	Date/Time of Peak Outflow :	03Jan2020, 16:30
Total Inflow :	37.77 (AC-FT)	Peak Storage :	51.83 (AC-FT)
Total Outflow :	37.76 (AC-FT)	Peak Elevation :	1.58 (FT)

APPENDIX S



NFP
 NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0360F

FIRM

FLOOD INSURANCE RATE MAP

CONTRA COSTA COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 360 OF 602
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BRENTWOOD, CITY OF	060439	0360	F
CONTRA COSTA COUNTY	060025	0360	F
OAKLEY, CITY OF	060766	0360	F

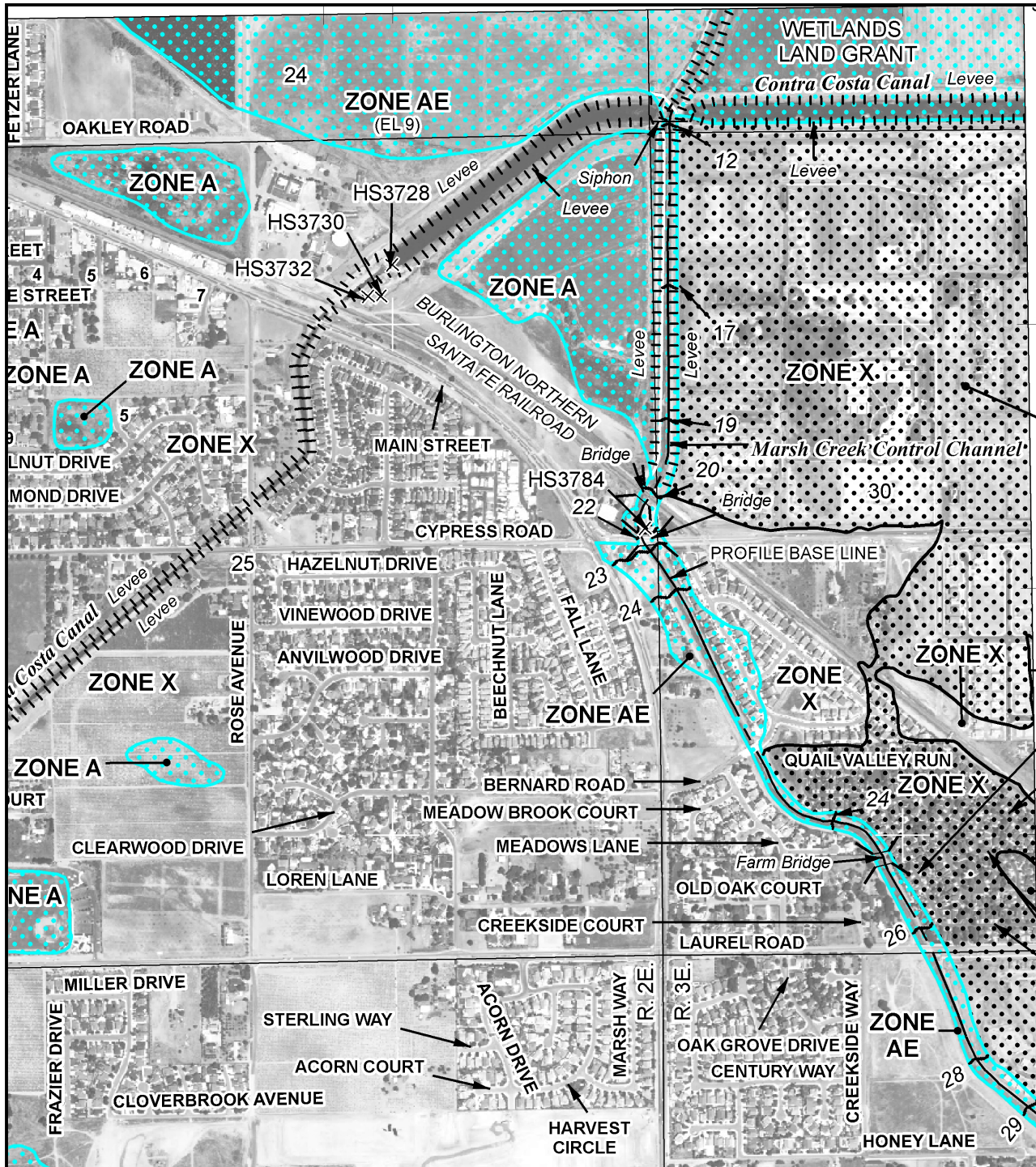
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06013C0360F

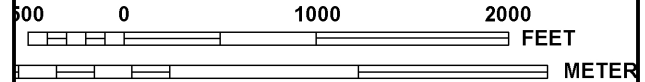
EFFECTIVE DATE
JUNE 16, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



MAP SCALE 1" = 1000'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0355F

FIRM
FLOOD INSURANCE RATE MAP

CONTRA COSTA COUNTY,
CALIFORNIA
AND INCORPORATED AREAS

PANEL 355 OF 602
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ANTIOCH, CITY OF	060026	0355	F
BRENTWOOD, CITY OF	060439	0355	F
CONTRA COSTA COUNTY	060025	0355	F
OAKLEY, CITY OF	060766	0355	F

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
06013C0355F

EFFECTIVE DATE
JUNE 16, 2009

Federal Emergency Management Agency

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