



APPENDIX P
2020 & 2040 Build 2 Sub Scenario Synchro
Intersection Analysis

Queues

1: SW 12th Avenue & Hillsboro Blvd




























Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	277	2092	321	1413	473	98	147	196	22	22	22
v/c Ratio	0.88	0.67	0.96	0.52	0.43	0.27	0.74	0.38	0.28	0.28	0.06
Control Delay	92.0	22.1	104.4	18.8	5.9	66.2	90.7	7.8	81.9	81.4	0.3
Queue Delay	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	92.0	22.1	104.4	19.0	6.0	66.2	90.7	7.8	81.9	81.4	0.3
Queue Length 50th (ft)	282	491	172	241	75	49	152	0	24	24	0
Queue Length 95th (ft)	#430	639	#278	280	90	77	224	64	57	57	0
Internal Link Dist (ft)		580		548			436			396	
Turn Bay Length (ft)	450		375		350	225		250	200		
Base Capacity (vph)	335	3103	336	2737	1263	686	372	514	283	291	399
Starvation Cap Reductn	0	0	0	422	145	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.67	0.96	0.61	0.42	0.14	0.40	0.38	0.08	0.08	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

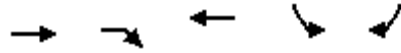
HCM Signalized Intersection Capacity Analysis

1: SW 12th Avenue & Hillsboro Blvd

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 			 								
Traffic Volume (vph)	255	1760	165	295	1300	435	90	135	180	30	10	20	
Future Volume (vph)	255	1760	165	295	1300	435	90	135	180	30	10	20	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.5	4.5		4.5	4.5	4.0	6.0	6.0	6.5	6.0	6.0	6.5	
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	0.97	1.00	1.00	0.95	0.95	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	
Satd. Flow (prot)	1770	5020		3433	5085	1583	3433	1863	1583	1681	1726	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	
Satd. Flow (perm)	1770	5020		3433	5085	1583	3433	1863	1583	1681	1726	1583	
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)	277	1913	179	321	1413	473	98	147	196	33	11	22	
RTOR Reduction (vph)	0	4	0	0	0	127	0	0	158	0	0	17	
Lane Group Flow (vph)	277	2088	0	321	1413	346	98	147	38	22	22	5	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	pm+ov	
Protected Phases	1	6		5	2	3	4	4	5	3	3	1	
Permitted Phases						2			4			3	
Actuated Green, G (s)	26.4	96.8		13.7	84.1	91.6	17.0	17.0	30.7	7.5	7.5	33.9	
Effective Green, g (s)	28.4	98.8		15.7	86.1	95.6	17.0	17.0	30.7	7.5	7.5	33.9	
Actuated g/C Ratio	0.18	0.62		0.10	0.54	0.60	0.11	0.11	0.19	0.05	0.05	0.21	
Clearance Time (s)	6.5	6.5		6.5	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.5	
Vehicle Extension (s)	1.5	3.0		2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5	
Lane Grp Cap (vph)	314	3099		336	2736	945	364	197	303	78	80	335	
v/s Ratio Prot	c0.16	c0.42		0.09	0.28	c0.02	0.03	c0.08	0.01	0.01	0.01	0.00	
v/s Ratio Perm						0.20			0.01			0.00	
v/c Ratio	0.88	0.67		0.96	0.52	0.37	0.27	0.75	0.12	0.28	0.28	0.01	
Uniform Delay, d1	64.2	20.0		71.8	23.6	16.6	65.8	69.4	53.5	73.6	73.6	49.8	
Progression Factor	1.00	1.00		0.97	0.73	0.93	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	23.4	1.2		34.0	0.6	0.1	0.1	12.6	0.1	0.7	0.7	0.0	
Delay (s)	87.5	21.2		103.5	17.9	15.6	65.9	82.0	53.6	74.4	74.3	49.8	
Level of Service	F	C		F	B	B	E	F	D	E	E	D	
Approach Delay (s)		29.0			29.9			65.8			66.2		
Approach LOS		C			C			E			E		
Intersection Summary													
HCM 2000 Control Delay			33.0									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.74										
Actuated Cycle Length (s)			160.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			72.0%									ICU Level of Service	C
Analysis Period (min)			15										
c Critical Lane Group													

Queues

2: Hillsboro Blvd & I-95 SB RAMP



Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1380	737	1462	542	721
v/c Ratio	0.27	0.47	0.50	0.82	0.69
Control Delay	0.1	2.0	16.2	55.4	45.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.1	2.0	16.2	55.4	45.4
Queue Length 50th (ft)	0	10	257	509	360
Queue Length 95th (ft)	0	7	294	583	384
Internal Link Dist (ft)	548		319		
Turn Bay Length (ft)	150				
Base Capacity (vph)	5085	1583	2900	890	1402
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	0.47	0.50	0.61	0.51

Intersection Summary

HCM Signalized Intersection Capacity Analysis

2: Hillsboro Bvd & I-95 SB RAMP



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↑		↑↑↑		↑		↑↑		
Traffic Volume (vph)	0	1270	700	0	1345	0	515	0	685	0	0
Future Volume (vph)	0	1270	700	0	1345	0	515	0	685	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	2.0		4.5		4.5		4.5		
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		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1380	737	0	1462	0	542	0	721	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1380	737	0	1462	0	542	0	721	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type		NA	Perm		NA		Prot		Prot		
Protected Phases		Free!			2		8!		3		
Permitted Phases			Free								
Actuated Green, G (s)		160.0	160.0		89.3		57.7		57.7		
Effective Green, g (s)		160.0	160.0		91.3		59.7		59.7		
Actuated g/C Ratio		1.00	1.00		0.57		0.37		0.37		
Clearance Time (s)					6.5		6.5		6.5		
Vehicle Extension (s)					3.0		2.5		2.5		
Lane Grp Cap (vph)		5085	1583		2901		660		1039		
v/s Ratio Prot		0.27			c0.29		c0.31		0.26		
v/s Ratio Perm			0.47								
v/c Ratio		0.27	0.47		0.50		0.82		0.69		
Uniform Delay, d1		0.0	0.0		20.7		45.3		42.4		
Progression Factor		1.00	1.00		0.71		1.00		1.00		
Incremental Delay, d2		0.1	0.8		0.6		7.9		1.9		
Delay (s)		0.1	0.8		15.2		53.3		44.3		
Level of Service		A	A		B		D		D		
Approach Delay (s)		0.3			15.2			48.1		0.0	
Approach LOS		A			B			D		A	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Queues

3: I-95 NB Ramp & Hillsboro Blvd















Lane Group	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1353	1571	772	554	779
v/c Ratio	0.49	0.56	0.49	0.30	0.73
Control Delay	11.2	9.6	1.8	17.7	24.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.2	9.6	1.8	17.7	24.4
Queue Length 50th (ft)	152	163	31	66	172
Queue Length 95th (ft)	201	m174	m3	84	224
Internal Link Dist (ft)	286	371			
Turn Bay Length (ft)			250	350	350
Base Capacity (vph)	2785	2785	1568	2120	1212
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.56	0.49	0.26	0.64

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.













HCM Signalized Intersection Capacity Analysis

3: I-95 NB Ramp & Hillsboro Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	↑	↑↑↑		↑↑			
Traffic Volume (vph)	0	1245	0	0	1445	710	510	0	740	0	0	0
Future Volume (vph)	0	1245	0	0	1445	710	510	0	740	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	2.0	2.0		2.0			
Lane Util. Factor		0.91			0.91	1.00	0.94		0.88			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		5085			5085	1568	4990		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		5085			5085	1568	4990		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	1353	0	0	1571	772	554	0	779	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	30	0	0	0
Lane Group Flow (vph)	0	1353	0	0	1571	772	554	0	749	0	0	0
Heavy Vehicles (%)	3%	2%	2%	2%	2%	3%	2%	3%	2%	3%	3%	3%
Turn Type		NA			NA	Free	Prot		Prot			
Protected Phases		6			2		4		4			
Permitted Phases						Free						
Actuated Green, G (s)		41.8			41.8	80.0	27.7		27.7			
Effective Green, g (s)		43.8			43.8	80.0	29.7		29.7			
Actuated g/C Ratio		0.55			0.55	1.00	0.37		0.37			
Clearance Time (s)		6.5			6.5		4.0		4.0			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		2784			2784	1568	1852		1034			
v/s Ratio Prot		0.27			0.31		0.11		0.27			
v/s Ratio Perm						0.49						
v/c Ratio		0.49			0.56	0.49	0.30		0.72			
Uniform Delay, d1		11.2			11.9	0.0	17.8		21.6			
Progression Factor		0.91			0.73	1.00	1.00		1.00			
Incremental Delay, d2		0.6			0.5	0.7	0.1		2.5			
Delay (s)		10.7			9.1	0.7	17.9		24.2			
Level of Service		B			A	A	B		C			
Approach Delay (s)		10.7			6.3			21.6			0.0	
Approach LOS		B			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			11.6			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			80.0			Sum of lost time (s)				6.5		
Intersection Capacity Utilization			57.0%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	315	1728	114	76	1837	87	435	87	147	37	5	71
v/c Ratio	0.84	0.54	0.11	0.60	0.61	0.09	1.56	0.31	0.41	0.40	0.07	0.35
Control Delay	82.7	14.7	1.3	90.9	21.5	0.2	309.3	65.3	12.1	68.6	76.6	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.7	14.7	1.3	90.9	21.5	0.2	309.3	65.3	12.1	68.6	76.6	4.7
Queue Length 50th (ft)	177	283	3	78	431	0	~577	84	0	32	5	0
Queue Length 95th (ft)	#240	360	20	137	476	0	#799	143	68	67	21	0
Internal Link Dist (ft)		660			631			513			403	
Turn Bay Length (ft)	300		150	100		200	125					340
Base Capacity (vph)	384	3223	1057	144	3031	1002	278	628	631	93	442	490
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.54	0.11	0.53	0.61	0.09	1.56	0.14	0.23	0.40	0.01	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.






























Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.













HCM Signalized Intersection Capacity Analysis

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  							
Traffic Volume (vph)	290	1590	105	70	1690	80	400	80	135	34	5	65
Future Volume (vph)	290	1590	105	70	1690	80	400	80	135	34	5	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	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	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	5085	1583	1770	5085	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.41	1.00	1.00	0.70	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	1770	5085	1583	767	1863	1583	1305	1863	1583
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)	315	1728	114	76	1837	87	435	87	147	37	5	71
RTOR Reduction (vph)	0	0	43	0	0	36	0	0	125	0	0	68
Lane Group Flow (vph)	315	1728	71	76	1837	51	435	87	22	37	5	3
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Actuated Green, G (s)	15.6	98.2	98.2	9.6	92.2	92.2	33.2	24.0	24.0	10.4	7.2	7.2
Effective Green, g (s)	17.6	100.2	100.2	11.6	94.2	94.2	33.2	24.0	24.0	10.4	7.2	7.2
Actuated g/C Ratio	0.11	0.63	0.63	0.07	0.59	0.59	0.21	0.15	0.15	0.07	0.05	0.05
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	3.0	3.0	1.5	3.0	3.0	1.5	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	377	3184	991	128	2993	931	284	279	237	94	83	71
v/s Ratio Prot	c0.09	0.34		0.04	c0.36		c0.19	0.05		0.01	0.00	
v/s Ratio Perm			0.05			0.03	c0.13		0.01	0.02		0.00
v/c Ratio	0.84	0.54	0.07	0.59	0.61	0.06	1.53	0.31	0.09	0.39	0.06	0.04
Uniform Delay, d1	69.8	16.9	11.7	71.9	21.2	14.0	61.1	60.6	58.6	71.4	73.2	73.1
Progression Factor	0.95	0.86	1.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.3	0.6	0.1	4.8	1.0	0.1	256.3	0.2	0.1	1.0	0.1	0.1
Delay (s)	78.4	15.1	20.6	76.8	22.1	14.1	317.4	60.9	58.7	72.4	73.3	73.2
Level of Service	E	B	C	E	C	B	F	E	E	E	E	E
Approach Delay (s)		24.6			23.9			227.2			73.0	
Approach LOS		C			C			F			E	
Intersection Summary												
HCM 2000 Control Delay			52.9			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			160.0	Sum of lost time (s)					21.0			
Intersection Capacity Utilization			82.3%	ICU Level of Service			E					
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: S Military Trail & SR 869/SW 10th Street































												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	304	918	130	342	685	467	168	652	576	484	489	342
v/c Ratio	0.75	0.71	0.16	0.68	0.49	0.49	0.65	0.89	0.85	0.88	0.47	0.49
Control Delay	88.6	53.7	1.7	93.1	24.2	9.1	92.6	84.6	52.0	90.8	54.0	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.6	53.7	1.7	93.1	24.2	9.1	92.6	84.6	52.0	90.8	54.0	8.1
Queue Length 50th (ft)	181	488	0	159	306	341	101	397	525	290	249	14
Queue Length 95th (ft)	236	624	18	245	308	4	145	#483	646	#370	309	102
Internal Link Dist (ft)		620			1082			752			457	
Turn Bay Length (ft)	550		500	550		500	300		300	650		650
Base Capacity (vph)	448	1302	834	657	1400	957	276	749	747	574	1055	700
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.71	0.16	0.52	0.49	0.49	0.61	0.87	0.77	0.84	0.46	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

1: S Military Trail & SR 869/SW 10th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 		 		
Traffic Volume (vph)	280	845	120	315	630	430	155	600	530	445	450	315
Future Volume (vph)	280	845	120	315	630	430	155	600	530	445	450	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	4.0	5.9	5.5	4.0	5.9	5.9	5.9	5.5	5.9	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
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	3433	3539	1583	3433	3539	1583	3433	3539	1583
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	3433	3539	1583	3433	3539	1583	3433	3539	1583
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)	304	918	130	342	685	467	168	652	576	484	489	342
RTOR Reduction (vph)	0	0	72	0	0	33	0	0	74	0	0	230
Lane Group Flow (vph)	304	918	58	342	685	434	168	652	502	484	489	112
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	6	7	5	2	3	7	4	5	3	8	
Permitted Phases			6			2			4			8
Actuated Green, G (s)	19.3	64.2	75.9	24.3	69.2	96.2	11.7	35.2	59.5	27.0	50.5	50.5
Effective Green, g (s)	21.3	66.2	79.9	26.3	71.2	100.2	13.7	37.2	63.5	29.0	52.5	52.5
Actuated g/C Ratio	0.12	0.37	0.44	0.15	0.40	0.56	0.08	0.21	0.35	0.16	0.29	0.29
Clearance Time (s)	7.5	6.0	7.9	7.5	6.0	7.9	7.9	7.9	7.5	7.9	7.9	7.9
Vehicle Extension (s)	2.0	3.0	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0	3.0	3.0
Lane Grp Cap (vph)	406	1301	702	501	1399	881	261	731	558	553	1032	461
v/s Ratio Prot	0.09	c0.26	0.01	0.10	0.19	c0.08	0.05	0.18	c0.13	c0.14	0.14	
v/s Ratio Perm			0.03			0.19			0.19			0.07
v/c Ratio	0.75	0.71	0.08	0.68	0.49	0.49	0.64	0.89	0.90	0.88	0.47	0.24
Uniform Delay, d1	76.8	48.6	28.9	72.9	40.8	24.4	80.8	69.4	55.2	73.7	52.4	48.6
Progression Factor	1.00	1.00	1.00	1.20	0.55	0.40	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.5	3.2	0.0	2.6	1.1	0.1	4.0	13.2	17.2	14.0	0.3	0.3
Delay (s)	83.3	51.8	28.9	90.2	23.7	9.8	84.8	82.6	72.5	87.7	52.7	48.9
Level of Service	F	D	C	F	C	A	F	F	E	F	D	D
Approach Delay (s)		56.7			34.6			78.7			64.6	
Approach LOS		E			C			E			E	
Intersection Summary												
HCM 2000 Control Delay			58.1				HCM 2000 Level of Service				E	
HCM 2000 Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)				21.3	
Intersection Capacity Utilization			81.7%				ICU Level of Service				D	
Analysis Period (min)			15									

c Critical Lane Group

Queues

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

































Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	321	2071	424	1538	402	35	36	109	54	92
v/c Ratio	0.47	0.57	0.77	0.56	0.40	0.25	0.25	0.22	0.53	0.14
Control Delay	60.7	23.0	85.5	18.5	2.5	82.2	82.2	8.2	99.6	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.7	23.0	85.5	18.5	2.5	82.2	82.2	8.2	99.6	7.9
Queue Length 50th (ft)	148	358	246	336	31	41	43	0	63	0
Queue Length 95th (ft)	m207	455	312	279	11	86	87	50	113	26
Internal Link Dist (ft)		818		925			616		185	
Turn Bay Length (ft)	700		750		750			150		
Base Capacity (vph)	679	3603	705	2759	1011	158	161	534	150	709
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.57	0.60	0.56	0.40	0.22	0.22	0.20	0.36	0.13

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

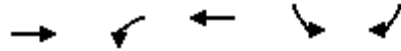
HCM Signalized Intersection Capacity Analysis

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  						 	 
Traffic Volume (vph)	295	1410	495	390	1415	370	55	10	100	40	10	85
Future Volume (vph)	295	1410	495	390	1415	370	55	10	100	40	10	85
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	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	0.97	0.86		0.97	0.91	1.00	0.95	0.95	1.00		1.00	0.88
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	0.97	1.00		0.96	1.00
Satd. Flow (prot)	3367	6158		3433	5085	1524	1681	1710	1583		1593	2030
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	0.97	1.00		0.96	1.00
Satd. Flow (perm)	3367	6158		3433	5085	1524	1681	1710	1583		1593	2030
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)	321	1533	538	424	1538	402	60	11	109	43	11	92
RTOR Reduction (vph)	0	29	0	0	0	185	0	0	80	0	0	66
Lane Group Flow (vph)	321	2042	0	424	1538	217	35	36	29	0	54	26
Heavy Vehicles (%)	4%	2%	2%	2%	2%	6%	2%	2%	2%	18%	2%	40%
Turn Type	Prot	NA		Prot	NA	Prot	Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	1	6		5	2	2	3	3	3 5	4	4	4 1
Permitted Phases												
Actuated Green, G (s)	34.3	102.5		27.0	95.2	95.2	15.0	15.0	48.0		11.5	51.8
Effective Green, g (s)	36.3	104.5		29.0	97.2	97.2	15.0	15.0	48.0		11.5	51.8
Actuated g/C Ratio	0.20	0.58		0.16	0.54	0.54	0.08	0.08	0.27		0.06	0.29
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	1.5	3.0		2.5	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	679	3575		553	2745	822	140	142	422		101	584
v/s Ratio Prot	0.10	c0.33		c0.12	0.30	0.14	0.02	c0.02	0.02		c0.03	0.01
v/s Ratio Perm												
v/c Ratio	0.47	0.57		0.77	0.56	0.26	0.25	0.25	0.07		0.53	0.05
Uniform Delay, d1	63.4	23.7		72.3	27.3	22.2	77.2	77.3	49.3		81.7	46.3
Progression Factor	0.93	0.95		1.08	0.64	0.81	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.5		5.0	0.7	0.6	0.9	0.9	0.1		5.4	0.0
Delay (s)	58.8	22.9		82.9	18.2	18.6	78.2	78.2	49.4		87.0	46.3
Level of Service	E	C		F	B	B	E	E	D		F	D
Approach Delay (s)		27.7			29.8			60.7			61.3	
Approach LOS		C			C			E			E	
Intersection Summary												
HCM 2000 Control Delay			30.9				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)			22.0		
Intersection Capacity Utilization			64.0%				ICU Level of Service				C	
Analysis Period (min)			15									
c	Critical Lane Group											

Queues

3: SR 869/SW 10th Street & I-95 SB Off-Ramp




















Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	1672	626	1647	316	695
v/c Ratio	0.77	0.60	0.52	0.28	0.75
Control Delay	41.5	67.4	19.9	45.2	59.8
Queue Delay	0.0	0.0	0.2	0.0	0.0
Total Delay	41.5	67.4	20.1	45.2	59.8
Queue Length 50th (ft)	375	356	222	142	417
Queue Length 95th (ft)	441	428	609	186	506
Internal Link Dist (ft)	925		307		
Turn Bay Length (ft)		500		500	500
Base Capacity (vph)	2174	1125	3149	1136	922
Starvation Cap Reductn	0	0	576	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.77	0.56	0.64	0.28	0.75

Intersection Summary

HCM Signalized Intersection Capacity Analysis






3: SR 869/SW 10th Street & I-95 SB Off-Ramp

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1185	365	595	1515	0	0	0	0	300	0	660
Future Volume (vph)	0	1185	365	595	1515	0	0	0	0	300	0	660
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.5					4.4		4.4
Lane Util. Factor		0.81		0.97	0.91					0.97		0.88
Frt		0.97		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		7284		3433	5085					3433		2787
Flt Permitted		1.00		0.95	1.00					0.95		1.00
Satd. Flow (perm)		7284		3433	5085					3433		2787
Peak-hour factor, PHF	0.92	0.92	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	1288	384	626	1647	0	0	0	0	316	0	695
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1643	0	626	1647	0	0	0	0	316	0	695
Turn Type		NA		Prot	NA					Prot		Prot
Protected Phases		6		5 4	2 4					3		3
Permitted Phases												
Actuated Green, G (s)		51.0		53.0	109.5					57.6		57.6
Effective Green, g (s)		53.0		50.6	107.1					59.6		59.6
Actuated g/C Ratio		0.29		0.28	0.59					0.33		0.33
Clearance Time (s)		6.0								6.4		6.4
Vehicle Extension (s)		3.0								2.0		2.0
Lane Grp Cap (vph)		2144		965	3025					1136		922
v/s Ratio Prot		c0.23		c0.18	0.32					0.09		c0.25
v/s Ratio Perm												
v/c Ratio		0.77		0.65	0.54					0.28		0.75
Uniform Delay, d1		57.9		56.9	21.8					44.4		53.7
Progression Factor		0.69		1.22	1.00					1.00		1.00
Incremental Delay, d2		2.3		1.4	0.2					0.0		3.1
Delay (s)		42.4		70.7	21.9					44.4		56.8
Level of Service		D		E	C					D		E
Approach Delay (s)		42.4			35.4			0.0			52.9	
Approach LOS		D			D			A			D	
Intersection Summary												
HCM 2000 Control Delay			41.3			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)				16.8		
Intersection Capacity Utilization			59.8%			ICU Level of Service				B		
Analysis Period (min)			15									

c Critical Lane Group

Queues

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street

					
Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	1168	432	1967	600	442
v/c Ratio	0.35	0.16	0.35	0.56	0.57
Control Delay	1.2	0.1	4.5	65.5	66.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	1.2	0.1	4.5	65.5	66.7
Queue Length 50th (ft)	11	0	82	227	207
Queue Length 95th (ft)	12	0	58	272	260
Internal Link Dist (ft)	248		630	1225	
Turn Bay Length (ft)		700		410	430
Base Capacity (vph)	3305	2787	5553	1070	774
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.16	0.35	0.56	0.57
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗↘		↑↑↑↑	↖↗	↗↘
Traffic Volume (vph)	1075	410	0	1810	570	420
Future Volume (vph)	1075	410	0	1810	570	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	2.0		4.5	4.4	4.4
Lane Util. Factor	0.91	0.88		0.81	0.94	0.76
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	2787		7544	4990	3610
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	5085	2787		7544	4990	3610
Peak-hour factor, PHF	0.92	0.95	0.92	0.92	0.95	0.95
Adj. Flow (vph)	1168	432	0	1967	600	442
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1168	432	0	1967	600	442
Turn Type	NA	Free		NA	Prot	Prot
Protected Phases	6 3			2 3	4	4
Permitted Phases		Free				
Actuated Green, G (s)	114.6	180.0		130.6	36.6	36.6
Effective Green, g (s)	116.6	180.0		132.6	38.6	38.6
Actuated g/C Ratio	0.65	1.00		0.74	0.21	0.21
Clearance Time (s)					6.4	6.4
Vehicle Extension (s)					3.5	3.5
Lane Grp Cap (vph)	3293	2787		5557	1070	774
v/s Ratio Prot	c0.23			c0.26	0.12	c0.12
v/s Ratio Perm		0.16				
v/c Ratio	0.35	0.16		0.35	0.56	0.57
Uniform Delay, d1	14.5	0.0		8.4	63.1	63.3
Progression Factor	0.07	1.00		0.51	1.00	1.00
Incremental Delay, d2	0.0	0.1		0.0	0.7	1.1
Delay (s)	1.1	0.1		4.3	63.9	64.4
Level of Service	A	A		A	E	E
Approach Delay (s)	0.8			4.3	64.1	
Approach LOS	A			A	E	













Intersection Summary

HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Queues

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	207	1174	245	114	1424	92	234	136	141	245	163	310
v/c Ratio	0.65	0.40	0.24	0.53	0.51	0.10	0.78	0.32	0.45	0.68	0.78	0.77
Control Delay	89.0	20.0	4.8	90.8	27.3	4.7	71.7	73.1	13.6	64.4	100.6	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.0	20.0	4.8	90.8	27.3	4.7	71.7	73.1	13.6	64.4	100.6	28.1
Queue Length 50th (ft)	131	162	36	68	384	1	230	78	0	243	191	61
Queue Length 95th (ft)	161	439	112	106	497	37	300	111	67	314	267	176
Internal Link Dist (ft)		630			1233			1112			1327	
Turn Bay Length (ft)	300		300	200		200	260		260	170		170
Base Capacity (vph)	392	2958	1023	240	2806	914	325	812	471	377	406	544
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.40	0.24	0.47	0.51	0.10	0.72	0.17	0.30	0.65	0.40	0.57
Intersection Summary												

HCM Signalized Intersection Capacity Analysis

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	1080	225	105	1310	85	215	125	130	225	150	285
Future Volume (vph)	190	1080	225	105	1310	85	215	125	130	225	150	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4	4.4	4.4	4.4	4.4	5.7	5.7	5.7	5.7	5.7	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00
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	5085	1583	3433	5085	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.31	1.00	1.00	0.67	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	576	3539	1583	1240	1863	1583
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	1174	245	114	1424	92	234	136	141	245	163	310
RTOR Reduction (vph)	0	0	102	0	0	40	0	0	124	0	0	226
Lane Group Flow (vph)	207	1174	143	114	1424	52	234	136	17	245	163	84
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Actuated Green, G (s)	14.7	102.7	102.7	9.3	97.3	97.3	45.0	21.6	21.6	42.6	20.4	20.4
Effective Green, g (s)	16.7	104.7	104.7	11.3	99.3	99.3	45.0	21.6	21.6	42.6	20.4	20.4
Actuated g/C Ratio	0.09	0.58	0.58	0.06	0.55	0.55	0.25	0.12	0.12	0.24	0.11	0.11
Clearance Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	5.7	5.7	5.7	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0	3.0	1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	318	2957	920	215	2805	873	299	424	189	358	211	179
v/s Ratio Prot	c0.06	0.23		0.03	c0.28		c0.10	0.04		0.08	0.09	
v/s Ratio Perm			0.09			0.03	c0.09		0.01	0.08		0.05
v/c Ratio	0.65	0.40	0.15	0.53	0.51	0.06	0.78	0.32	0.09	0.68	0.77	0.47
Uniform Delay, d1	78.8	20.5	17.3	81.8	25.1	18.7	58.8	72.5	70.5	60.9	77.5	74.7
Progression Factor	1.01	0.91	1.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.4	0.4	0.3	1.3	0.1	0.0	11.6	0.2	0.1	4.3	14.7	0.7
Delay (s)	83.4	18.9	33.5	83.0	25.3	18.7	70.4	72.6	70.5	65.1	92.2	75.4
Level of Service	F	B	C	F	C	B	E	E	E	E	F	E
Approach Delay (s)		29.3			28.9			71.0			75.7	
Approach LOS		C			C			E			E	

Intersection Summary

HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	20.2
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Queues

1: NW 5th Terr & Sample Road



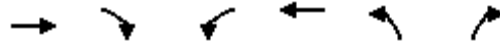
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2288	152	1810	147	190
v/c Ratio	0.54	0.64	0.47	0.68	0.53
Control Delay	17.0	62.0	1.6	65.1	11.8
Queue Delay	0.0	1.6	0.1	0.0	0.0
Total Delay	17.0	63.6	1.7	65.1	11.8
Queue Length 50th (ft)	254	84	26	111	0
Queue Length 95th (ft)	323	#154	27	170	64
Internal Link Dist (ft)	575		175	531	
Turn Bay Length (ft)					
Base Capacity (vph)	4265	236	3824	545	619
Starvation Cap Reductn	0	19	458	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.70	0.54	0.27	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

1: NW 5th Terr & Sample Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑		↵	↑↑↑	↵	↵
Traffic Volume (vph)	2000	105	140	1665	135	175
Future Volume (vph)	2000	105	140	1665	135	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	9.0	9.0
Lane Util. Factor	0.81		1.00	0.91	1.00	1.00
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)	7488		1770	5085	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	7488		1770	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2174	114	152	1810	147	190
RTOR Reduction (vph)	5	0	0	0	0	167
Lane Group Flow (vph)	2283	0	152	1810	147	23
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2 3		1	1 2 3	4	
Permitted Phases					4	4
Actuated Green, G (s)	66.2		14.0	88.2	14.8	14.8
Effective Green, g (s)	68.2		16.0	90.2	14.8	14.8
Actuated g/C Ratio	0.57		0.13	0.75	0.12	0.12
Clearance Time (s)			8.0		9.0	9.0
Vehicle Extension (s)			1.5		2.0	2.0
Lane Grp Cap (vph)	4255		236	3822	218	195
v/s Ratio Prot	c0.30		c0.09	0.36	c0.08	
v/s Ratio Perm						0.01
v/c Ratio	0.54		0.64	0.47	0.67	0.12
Uniform Delay, d1	16.1		49.3	5.7	50.3	46.8
Progression Factor	1.00		1.00	0.20	1.00	1.00
Incremental Delay, d2	0.1		4.1	0.0	6.3	0.1
Delay (s)	16.2		53.6	1.2	56.6	46.9
Level of Service	B		D	A	E	D
Approach Delay (s)	16.2			5.2	51.1	
Approach LOS	B			A	D	

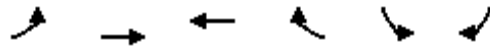
Intersection Summary

HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Queues

2: Sample Road & NW 5th Ave



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	92	2272	1799	82	250	163
v/c Ratio	0.70	0.47	0.45	0.08	0.59	0.49
Control Delay	63.6	2.4	9.8	1.3	55.0	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.6	2.4	9.8	1.3	55.0	13.2
Queue Length 50th (ft)	70	26	179	3	95	5
Queue Length 95th (ft)	#152	43	242	m4	130	64
Internal Link Dist (ft)		175	1004		271	
Turn Bay Length (ft)				450		
Base Capacity (vph)	132	4818	4017	1023	1058	595
Starvation Cap Reductn	0	529	0	0	0	0
Spillback Cap Reductn	0	0	14	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.53	0.45	0.08	0.24	0.27

Intersection Summary

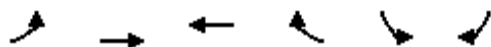
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Sample Road & NW 5th Ave



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	85	2090	1655	75	230	150
Future Volume (vph)	85	2090	1655	75	230	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	9.0	9.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.97	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	6408	6408	1583	3433	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	6408	6408	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	92	2272	1799	82	250	163
RTOR Reduction (vph)	0	0	0	31	0	137
Lane Group Flow (vph)	92	2272	1799	51	250	26
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	3	1 2 3	1 2		4	
Permitted Phases				1 2		4
Actuated Green, G (s)	7.0	88.2	73.2	73.2	14.8	14.8
Effective Green, g (s)	9.0	90.2	75.2	75.2	14.8	14.8
Actuated g/C Ratio	0.08	0.75	0.63	0.63	0.12	0.12
Clearance Time (s)	8.0				9.0	9.0
Vehicle Extension (s)	1.5				2.0	2.0
Lane Grp Cap (vph)	132	4816	4015	992	423	195
v/s Ratio Prot	c0.05	c0.35	0.28		c0.07	
v/s Ratio Perm				0.03		0.02
v/c Ratio	0.70	0.47	0.45	0.05	0.59	0.13
Uniform Delay, d1	54.2	5.7	11.6	8.6	49.7	46.9
Progression Factor	0.72	0.34	0.78	0.50	1.00	1.00
Incremental Delay, d2	10.6	0.0	0.0	0.0	1.5	0.1
Delay (s)	49.5	2.0	9.1	4.3	51.2	47.0
Level of Service	D	A	A	A	D	D
Approach Delay (s)		3.8	8.9		49.6	
Approach LOS		A	A		D	

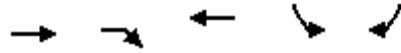
Intersection Summary

HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Queues

3: Sample Road & I-95 SB RAMP














Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1554	937	1391	442	474
v/c Ratio	0.42	0.59	0.48	0.52	0.69
Control Delay	5.4	7.6	6.9	21.9	26.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	7.6	6.9	21.9	26.4
Queue Length 50th (ft)	74	232	107	70	86
Queue Length 95th (ft)	131	356	146	108	135
Internal Link Dist (ft)	1004		259		
Turn Bay Length (ft)		250			
Base Capacity (vph)	3658	1583	2903	886	719
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.59	0.48	0.50	0.66

Intersection Summary

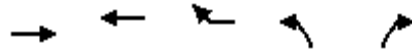
HCM Signalized Intersection Capacity Analysis

3: Sample Road & I-95 SB RAMP

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↗		↑↑↑		↘↘		↘↘		
Traffic Volume (vph)	0	1430	890	0	1280	0	420	0	450	0	0
Future Volume (vph)	0	1430	890	0	1280	0	420	0	450	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	2.0		5.5		5.5		5.5		
Lane Util. Factor		0.86	1.00		0.91		0.97		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)		6408	1583		5085		3433		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		6408	1583		5085		3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1554	937	0	1391	0	442	0	474	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1554	937	0	1391	0	442	0	474	0	0
Turn Type		NA	Free		NA		Prot		Prot		
Protected Phases		6			2		3		3		
Permitted Phases			Free								
Actuated Green, G (s)		32.3	60.0		32.3		12.7		12.7		
Effective Green, g (s)		34.3	60.0		34.3		14.7		14.7		
Actuated g/C Ratio		0.57	1.00		0.57		0.24		0.24		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		3663	1583		2906		841		682		
v/s Ratio Prot		0.24			0.27		0.13		0.17		
v/s Ratio Perm			c0.59								
v/c Ratio		0.42	0.59		0.48		0.53		0.70		
Uniform Delay, d1		7.3	0.0		7.6		19.6		20.6		
Progression Factor		0.68	1.00		0.83		1.00		1.00		
Incremental Delay, d2		0.3	1.5		0.5		0.5		2.8		
Delay (s)		5.3	1.5		6.7		20.1		23.5		
Level of Service		A	A		A		C		C		
Approach Delay (s)		3.8			6.7			21.8		0.0	
Approach LOS		A			A			C		A	
Intersection Summary											
HCM 2000 Control Delay			8.1				HCM 2000 Level of Service		A		
HCM 2000 Volume to Capacity ratio			0.72								
Actuated Cycle Length (s)			60.0				Sum of lost time (s)		11.0		
Intersection Capacity Utilization			57.8%				ICU Level of Service		B		
Analysis Period (min)			15								

c Critical Lane Group

Queues














Lane Group	EBT	WBT	WBR	NBL2	NBR
Lane Group Flow (vph)	1130	1848	453	484	347
v/c Ratio	0.38	0.62	0.29	0.62	0.55
Control Delay	5.1	4.6	0.2	24.5	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	4.6	0.2	24.5	23.8
Queue Length 50th (ft)	82	91	0	79	61
Queue Length 95th (ft)	56	m143	m0	121	101
Internal Link Dist (ft)	270	1155			
Turn Bay Length (ft)			250		
Base Capacity (vph)	2991	2991	1583	829	673
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.62	0.29	0.58	0.52

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: I-95 NB RAMP & Sample Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	
Lane Configurations		↑↑↑			↑↑↑	↑	↑↑		↑↑			
Traffic Volume (vph)	0	1040	0	0	1700	430	460	0	330	0	0	
Future Volume (vph)	0	1040	0	0	1700	430	460	0	330	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.5			5.5	2.0	5.5		5.5			
Lane Util. Factor		0.91			0.91	1.00	0.97		0.88			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		5085			5085	1583	3433		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		5085			5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.92	0.95	0.92	0.92	
Adj. Flow (vph)	0	1130	0	0	1848	453	484	0	347	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	1130	0	0	1848	453	484	0	347	0	0	
Turn Type		NA			NA	Free	Prot		Prot			
Protected Phases		6			2		4		4			
Permitted Phases						Free						
Actuated Green, G (s)		33.3			33.3	60.0	11.7		11.7			
Effective Green, g (s)		35.3			35.3	60.0	13.7		13.7			
Actuated g/C Ratio		0.59			0.59	1.00	0.23		0.23			
Clearance Time (s)		7.5			7.5		7.5		7.5			
Vehicle Extension (s)		3.0			3.0		2.5		2.5			
Lane Grp Cap (vph)		2991			2991	1583	783		636			
v/s Ratio Prot		0.22			0.36		0.14		0.12			
v/s Ratio Perm						0.29						
v/c Ratio		0.38			0.62	0.29	0.62		0.55			
Uniform Delay, d1		6.5			8.0	0.0	20.8		20.4			
Progression Factor		0.71			0.51	1.00	1.00		1.00			
Incremental Delay, d2		0.3			0.4	0.2	1.2		0.8			
Delay (s)		5.0			4.5	0.2	22.0		21.2			
Level of Service		A			A	A	C		C			
Approach Delay (s)		5.0			3.7			21.7		0.0		
Approach LOS		A			A			C		A		
Intersection Summary												
HCM 2000 Control Delay			7.5								HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.62									
Actuated Cycle Length (s)			60.0								Sum of lost time (s)	11.0
Intersection Capacity Utilization			53.5%								ICU Level of Service	A
Analysis Period (min)			15									

c Critical Lane Group

Queues

5: NE 3rd Ave & Sample Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	386	1103	49	1658	212	217	65	92	212	516
v/c Ratio	0.91	0.48	0.43	0.87	0.63	0.43	0.12	0.28	0.44	0.98
Control Delay	71.5	18.4	66.2	40.8	40.4	39.2	0.5	29.1	40.1	66.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.5	18.4	66.2	40.8	40.4	39.2	0.5	29.1	40.1	66.1
Queue Length 50th (ft)	147	202	37	433	117	138	0	47	136	297
Queue Length 95th (ft)	#243	260	79	501	183	214	0	86	212	#526
Internal Link Dist (ft)		1155		834		912			742	
Turn Bay Length (ft)	550		490		250		225	200		
Base Capacity (vph)	425	2284	116	1899	335	507	543	327	492	531
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.48	0.42	0.87	0.63	0.43	0.12	0.28	0.43	0.97

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: NE 3rd Ave & Sample Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	355	900	115	45	1460	65	195	200	60	85	195	475
Future Volume (vph)	355	900	115	45	1460	65	195	200	60	85	195	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91		1.00	0.91		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)	3400	4950		1752	5004		1752	1845	1568	1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00		0.49	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	3400	4950		1752	5004		913	1845	1568	967	1845	1568
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)	386	978	125	49	1587	71	212	217	65	92	212	516
RTOR Reduction (vph)	0	13	0	0	4	0	0	0	47	0	0	114
Lane Group Flow (vph)	386	1090	0	49	1654	0	212	217	18	92	212	402
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	13.0	51.6		4.8	43.4		38.6	32.6	32.6	36.6	31.6	31.6
Effective Green, g (s)	15.0	53.6		6.8	45.4		38.6	32.6	32.6	36.6	31.6	31.6
Actuated g/C Ratio	0.12	0.45		0.06	0.38		0.32	0.27	0.27	0.31	0.26	0.26
Clearance Time (s)	7.0	7.0		7.0	7.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	425	2211		99	1893		335	501	425	327	485	412
v/s Ratio Prot	c0.11	0.22		0.03	c0.33		c0.03	0.12		0.01	0.11	
v/s Ratio Perm							0.17		0.01	0.07		c0.26
v/c Ratio	0.91	0.49		0.49	0.87		0.63	0.43	0.04	0.28	0.44	0.98
Uniform Delay, d1	51.8	23.6		54.9	34.6		34.8	36.1	32.2	30.7	36.8	43.8
Progression Factor	0.89	0.77		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	21.1	0.7		1.4	6.0		2.9	0.2	0.0	0.2	0.2	37.4
Delay (s)	67.5	18.9		56.4	40.6		37.6	36.3	32.2	30.9	37.0	81.2
Level of Service	E	B		E	D		D	D	C	C	D	F
Approach Delay (s)		31.5			41.1			36.3			64.1	
Approach LOS		C			D			D			E	
Intersection Summary												
HCM 2000 Control Delay			41.6				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			22.0		
Intersection Capacity Utilization			84.0%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: SW 12th Avenue & Hillsboro Blvd



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	43	2016	250	2190	54	223	11	332	259	263	337
v/c Ratio	0.42	0.83	1.25	0.90	0.05	0.64	0.06	0.89	0.84	0.83	0.68
Control Delay	67.2	32.0	197.2	24.3	0.2	60.0	47.6	59.8	69.1	68.1	18.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.2	32.0	197.2	24.3	0.2	60.0	47.6	59.8	69.1	68.1	18.5
Queue Length 50th (ft)	33	484	~128	445	1	87	8	192	204	207	72
Queue Length 95th (ft)	72	#676	#213	#776	m0	124	26	#324	295	297	146
Internal Link Dist (ft)		580		548			436			396	
Turn Bay Length (ft)	450		375		350	225		250	200		
Base Capacity (vph)	103	2422	200	2441	1222	915	496	375	378	386	498
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.83	1.25	0.90	0.04	0.24	0.02	0.89	0.69	0.68	0.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

































95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

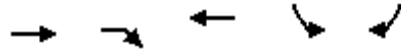
HCM Signalized Intersection Capacity Analysis

1: SW 12th Avenue & Hillsboro Blvd

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		  		 	  		 		 		 	 	
Traffic Volume (vph)	40	1725	130	230	2015	50	205	10	305	390	90	310	
Future Volume (vph)	40	1725	130	230	2015	50	205	10	305	390	90	310	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.5	4.5		4.5	4.5	4.0	6.0	6.0	6.5	6.0	6.0	6.5	
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	0.97	1.00	1.00	0.95	0.95	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	
Satd. Flow (prot)	1770	5032		3433	5085	1583	3433	1863	1583	1681	1716	1583	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	
Satd. Flow (perm)	1770	5032		3433	5085	1583	3433	1863	1583	1681	1716	1583	
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	1875	141	250	2190	54	223	11	332	424	98	337	
RTOR Reduction (vph)	0	5	0	0	0	17	0	0	74	0	0	145	
Lane Group Flow (vph)	43	2011	0	250	2190	37	223	11	258	259	263	192	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	pm+ov	
Protected Phases	1	6		5	2	3	4	4	5	3	3	1	
Permitted Phases						2			4			3	
Actuated Green, G (s)	5.0	55.6		5.0	55.6	77.8	12.2	12.2	17.2	22.2	22.2	27.2	
Effective Green, g (s)	7.0	57.6		7.0	57.6	81.8	12.2	12.2	17.2	22.2	22.2	27.2	
Actuated g/C Ratio	0.06	0.48		0.06	0.48	0.68	0.10	0.10	0.14	0.18	0.18	0.23	
Clearance Time (s)	6.5	6.5		6.5	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.5	
Vehicle Extension (s)	1.5	3.0		2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5	
Lane Grp Cap (vph)	103	2415		200	2440	1079	349	189	226	310	317	358	
v/s Ratio Prot	0.02	0.40		c0.07	c0.43	0.01	0.06	0.01	c0.05	c0.15	0.15	0.02	
v/s Ratio Perm						0.02			0.12			0.10	
v/c Ratio	0.42	0.83		1.25	0.90	0.03	0.64	0.06	1.14	0.84	0.83	0.54	
Uniform Delay, d1	54.5	27.0		56.5	28.5	6.2	51.8	48.7	51.4	47.1	47.1	40.8	
Progression Factor	1.00	1.00		1.33	0.62	0.23	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.0	3.5		140.2	4.5	0.0	2.8	0.0	103.8	16.7	15.5	0.8	
Delay (s)	55.5	30.6		215.5	22.3	1.4	54.6	48.8	155.2	63.8	62.6	41.6	
Level of Service	E	C		F	C	A	D	D	F	E	E	D	
Approach Delay (s)		31.1			41.2			113.5			54.7		
Approach LOS		C			D			F			D		
Intersection Summary													
HCM 2000 Control Delay			46.5									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.96										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	23.0
Intersection Capacity Utilization			82.4%									ICU Level of Service	E
Analysis Period (min)			15										
c	Critical Lane Group												

Queues

2: Hillsboro Bvd & I-95 SB RAMP














Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1848	758	1946	563	532
v/c Ratio	0.36	0.48	0.70	0.84	0.50
Control Delay	0.1	0.8	17.4	45.7	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.1	0.8	17.4	45.7	29.7
Queue Length 50th (ft)	0	0	275	388	175
Queue Length 95th (ft)	0	m0	418	486	209
Internal Link Dist (ft)	548		319		
Turn Bay Length (ft)	150				
Base Capacity (vph)	5085	1583	2780	789	1242
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.48	0.70	0.71	0.43

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Hillsboro Bvd & I-95 SB RAMP

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↑		↑↑↑		↑		↑↑		
Traffic Volume (vph)	0	1700	720	0	1790	0	535	0	505	0	0
Future Volume (vph)	0	1700	720	0	1790	0	535	0	505	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	2.0		4.5		4.5		4.5		
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		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1848	758	0	1946	0	563	0	532	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1848	758	0	1946	0	563	0	532	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type		NA	Perm		NA		Prot		Prot		
Protected Phases		Free!			2		8!		3		
Permitted Phases			Free								
Actuated Green, G (s)		120.0	120.0		63.6		43.4		43.4		
Effective Green, g (s)		120.0	120.0		65.6		45.4		45.4		
Actuated g/C Ratio		1.00	1.00		0.55		0.38		0.38		
Clearance Time (s)					6.5		6.5		6.5		
Vehicle Extension (s)					3.0		2.5		2.5		
Lane Grp Cap (vph)		5085	1583		2779		669		1054		
v/s Ratio Prot		0.36			c0.38		c0.32		0.19		
v/s Ratio Perm			0.48								
v/c Ratio		0.36	0.48		0.70		0.84		0.50		
Uniform Delay, d1		0.0	0.0		20.0		34.0		28.7		
Progression Factor		1.00	1.00		0.77		1.00		1.00		
Incremental Delay, d2		0.1	0.6		1.1		9.3		0.3		
Delay (s)		0.1	0.6		16.4		43.3		28.9		
Level of Service		A	A		B		D		C		
Approach Delay (s)		0.2			16.4			36.3		0.0	
Approach LOS		A			B			D		A	
Intersection Summary											
HCM 2000 Control Delay			12.8		HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.76								
Actuated Cycle Length (s)			120.0		Sum of lost time (s)				9.0		
Intersection Capacity Utilization			59.8%		ICU Level of Service				B		
Analysis Period (min)			15								
! Phase conflict between lane groups.											
c Critical Lane Group											

Queues

3: I-95 NB Ramp & Hillsboro Blvd



Lane Group	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1766	2163	674	598	716
v/c Ratio	0.60	0.73	0.43	0.39	0.79
Control Delay	10.4	10.0	0.5	17.0	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	10.0	0.5	17.0	24.9
Queue Length 50th (ft)	168	273	0	58	119
Queue Length 95th (ft)	189	m242	m0	84	#193
Internal Link Dist (ft)	286	371			
Turn Bay Length (ft)			250	350	350
Base Capacity (vph)	2960	2960	1568	1580	926
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.73	0.43	0.38	0.77

Intersection Summary













95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.













HCM Signalized Intersection Capacity Analysis

3: I-95 NB Ramp & Hillsboro Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	↑	↑↑↑		↑↑			
Traffic Volume (vph)	0	1625	0	0	1990	620	550	0	680	0	0	0
Future Volume (vph)	0	1625	0	0	1990	620	550	0	680	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	2.0	2.0		2.0			
Lane Util. Factor		0.91			0.91	1.00	0.94		0.88			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		5085			5085	1568	4990		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		5085			5085	1568	4990		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	1766	0	0	2163	674	598	0	716	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	44	0	0	0
Lane Group Flow (vph)	0	1766	0	0	2163	674	598	0	672	0	0	0
Heavy Vehicles (%)	3%	2%	2%	2%	2%	3%	2%	3%	2%	3%	3%	3%
Turn Type		NA			NA	Free	Prot		Prot			
Protected Phases		6			2		4		4			
Permitted Phases						Free						
Actuated Green, G (s)		32.9			32.9	60.0	16.6		16.6			
Effective Green, g (s)		34.9			34.9	60.0	18.6		18.6			
Actuated g/C Ratio		0.58			0.58	1.00	0.31		0.31			
Clearance Time (s)		6.5			6.5		4.0		4.0			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		2957			2957	1568	1546		863			
v/s Ratio Prot		0.35			c0.43		0.12		c0.24			
v/s Ratio Perm						0.43						
v/c Ratio		0.60			0.73	0.43	0.39		0.78			
Uniform Delay, d1		8.0			9.1	0.0	16.2		18.8			
Progression Factor		1.18			0.97	1.00	1.00		1.00			
Incremental Delay, d2		0.8			1.0	0.5	0.2		4.5			
Delay (s)		10.3			9.9	0.5	16.4		23.3			
Level of Service		B			A	A	B		C			
Approach Delay (s)		10.3			7.7			20.2			0.0	
Approach LOS		B			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			11.2			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)				6.5		
Intersection Capacity Utilization			62.3%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd































												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	87	2141	277	130	2239	33	288	11	125	37	54	310
v/c Ratio	0.43	0.75	0.29	0.99	0.76	0.03	1.05	0.03	0.30	0.14	0.19	0.85
Control Delay	66.1	15.4	4.2	132.5	22.4	0.1	112.4	38.3	6.1	33.5	42.4	46.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.1	15.4	4.2	132.5	22.4	0.1	112.4	38.3	6.1	33.5	42.4	46.3
Queue Length 50th (ft)	34	405	26	102	450	0	~241	7	0	23	37	129
Queue Length 95th (ft)	m51	507	m97	#233	633	0	#306	22	36	46	68	215
Internal Link Dist (ft)		660			631			513			403	
Turn Bay Length (ft)	300		150	100		200	125					340
Base Capacity (vph)	200	2872	955	131	2952	978	274	589	600	272	589	600
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.75	0.29	0.99	0.76	0.03	1.05	0.02	0.21	0.14	0.09	0.52

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.













HCM Signalized Intersection Capacity Analysis

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  						 	
Traffic Volume (vph)	80	1970	255	120	2060	30	265	10	115	34	50	285
Future Volume (vph)	80	1970	255	120	2060	30	265	10	115	34	50	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	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	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	5085	1583	1770	5085	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.67	1.00	1.00	0.75	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	1770	5085	1583	1248	1863	1583	1398	1863	1583
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)	87	2141	277	130	2239	33	288	11	125	37	54	310
RTOR Reduction (vph)	0	0	64	0	0	14	0	0	102	0	0	120
Lane Group Flow (vph)	87	2141	213	130	2239	19	288	11	23	37	54	190
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Actuated Green, G (s)	5.0	63.4	63.4	6.9	65.3	65.3	26.3	22.3	22.3	23.1	20.7	20.7
Effective Green, g (s)	7.0	65.4	65.4	8.9	67.3	67.3	26.3	22.3	22.3	23.1	20.7	20.7
Actuated g/C Ratio	0.06	0.55	0.55	0.07	0.56	0.56	0.22	0.19	0.19	0.19	0.17	0.17
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	3.0	3.0	1.5	3.0	3.0	1.5	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	200	2771	862	131	2851	887	290	346	294	276	321	273
v/s Ratio Prot	0.03	0.42		c0.07	c0.44		c0.03	0.01		0.00	0.03	
v/s Ratio Perm			0.13			0.01	c0.18		0.01	0.02		0.12
v/c Ratio	0.43	0.77	0.25	0.99	0.79	0.02	0.99	0.03	0.08	0.13	0.17	0.70
Uniform Delay, d1	54.6	21.5	14.4	55.5	20.7	11.7	46.7	40.0	40.4	40.0	42.3	46.7
Progression Factor	1.11	0.66	0.47	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	1.7	0.5	75.9	2.3	0.0	50.7	0.0	0.0	0.1	0.1	6.1
Delay (s)	61.0	15.8	7.3	131.4	22.9	11.8	97.4	40.0	40.4	40.0	42.4	52.8
Level of Service	E	B	A	F	C	B	F	D	D	D	D	D
Approach Delay (s)		16.4			28.7			79.1			50.2	
Approach LOS		B			C			E			D	
Intersection Summary												
HCM 2000 Control Delay			28.5									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			120.0							21.0		
Intersection Capacity Utilization			85.9%									ICU Level of Service E
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: S Military Trail & SR 869/SW 10th Street

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	337	837	185	527	978	511	185	549	353	299	679	527
v/c Ratio	0.80	0.64	0.22	0.86	0.65	0.55	0.71	0.73	0.48	0.71	0.74	0.85
Control Delay	91.4	51.7	6.3	69.4	46.1	28.0	96.7	72.2	26.0	84.9	65.9	41.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.4	51.7	6.3	69.4	46.1	28.0	96.7	72.2	26.0	84.9	65.9	41.4
Queue Length 50th (ft)	201	437	11	277	575	319	111	322	199	178	393	305
Queue Length 95th (ft)	261	560	66	354	680	579	159	385	285	225	437	446
Internal Link Dist (ft)		620			1082			752			457	
Turn Bay Length (ft)	550		500	550		500	300		300	650		650
Base Capacity (vph)	448	1301	830	657	1498	995	268	797	754	564	1083	682
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.64	0.22	0.80	0.65	0.51	0.69	0.69	0.47	0.53	0.63	0.77
Intersection Summary												

HCM Signalized Intersection Capacity Analysis

1: S Military Trail & SR 869/SW 10th Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	310	770	170	485	900	470	170	505	325	275	625	485
Future Volume (vph)	310	770	170	485	900	470	170	505	325	275	625	485
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	4.0	5.9	5.5	4.0	5.9	5.9	5.9	5.5	5.9	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
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	3433	3539	1583	3433	3539	1583	3433	3539	1583
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	3433	3539	1583	3433	3539	1583	3433	3539	1583
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)	337	837	185	527	978	511	185	549	353	299	679	527
RTOR Reduction (vph)	0	0	93	0	0	34	0	0	69	0	0	211
Lane Group Flow (vph)	337	837	92	527	978	477	185	549	284	299	679	316
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	6	7	5	2	3	7	4	5	3	8	
Permitted Phases			6			2			4			8
Actuated Green, G (s)	20.1	64.2	75.9	30.2	74.3	94.5	11.7	36.1	66.3	20.2	44.6	44.6
Effective Green, g (s)	22.1	66.2	79.9	32.2	76.3	98.5	13.7	38.1	70.3	22.2	46.6	46.6
Actuated g/C Ratio	0.12	0.37	0.44	0.18	0.42	0.55	0.08	0.21	0.39	0.12	0.26	0.26
Clearance Time (s)	7.5	6.0	7.9	7.5	6.0	7.9	7.9	7.9	7.5	7.9	7.9	7.9
Vehicle Extension (s)	2.0	3.0	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0	3.0	3.0
Lane Grp Cap (vph)	421	1301	702	614	1500	866	261	749	618	423	916	409
v/s Ratio Prot	0.10	0.24	0.01	c0.15	c0.28	0.07	0.05	0.16	0.08	c0.09	0.19	
v/s Ratio Perm			0.05			0.23			0.10			c0.20
v/c Ratio	0.80	0.64	0.13	0.86	0.65	0.55	0.71	0.73	0.46	0.71	0.74	0.77
Uniform Delay, d1	76.8	47.1	29.5	71.7	41.3	26.4	81.2	66.2	40.7	75.8	61.2	61.8
Progression Factor	1.00	1.00	1.00	0.80	1.03	1.23	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.9	2.5	0.0	8.9	1.7	0.3	7.0	3.7	0.2	4.4	3.3	8.8
Delay (s)	86.7	49.6	29.6	66.5	44.2	32.8	88.2	69.9	40.9	80.1	64.4	70.5
Level of Service	F	D	C	E	D	C	F	E	D	F	E	E
Approach Delay (s)		56.1			47.1			63.6			69.7	
Approach LOS		E			D			E			E	
Intersection Summary												
HCM 2000 Control Delay			57.9				HCM 2000 Level of Service				E	
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)				21.3	
Intersection Capacity Utilization			75.0%				ICU Level of Service				D	
Analysis Period (min)			15									
c Critical Lane Group												

Queues

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street



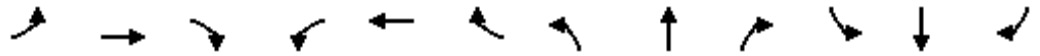
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	71	1647	109	1712	87	181	178	429	125	380
v/c Ratio	0.48	0.51	0.58	0.66	0.11	0.53	0.52	0.79	0.63	0.77
Control Delay	93.0	29.8	109.8	18.8	1.4	68.7	68.2	50.9	87.5	57.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.0	29.8	109.8	18.8	1.4	68.7	68.2	50.9	87.5	57.1
Queue Length 50th (ft)	44	491	64	341	2	201	196	330	141	170
Queue Length 95th (ft)	m72	536	m102	698	m10	282	275	457	212	235
Internal Link Dist (ft)		818		925			616		185	
Turn Bay Length (ft)	700		750		750			150		
Base Capacity (vph)	149	3205	190	2610	826	410	413	550	257	564
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.51	0.57	0.66	0.11	0.44	0.43	0.78	0.49	0.67

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

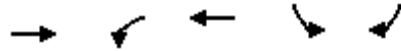


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	1455	60	100	1575	80	320	10	395	110	5	350
Future Volume (vph)	65	1455	60	100	1575	80	320	10	395	110	5	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	0.97	0.86		0.97	0.91	1.00	0.95	0.95	1.00		1.00	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	0.96	1.00		0.95	1.00
Satd. Flow (prot)	3367	6370		3433	5085	1524	1681	1690	1583		1545	2030
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	0.96	1.00		0.95	1.00
Satd. Flow (perm)	3367	6370		3433	5085	1524	1681	1690	1583		1545	2030
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)	71	1582	65	109	1712	87	348	11	429	120	5	380
RTOR Reduction (vph)	0	2	0	0	0	42	0	0	98	0	0	96
Lane Group Flow (vph)	71	1645	0	109	1712	45	181	178	331	0	125	284
Heavy Vehicles (%)	4%	2%	2%	2%	2%	6%	2%	2%	2%	18%	2%	40%
Turn Type	Prot	NA		Prot	NA	Prot	Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	1	6		5	2	2	3	3	3 5	4	4	4 1
Permitted Phases												
Actuated Green, G (s)	6.0	88.5		7.9	90.4	90.4	36.5	36.5	50.4		23.1	35.1
Effective Green, g (s)	8.0	90.5		9.9	92.4	92.4	36.5	36.5	50.4		23.1	35.1
Actuated g/C Ratio	0.04	0.50		0.06	0.51	0.51	0.20	0.20	0.28		0.13	0.20
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	1.5	3.0		2.5	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	149	3202		188	2610	782	340	342	443		198	395
v/s Ratio Prot	0.02	0.26		0.03	c0.34	0.03	0.11	0.11	c0.21		0.08	c0.14
v/s Ratio Perm												
v/c Ratio	0.48	0.51		0.58	0.66	0.06	0.53	0.52	0.75		0.63	0.72
Uniform Delay, d1	84.0	30.0		83.0	32.1	22.0	64.1	63.9	59.0		74.4	67.8
Progression Factor	0.99	0.92		1.18	0.51	0.25	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	0.5		3.2	1.2	0.1	1.6	1.4	6.8		6.4	6.2
Delay (s)	84.2	28.0		101.4	17.6	5.6	65.7	65.4	65.8		80.8	74.0
Level of Service	F	C		F	B	A	E	E	E		F	E
Approach Delay (s)		30.3			21.9			65.7			75.7	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Queues

3: SR 869/SW 10th Street & I-95 SB Off-Ramp




















Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	2110	605	1473	232	421
v/c Ratio	1.02dr	0.53	0.39	0.32	0.71
Control Delay	31.3	33.9	16.9	61.0	72.8
Queue Delay	0.0	0.0	0.2	0.0	0.0
Total Delay	31.3	33.9	17.0	61.0	72.8
Queue Length 50th (ft)	573	215	402	120	264
Queue Length 95th (ft)	215	234	463	164	337
Internal Link Dist (ft)	925		315		
Turn Bay Length (ft)		500		500	500
Base Capacity (vph)	2647	1144	3743	736	597
Starvation Cap Reductn	0	0	1066	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.80	0.53	0.55	0.32	0.71

Intersection Summary

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

3: SR 869/SW 10th Street & I-95 SB Off-Ramp

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1355	605	575	1355	0	0	0	0	220	0	400
Future Volume (vph)	0	1355	605	575	1355	0	0	0	0	220	0	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.5					4.4		4.4
Lane Util. Factor		0.81		0.97	0.91					0.97		0.88
Frt		0.95		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		7202		3433	5085					3433		2787
Flt Permitted		1.00		0.95	1.00					0.95		1.00
Satd. Flow (perm)		7202		3433	5085					3433		2787
Peak-hour factor, PHF	0.92	0.92	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	1473	637	605	1473	0	0	0	0	232	0	421
RTOR Reduction (vph)	0	43	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2067	0	605	1473	0	0	0	0	232	0	421
Turn Type		NA		Prot	NA					Prot		Prot
Protected Phases		6		5 4	2 4					3		3
Permitted Phases												
Actuated Green, G (s)		63.0		55.6	130.6					36.6		36.6
Effective Green, g (s)		65.0		59.6	132.6					38.6		38.6
Actuated g/C Ratio		0.36		0.33	0.74					0.21		0.21
Clearance Time (s)		6.0								6.4		6.4
Vehicle Extension (s)		3.0								2.0		2.0
Lane Grp Cap (vph)		2600		1136	3745					736		597
v/s Ratio Prot		c0.29		c0.18	0.29					0.07		c0.15
v/s Ratio Perm												
v/c Ratio		1.02dr		0.53	0.39					0.32		0.71
Uniform Delay, d1		51.5		48.9	8.8					59.6		65.4
Progression Factor		0.58		1.26	1.87					1.00		1.00
Incremental Delay, d2		2.2		0.5	0.1					0.1		3.1
Delay (s)		32.2		62.1	16.5					59.7		68.5
Level of Service		C		E	B					E		E
Approach Delay (s)		32.2			29.8			0.0			65.4	
Approach LOS		C			C			A			E	
Intersection Summary												
HCM 2000 Control Delay			35.6			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)				16.8		
Intersection Capacity Utilization			56.5%			ICU Level of Service				B		
Analysis Period (min)			15									
dr Defacto Right Lane. Recode with 1 though lane as a right lane.												
c Critical Lane Group												

Queues

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street

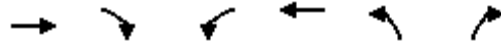


Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	886	800	2000	411	653
v/c Ratio	0.30	0.29	0.38	0.33	0.73
Control Delay	4.2	0.2	11.7	56.4	67.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.2	0.2	11.7	56.4	67.8
Queue Length 50th (ft)	22	0	350	142	314
Queue Length 95th (ft)	68	0	74	178	377
Internal Link Dist (ft)	240		630	1225	
Turn Bay Length (ft)		700		410	430
Base Capacity (vph)	2939	2787	5301	1236	894
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.30	0.29	0.38	0.33	0.73

Intersection Summary

HCM Signalized Intersection Capacity Analysis

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↑		↑↑↑↑	↑↑↑	↑↑↑
Traffic Volume (vph)	815	760	0	1840	390	620
Future Volume (vph)	815	760	0	1840	390	620
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	2.0		4.5	4.4	4.4
Lane Util. Factor	0.91	0.88		0.81	0.94	0.76
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	2787		7544	4990	3610
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	5085	2787		7544	4990	3610
Peak-hour factor, PHF	0.92	0.95	0.92	0.92	0.95	0.95
Adj. Flow (vph)	886	800	0	2000	411	653
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	886	800	0	2000	411	653
Turn Type	NA	Free		NA	Prot	Prot
Protected Phases	6 3			2 3	4	4
Permitted Phases		Free				
Actuated Green, G (s)	99.6	180.0		124.5	42.6	42.6
Effective Green, g (s)	103.6	180.0		122.1	44.6	44.6
Actuated g/C Ratio	0.58	1.00		0.68	0.25	0.25
Clearance Time (s)					6.4	6.4
Vehicle Extension (s)					3.5	3.5
Lane Grp Cap (vph)	2926	2787		5117	1236	894
v/s Ratio Prot	0.17			c0.27	0.08	c0.18
v/s Ratio Perm		0.29				
v/c Ratio	0.30	0.29		0.39	0.33	0.73
Uniform Delay, d1	19.6	0.0		12.7	55.5	62.2
Progression Factor	0.36	1.00		1.06	1.00	1.00
Incremental Delay, d2	0.0	0.2		0.0	0.2	3.2
Delay (s)	7.1	0.2		13.5	55.7	65.4
Level of Service	A	A		B	E	E
Approach Delay (s)	3.8			13.5	61.6	
Approach LOS	A			B	E	













Intersection Summary

HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

























Queues

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	277	1043	239	207	1277	120	310	98	120	239	245	413
v/c Ratio	0.74	0.44	0.28	0.69	0.57	0.16	0.84	0.12	0.26	0.62	0.78	0.91
Control Delay	89.1	24.9	8.9	91.4	40.3	5.6	62.6	51.1	8.0	50.6	87.6	55.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	89.1	24.9	8.9	91.4	40.3	5.6	62.6	51.1	8.0	50.6	87.6	55.9
Queue Length 50th (ft)	163	323	53	124	412	0	281	48	0	207	284	239
Queue Length 95th (ft)	203	487	173	172	541	46	331	68	51	250	354	356
Internal Link Dist (ft)		630			1233			1112			1327	
Turn Bay Length (ft)	300		300	200		300	260		260	170		170
Base Capacity (vph)	419	2366	864	335	2260	772	383	1205	618	386	489	584
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.44	0.28	0.62	0.57	0.16	0.81	0.08	0.19	0.62	0.50	0.71
Intersection Summary												

HCM Signalized Intersection Capacity Analysis

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	960	220	190	1175	110	285	90	110	220	225	380
Future Volume (vph)	255	960	220	190	1175	110	285	90	110	220	225	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4	4.4	4.4	4.4	4.4	5.7	5.7	5.7	5.7	5.7	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00
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	5085	1583	3433	5085	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.21	1.00	1.00	0.69	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	392	3539	1583	1286	1863	1583
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)	277	1043	239	207	1277	120	310	98	120	239	245	413
RTOR Reduction (vph)	0	0	128	0	0	67	0	0	91	0	0	189
Lane Group Flow (vph)	277	1043	111	207	1277	53	310	98	29	239	245	224
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Actuated Green, G (s)	17.6	81.7	81.7	13.9	78.0	78.0	65.9	43.2	43.2	47.4	30.4	30.4
Effective Green, g (s)	19.6	83.7	83.7	15.9	80.0	80.0	65.9	43.2	43.2	47.4	30.4	30.4
Actuated g/C Ratio	0.11	0.47	0.47	0.09	0.44	0.44	0.37	0.24	0.24	0.26	0.17	0.17
Clearance Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	5.7	5.7	5.7	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0	3.0	1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	373	2364	736	303	2260	703	371	849	379	384	314	267
v/s Ratio Prot	c0.08	c0.21		0.06	c0.25		c0.14	0.03		0.06	0.13	
v/s Ratio Perm			0.07			0.03	c0.17		0.02	0.11		0.14
v/c Ratio	0.74	0.44	0.15	0.68	0.57	0.08	0.84	0.12	0.08	0.62	0.78	0.84
Uniform Delay, d1	77.8	32.4	27.7	79.6	37.1	28.7	46.0	53.5	52.9	56.6	71.6	72.4
Progression Factor	1.00	0.71	2.18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.1	0.1	0.1	5.0	1.0	0.2	14.3	0.0	0.0	2.3	11.0	19.1
Delay (s)	84.2	23.2	60.5	84.6	38.1	29.0	60.3	53.5	53.0	58.8	82.6	91.5
Level of Service	F	C	E	F	D	C	E	D	D	E	F	F
Approach Delay (s)		39.8			43.4			57.4			80.4	
Approach LOS		D			D			E			F	
Intersection Summary												
HCM 2000 Control Delay			51.0			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)			20.2			
Intersection Capacity Utilization			75.2%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: NW 5th Terr & Sample Road



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2522	261	2255	114	120
v/c Ratio	0.59	0.87	0.56	0.65	0.45
Control Delay	19.1	77.5	2.0	72.8	14.3
Queue Delay	0.0	52.4	0.2	0.0	0.0
Total Delay	19.2	130.0	2.2	72.8	14.3
Queue Length 50th (ft)	323	167	49	94	0
Queue Length 95th (ft)	389	#359	31	152	57
Internal Link Dist (ft)	575		175	531	
Turn Bay Length (ft)					
Base Capacity (vph)	4280	299	3992	503	536
Starvation Cap Reductn	0	62	690	0	0
Spillback Cap Reductn	112	0	0	0	1
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	1.10	0.68	0.23	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

1: NW 5th Terr & Sample Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑		↙	↑↑↑	↙	↗
Traffic Volume (vph)	2240	80	240	2075	105	110
Future Volume (vph)	2240	80	240	2075	105	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	9.0	9.0
Lane Util. Factor	0.81		1.00	0.91	1.00	1.00
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)	7505		1770	5085	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	7505		1770	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2435	87	261	2255	114	120
RTOR Reduction (vph)	3	0	0	0	0	108
Lane Group Flow (vph)	2519	0	261	2255	114	12
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2 3		1	1 2 3	4	
Permitted Phases					4	4
Actuated Green, G (s)	72.1		20.0	100.1	12.9	12.9
Effective Green, g (s)	74.1		22.0	102.1	12.9	12.9
Actuated g/C Ratio	0.57		0.17	0.79	0.10	0.10
Clearance Time (s)			8.0		9.0	9.0
Vehicle Extension (s)			1.5		2.0	2.0
Lane Grp Cap (vph)	4277		299	3993	175	157
v/s Ratio Prot	c0.34		c0.15	c0.44	c0.06	
v/s Ratio Perm						0.01
v/c Ratio	0.59		0.87	0.56	0.65	0.08
Uniform Delay, d1	18.1		52.6	5.4	56.4	53.1
Progression Factor	1.00		1.01	0.27	1.00	1.00
Incremental Delay, d2	0.1		19.4	0.1	6.5	0.1
Delay (s)	18.2		72.7	1.5	62.8	53.2
Level of Service	B		E	A	E	D
Approach Delay (s)	18.2			8.9	57.9	
Approach LOS	B			A	E	

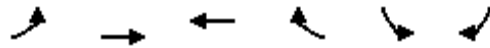
Intersection Summary

HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Queues

2: Sample Road & NW 5th Ave



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	179	2375	2359	272	185	158
v/c Ratio	0.82	0.47	0.60	0.25	0.54	0.53
Control Delay	63.9	2.0	12.8	0.9	61.0	14.3
Queue Delay	6.0	0.1	0.0	0.0	0.0	0.1
Total Delay	69.9	2.0	12.9	0.9	61.0	14.4
Queue Length 50th (ft)	149	23	301	1	77	0
Queue Length 95th (ft)	#277	35	406	m15	112	64
Internal Link Dist (ft)		175	1004		271	
Turn Bay Length (ft)				450		
Base Capacity (vph)	217	5031	3947	1079	977	563
Starvation Cap Reductn	16	786	0	0	0	0
Spillback Cap Reductn	0	0	124	0	0	51
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.56	0.62	0.25	0.19	0.31

Intersection Summary

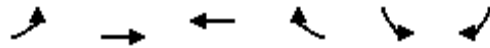
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Sample Road & NW 5th Ave



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	165	2185	2170	250	170	145
Future Volume (vph)	165	2185	2170	250	170	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	9.0	9.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.97	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	6408	6408	1583	3433	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	6408	6408	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	179	2375	2359	272	185	158
RTOR Reduction (vph)	0	0	0	104	0	142
Lane Group Flow (vph)	179	2375	2359	168	185	16
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	3	1 2 3	1 2		4	
Permitted Phases				1 2		4
Actuated Green, G (s)	14.0	100.1	78.1	78.1	12.9	12.9
Effective Green, g (s)	16.0	102.1	80.1	80.1	12.9	12.9
Actuated g/C Ratio	0.12	0.79	0.62	0.62	0.10	0.10
Clearance Time (s)	8.0				9.0	9.0
Vehicle Extension (s)	1.5				2.0	2.0
Lane Grp Cap (vph)	217	5032	3948	975	340	157
v/s Ratio Prot	c0.10	0.37	c0.37		c0.05	
v/s Ratio Perm				0.11		0.01
v/c Ratio	0.82	0.47	0.60	0.17	0.54	0.10
Uniform Delay, d1	55.6	4.8	15.2	10.7	55.8	53.3
Progression Factor	0.68	0.34	0.79	0.38	1.00	1.00
Incremental Delay, d2	17.8	0.0	0.1	0.0	1.0	0.1
Delay (s)	55.7	1.6	12.1	4.1	56.7	53.4
Level of Service	E	A	B	A	E	D
Approach Delay (s)		5.4	11.2		55.2	
Approach LOS		A	B		E	

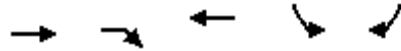
Intersection Summary

HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Queues

3: Sample Road & I-95 SB RAMP



Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1897	642	1946	474	663
v/c Ratio	0.56	0.41	0.73	0.46	0.78
Control Delay	9.4	1.4	13.9	19.7	28.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	1.4	13.9	19.7	28.4
Queue Length 50th (ft)	152	4	243	75	131
Queue Length 95th (ft)	263	29	m238	114	#196
Internal Link Dist (ft)	1004		259		
Turn Bay Length (ft)		250			
Base Capacity (vph)	3379	1583	2681	1082	878
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.56	0.41	0.73	0.44	0.76

Intersection Summary












95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

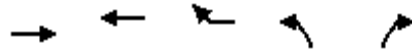
m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

3: Sample Road & I-95 SB RAMP

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↗		↑↑↑		↘↘		↗↗		
Traffic Volume (vph)	0	1745	610	0	1790	0	450	0	630	0	0
Future Volume (vph)	0	1745	610	0	1790	0	450	0	630	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	2.0		5.5		5.5		5.5		
Lane Util. Factor		0.86	1.00		0.91		0.97		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)		6408	1583		5085		3433		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		6408	1583		5085		3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1897	642	0	1946	0	474	0	663	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1897	642	0	1946	0	474	0	663	0	0
Turn Type		NA	Free		NA		Prot		Prot		
Protected Phases		6			2		3		3		
Permitted Phases			Free								
Actuated Green, G (s)		32.3	65.0		32.3		17.7		17.7		
Effective Green, g (s)		34.3	65.0		34.3		19.7		19.7		
Actuated g/C Ratio		0.53	1.00		0.53		0.30		0.30		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		3381	1583		2683		1040		844		
v/s Ratio Prot		0.30			0.38		0.14		0.24		
v/s Ratio Perm			0.41								
v/c Ratio		0.56	0.41		0.73		0.46		0.79		
Uniform Delay, d1		10.3	0.0		11.7		18.3		20.7		
Progression Factor		0.84	1.00		1.06		1.00		1.00		
Incremental Delay, d2		0.6	0.7		1.1		0.2		4.7		
Delay (s)		9.2	0.7		13.6		18.5		25.4		
Level of Service		A	A		B		B		C		
Approach Delay (s)		7.1			13.6			22.5		0.0	
Approach LOS		A			B			C		A	
Intersection Summary											
HCM 2000 Control Delay			12.4				HCM 2000 Level of Service			B	
HCM 2000 Volume to Capacity ratio			0.75								
Actuated Cycle Length (s)			65.0				Sum of lost time (s)			11.0	
Intersection Capacity Utilization			65.8%				ICU Level of Service			C	
Analysis Period (min)			15								
c Critical Lane Group											

Queues



Lane Group	EBT	WBT	WBR	NBL2	NBR
Lane Group Flow (vph)	1712	1685	358	1063	579
v/c Ratio	0.65	0.64	0.23	0.98	0.66
Control Delay	7.4	9.5	0.2	47.9	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	9.5	0.2	47.9	23.6
Queue Length 50th (ft)	57	126	0	212	110
Queue Length 95th (ft)	62	m283	m0	#338	167
Internal Link Dist (ft)	270	1155			
Turn Bay Length (ft)			250		
Base Capacity (vph)	2620	2620	1583	1082	878
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.65	0.64	0.23	0.98	0.66

Intersection Summary













95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: I-95 NB RAMP & Sample Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	
Lane Configurations		↑↑↑			↑↑↑	↑	↑↑		↑↑			
Traffic Volume (vph)	0	1575	0	0	1550	340	1010	0	550	0	0	
Future Volume (vph)	0	1575	0	0	1550	340	1010	0	550	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.5			5.5	2.0	5.5		5.5			
Lane Util. Factor		0.91			0.91	1.00	0.97		0.88			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		5085			5085	1583	3433		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		5085			5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.92	0.95	0.92	0.92	
Adj. Flow (vph)	0	1712	0	0	1685	358	1063	0	579	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	1712	0	0	1685	358	1063	0	579	0	0	
Turn Type		NA			NA	Free	Prot		Prot			
Protected Phases		6			2		4		4			
Permitted Phases						Free						
Actuated Green, G (s)		31.5			31.5	65.0	18.5		18.5			
Effective Green, g (s)		33.5			33.5	65.0	20.5		20.5			
Actuated g/C Ratio		0.52			0.52	1.00	0.32		0.32			
Clearance Time (s)		7.5			7.5		7.5		7.5			
Vehicle Extension (s)		3.0			3.0		2.5		2.5			
Lane Grp Cap (vph)		2620			2620	1583	1082		878			
v/s Ratio Prot		c0.34			0.33		c0.31		0.21			
v/s Ratio Perm						0.23						
v/c Ratio		0.65			0.64	0.23	0.98		0.66			
Uniform Delay, d1		11.5			11.4	0.0	22.1		19.2			
Progression Factor		0.55			0.76	1.00	1.00		1.00			
Incremental Delay, d2		0.5			0.8	0.2	23.0		1.6			
Delay (s)		6.8			9.4	0.2	45.1		20.8			
Level of Service		A			A	A	D		C			
Approach Delay (s)		6.8			7.8			36.5		0.0		
Approach LOS		A			A			D		A		
Intersection Summary												
HCM 2000 Control Delay			16.2				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			65.0				Sum of lost time (s)			11.0		
Intersection Capacity Utilization			58.8%				ICU Level of Service			B		
Analysis Period (min)			15									

c Critical Lane Group

Queues

5: NE 3rd Ave & Sample Road
































Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	467	1843	98	1571	228	326	98	71	255	375
v/c Ratio	0.86	0.73	0.74	0.74	0.96	0.76	0.19	0.41	0.78	0.80
Control Delay	63.9	21.1	89.8	35.2	89.0	58.5	0.8	39.8	66.9	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.9	21.1	89.8	35.2	89.0	58.5	0.8	39.8	66.9	31.5
Queue Length 50th (ft)	188	351	82	399	156	266	0	44	209	119
Queue Length 95th (ft)	#284	483	#171	523	#210	342	0	74	279	223
Internal Link Dist (ft)		1155		834		912			742	
Turn Bay Length (ft)	550		490		250		225	200		
Base Capacity (vph)	554	2528	136	2120	237	530	594	174	458	565
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.73	0.72	0.74	0.96	0.62	0.16	0.41	0.56	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: NE 3rd Ave & Sample Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  					 	 	
Traffic Volume (vph)	430	1515	180	90	1335	110	210	300	90	65	235	345
Future Volume (vph)	430	1515	180	90	1335	110	210	300	90	65	235	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91		1.00	0.91		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)	3433	5004		1770	5027		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.25	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	3433	5004		1770	5027		467	1863	1583	607	1863	1583
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)	467	1647	196	98	1451	120	228	326	98	71	255	375
RTOR Reduction (vph)	0	10	0	0	6	0	0	0	75	0	0	190
Lane Group Flow (vph)	467	1833	0	98	1565	0	228	326	23	71	255	185
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	18.5	62.3		7.7	51.5		40.0	30.0	30.0	28.0	24.0	24.0
Effective Green, g (s)	20.5	64.3		9.7	53.5		40.0	30.0	30.0	28.0	24.0	24.0
Actuated g/C Ratio	0.16	0.49		0.07	0.41		0.31	0.23	0.23	0.22	0.18	0.18
Clearance Time (s)	7.0	7.0		7.0	7.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	541	2475		132	2068		243	429	365	166	343	292
v/s Ratio Prot	c0.14	c0.37		0.06	0.31		c0.07	0.18		0.01	0.14	
v/s Ratio Perm							c0.22		0.01	0.08		0.12
v/c Ratio	0.86	0.74		0.74	0.76		0.94	0.76	0.06	0.43	0.74	0.63
Uniform Delay, d1	53.4	26.2		58.9	32.7		41.2	46.6	39.0	42.6	50.1	48.9
Progression Factor	0.95	0.75		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.2	1.5		17.7	2.6		40.2	6.7	0.0	0.6	7.4	3.3
Delay (s)	60.9	21.1		76.7	35.3		81.4	53.4	39.0	43.3	57.5	52.2
Level of Service	E	C		E	D		F	D	D	D	E	D
Approach Delay (s)		29.2			37.8			61.0			53.2	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Queues

1: SW 12th Avenue & Hillsboro Blvd

































Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	315	2310	370	1554	505	109	152	261	27	27	27
v/c Ratio	0.91	0.74	0.98	0.57	0.47	0.30	0.77	0.49	0.36	0.35	0.07
Control Delay	99.3	26.5	112.2	23.8	7.5	75.1	102.4	15.6	95.6	95.0	0.3
Queue Delay	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.3	26.5	112.2	24.1	7.6	75.1	102.4	15.6	95.6	95.0	0.3
Queue Length 50th (ft)	362	663	227	322	116	62	178	50	33	33	0
Queue Length 95th (ft)	#526	839	#343	404	135	93	255	136	72	72	1
Internal Link Dist (ft)		580		548			436			396	
Turn Bay Length (ft)	450		375		350	225		250	200		
Base Capacity (vph)	371	3125	379	2724	1215	610	331	536	252	257	425
Starvation Cap Reductn	0	0	0	469	165	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.74	0.98	0.69	0.48	0.18	0.46	0.49	0.11	0.11	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

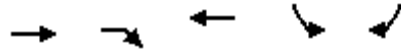
HCM Signalized Intersection Capacity Analysis

1: SW 12th Avenue & Hillsboro Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  		 				 	
Traffic Volume (vph)	290	1935	190	340	1430	465	100	140	240	40	10	25
Future Volume (vph)	290	1935	190	340	1430	465	100	140	240	40	10	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.0	6.0	6.0	6.5	6.0	6.0	6.5
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1770	5017		3433	5085	1583	3433	1863	1583	1681	1719	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1770	5017		3433	5085	1583	3433	1863	1583	1681	1719	1583
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)	315	2103	207	370	1554	505	109	152	261	43	11	27
RTOR Reduction (vph)	0	5	0	0	0	106	0	0	165	0	0	21
Lane Group Flow (vph)	315	2305	0	370	1554	399	109	152	96	27	27	6
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	1	6		5	2	3	4	4	5	3	3	1
Permitted Phases						2			4			3
Actuated Green, G (s)	33.4	109.9		17.9	94.4	102.5	19.1	19.1	37.0	8.1	8.1	41.5
Effective Green, g (s)	35.4	111.9		19.9	96.4	106.5	19.1	19.1	37.0	8.1	8.1	41.5
Actuated g/C Ratio	0.20	0.62		0.11	0.54	0.59	0.11	0.11	0.21	0.04	0.04	0.23
Clearance Time (s)	6.5	6.5		6.5	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.5
Vehicle Extension (s)	1.5	3.0		2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5
Lane Grp Cap (vph)	348	3118		379	2723	936	364	197	325	75	77	364
v/s Ratio Prot	c0.18	c0.46		0.11	0.31	c0.02	0.03	c0.08	0.03	0.02	0.02	0.00
v/s Ratio Perm						0.23			0.03			0.00
v/c Ratio	0.91	0.74		0.98	0.57	0.43	0.30	0.77	0.29	0.36	0.35	0.02
Uniform Delay, d1	70.7	23.8		79.8	28.0	20.1	74.3	78.3	60.5	83.4	83.4	53.5
Progression Factor	1.00	1.00		0.97	0.79	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.4	1.6		35.2	0.7	0.1	0.2	15.5	0.2	1.1	1.0	0.0
Delay (s)	96.0	25.5		112.9	22.7	14.1	74.4	93.9	60.6	84.5	84.4	53.5
Level of Service	F	C		F	C	B	E	F	E	F	F	D
Approach Delay (s)		33.9			34.6			73.2			74.1	
Approach LOS		C			C			E			E	
Intersection Summary												
HCM 2000 Control Delay			38.4				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)			23.0		
Intersection Capacity Utilization			81.2%				ICU Level of Service			D		
Analysis Period (min)			15									
c	Critical Lane Group											

Queues












2: Hillsboro Bvd & I-95 SB RAMP



Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1440	937	1549	642	853
v/c Ratio	0.28	0.59	0.60	0.83	0.70
Control Delay	0.1	6.2	24.2	53.4	43.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.1	6.2	24.2	53.4	43.3
Queue Length 50th (ft)	0	175	327	663	459
Queue Length 95th (ft)	0	297	462	702	454
Internal Link Dist (ft)	548		319		
Turn Bay Length (ft)		150			
Base Capacity (vph)	5085	1583	2597	939	1478
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.28	0.59	0.60	0.68	0.58
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

2: Hillsboro Bvd & I-95 SB RAMP

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↑		↑↑↑		↑		↑↑		
Traffic Volume (vph)	0	1325	890	0	1425	0	610	0	810	0	0
Future Volume (vph)	0	1325	890	0	1425	0	610	0	810	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	2.0		4.5		4.5		4.5		
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		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1440	937	0	1549	0	642	0	853	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1440	937	0	1549	0	642	0	853	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type		NA	Perm		NA		Prot		Prot		
Protected Phases		Free!			2		8!		3		
Permitted Phases			Free								
Actuated Green, G (s)		180.0	180.0		90.0		77.0		77.0		
Effective Green, g (s)		180.0	180.0		92.0		79.0		79.0		
Actuated g/C Ratio		1.00	1.00		0.51		0.44		0.44		
Clearance Time (s)					6.5		6.5		6.5		
Vehicle Extension (s)					3.0		2.5		2.5		
Lane Grp Cap (vph)		5085	1583		2599		776		1223		
v/s Ratio Prot		0.28			0.30		c0.36		0.31		
v/s Ratio Perm			c0.59								
v/c Ratio		0.28	0.59		0.60		0.83		0.70		
Uniform Delay, d1		0.0	0.0		30.9		44.5		40.8		
Progression Factor		1.00	1.00		0.71		1.00		1.00		
Incremental Delay, d2		0.1	1.2		0.8		7.1		1.6		
Delay (s)		0.1	1.2		22.9		51.6		42.5		
Level of Service		A	A		C		D		D		
Approach Delay (s)		0.5			22.9			46.4		0.0	
Approach LOS		A			C			D		A	
Intersection Summary											
HCM 2000 Control Delay			19.5		HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.72								
Actuated Cycle Length (s)			180.0		Sum of lost time (s)				9.0		
Intersection Capacity Utilization			63.4%		ICU Level of Service				B		
Analysis Period (min)			15								
! Phase conflict between lane groups.											
c Critical Lane Group											

Queues

3: I-95 NB Ramp & Hillsboro Blvd















Lane Group	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	1495	1799	848	587	874
v/c Ratio	0.55	0.66	0.54	0.30	0.78
Control Delay	15.7	10.0	1.8	18.7	27.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	10.0	1.8	18.7	27.7
Queue Length 50th (ft)	330	210	29	76	223
Queue Length 95th (ft)	278	m190	m0	98	292
Internal Link Dist (ft)	286	371			
Turn Bay Length (ft)			250	350	350
Base Capacity (vph)	2713	2713	1568	2162	1231
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.66	0.54	0.27	0.71

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.













HCM Signalized Intersection Capacity Analysis

3: I-95 NB Ramp & Hillsboro Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	↑	↑↑↑		↑↑			
Traffic Volume (vph)	0	1375	0	0	1655	780	540	0	830	0	0	0
Future Volume (vph)	0	1375	0	0	1655	780	540	0	830	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	2.0	2.0		2.0			
Lane Util. Factor		0.91			0.91	1.00	0.94		0.88			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		5085			5085	1568	4990		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		5085			5085	1568	4990		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	1495	0	0	1799	848	587	0	874	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	25	0	0	0
Lane Group Flow (vph)	0	1495	0	0	1799	848	587	0	849	0	0	0
Heavy Vehicles (%)	3%	2%	2%	2%	2%	3%	2%	3%	2%	3%	3%	3%
Turn Type		NA			NA	Free	Prot		Prot			
Protected Phases		6			2		4		4			
Permitted Phases						Free						
Actuated Green, G (s)		46.0			46.0	90.0	33.5		33.5			
Effective Green, g (s)		48.0			48.0	90.0	35.5		35.5			
Actuated g/C Ratio		0.53			0.53	1.00	0.39		0.39			
Clearance Time (s)		6.5			6.5		4.0		4.0			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		2712			2712	1568	1968		1099			
v/s Ratio Prot		0.29			c0.35		0.12		c0.30			
v/s Ratio Perm						0.54						
v/c Ratio		0.55			0.66	0.54	0.30		0.77			
Uniform Delay, d1		13.9			15.2	0.0	18.7		23.7			
Progression Factor		1.04			0.59	1.00	1.00		1.00			
Incremental Delay, d2		0.8			0.7	0.7	0.1		3.4			
Delay (s)		15.2			9.7	0.7	18.8		27.2			
Level of Service		B			A	A	B		C			
Approach Delay (s)		15.2			6.8			23.8			0.0	
Approach LOS		B			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			13.5			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			90.0			Sum of lost time (s)				6.5		
Intersection Capacity Utilization			62.7%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd






























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	342	1924	130	87	2071	103	484	92	174	37	5	92
v/c Ratio	0.92	0.58	0.12	0.76	0.67	0.10	1.69	0.32	0.45	0.45	0.08	0.42
Control Delay	105.6	16.1	2.0	117.7	24.7	0.2	362.4	72.0	14.7	81.3	87.0	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.6	16.1	2.0	117.7	24.7	0.2	362.4	72.0	14.7	81.3	87.0	5.7
Queue Length 50th (ft)	213	323	4	103	573	0	~769	100	10	36	6	0
Queue Length 95th (ft)	#310	409	m23	#195	620	0	#1003	164	89	74	22	0
Internal Link Dist (ft)		660			631			513			403	
Turn Bay Length (ft)	300		150	100		200	125					340
Base Capacity (vph)	371	3309	1075	120	3092	1029	287	600	621	82	393	470
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.58	0.12	0.72	0.67	0.10	1.69	0.15	0.28	0.45	0.01	0.20

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.













HCM Signalized Intersection Capacity Analysis

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  							
Traffic Volume (vph)	315	1770	120	80	1905	95	445	85	160	34	5	85
Future Volume (vph)	315	1770	120	80	1905	95	445	85	160	34	5	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	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	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	5085	1583	1770	5085	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.41	1.00	1.00	0.70	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	1770	5085	1583	767	1863	1583	1299	1863	1583
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)	342	1924	130	87	2071	103	484	92	174	37	5	92
RTOR Reduction (vph)	0	0	46	0	0	41	0	0	138	0	0	88
Lane Group Flow (vph)	342	1924	84	87	2071	62	484	92	36	37	5	4
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Actuated Green, G (s)	17.5	114.0	114.0	9.8	106.3	106.3	37.2	28.0	28.0	10.4	7.2	7.2
Effective Green, g (s)	19.5	116.0	116.0	11.8	108.3	108.3	37.2	28.0	28.0	10.4	7.2	7.2
Actuated g/C Ratio	0.11	0.64	0.64	0.07	0.60	0.60	0.21	0.16	0.16	0.06	0.04	0.04
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	3.0	3.0	1.5	3.0	3.0	1.5	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	371	3277	1020	116	3059	952	292	289	246	83	74	63
v/s Ratio Prot	c0.10	0.38		0.05	c0.41		c0.22	0.05		0.01	0.00	
v/s Ratio Perm			0.05			0.04	c0.12		0.02	0.02		0.00
v/c Ratio	0.92	0.59	0.08	0.75	0.68	0.07	1.66	0.32	0.14	0.45	0.07	0.06
Uniform Delay, d1	79.5	18.3	12.0	82.7	24.1	14.9	68.9	67.5	65.7	81.6	83.2	83.1
Progression Factor	1.02	0.87	1.10	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	23.5	0.6	0.1	21.2	1.2	0.1	310.7	0.2	0.1	1.4	0.1	0.1
Delay (s)	104.2	16.5	13.3	103.8	25.3	15.0	379.6	67.8	65.8	83.0	83.3	83.3
Level of Service	F	B	B	F	C	B	F	E	E	F	F	F
Approach Delay (s)		28.9			27.9			268.6			83.2	
Approach LOS		C			C			F			F	
Intersection Summary												
HCM 2000 Control Delay			62.2	HCM 2000 Level of Service				E				
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			180.0	Sum of lost time (s)				21.0				
Intersection Capacity Utilization			89.6%	ICU Level of Service				E				
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: S Military Trail & SR 869/SW 10th Street

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	326	1125	158	370	1016	543	185	728	739	533	576	337
v/c Ratio	0.76	0.97	0.20	0.54	0.72	0.57	0.66	1.03	0.99	1.00	0.59	0.52
Control Delay	88.2	79.8	3.7	81.6	54.1	16.3	91.7	109.3	72.0	112.1	59.8	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.2	79.8	3.7	81.6	54.1	16.3	91.7	109.3	72.0	112.1	59.8	12.8
Queue Length 50th (ft)	194	694	0	237	420	157	110	~480	775	329	315	46
Queue Length 95th (ft)	251	#845	39	295	521	222	157	#615	#1073	#460	384	149
Internal Link Dist (ft)		620			1082			752			457	
Turn Bay Length (ft)	550		500	550		500	300		300	650		650
Base Capacity (vph)	472	1156	785	680	1416	947	301	709	748	535	972	642
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.97	0.20	0.54	0.72	0.57	0.61	1.03	0.99	1.00	0.59	0.52

























Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

1: S Military Trail & SR 869/SW 10th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	300	1035	145	340	935	500	170	670	680	490	530	310
Future Volume (vph)	300	1035	145	340	935	500	170	670	680	490	530	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	4.0	5.9	5.5	4.0	5.9	5.9	5.9	5.5	5.9	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
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	3433	3539	1583	3433	3539	1583	3433	3539	1583
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	3433	3539	1583	3433	3539	1583	3433	3539	1583
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)	326	1125	158	370	1016	543	185	728	739	533	576	337
RTOR Reduction (vph)	0	0	93	0	0	33	0	0	69	0	0	208
Lane Group Flow (vph)	326	1125	65	370	1016	510	185	728	670	533	576	129
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	6	7	5	2	3	7	4	5	3	8	
Permitted Phases			6			2			4			8
Actuated Green, G (s)	20.4	56.8	69.6	33.7	70.1	96.2	12.8	34.1	67.8	26.1	47.4	47.4
Effective Green, g (s)	22.4	58.8	73.6	35.7	72.1	100.2	14.8	36.1	71.8	28.1	49.4	49.4
Actuated g/C Ratio	0.12	0.33	0.41	0.20	0.40	0.56	0.08	0.20	0.40	0.16	0.27	0.27
Clearance Time (s)	7.5	6.0	7.9	7.5	6.0	7.9	7.9	7.9	7.5	7.9	7.9	7.9
Vehicle Extension (s)	2.0	3.0	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0	3.0	3.0
Lane Grp Cap (vph)	427	1156	647	680	1417	881	282	709	631	535	971	434
v/s Ratio Prot	0.09	c0.32	0.01	0.11	0.29	0.09	0.05	0.21	c0.21	c0.16	0.16	
v/s Ratio Perm			0.03			0.23			0.21			0.08
v/c Ratio	0.76	0.97	0.10	0.54	0.72	0.58	0.66	1.03	1.06	1.00	0.59	0.30
Uniform Delay, d1	76.2	59.8	32.8	64.8	45.4	26.1	80.1	72.0	54.1	75.9	56.6	51.6
Progression Factor	1.00	1.00	1.00	1.22	1.12	0.69	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.1	20.8	0.0	0.3	2.3	0.4	4.1	40.8	53.6	37.7	1.0	0.4
Delay (s)	83.4	80.6	32.8	79.3	53.2	18.5	84.3	112.8	107.7	113.6	57.6	52.0
Level of Service	F	F	C	E	D	B	F	F	F	F	E	D
Approach Delay (s)		76.5			48.4			107.3			76.9	
Approach LOS		E			D			F			E	
Intersection Summary												
HCM 2000 Control Delay			76.1				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)			21.3		
Intersection Capacity Utilization			97.5%				ICU Level of Service			F		
Analysis Period (min)			15									

c Critical Lane Group

Queues

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

























Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	397	2533	484	2049	473	49	49	141	71	103
v/c Ratio	0.67	0.73	0.81	0.72	0.45	0.35	0.35	0.28	0.63	0.17
Control Delay	59.7	19.1	81.8	29.9	3.8	85.4	85.1	19.3	104.8	11.5
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.7	19.1	81.8	30.1	3.8	85.4	85.1	19.3	104.8	11.5
Queue Length 50th (ft)	218	433	288	613	36	58	58	44	83	6
Queue Length 95th (ft)	m234	m560	m336	604	m29	110	110	104	143	34
Internal Link Dist (ft)		818		925			616		185	
Turn Bay Length (ft)	700		750		750			150		
Base Capacity (vph)	592	3483	686	2841	1060	140	142	546	140	635
Starvation Cap Reductn	0	0	0	187	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.73	0.71	0.77	0.45	0.35	0.35	0.26	0.51	0.16

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

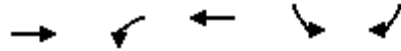
HCM Signalized Intersection Capacity Analysis

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	365	1780	550	445	1885	435	80	10	130	55	10	95
Future Volume (vph)	365	1780	550	445	1885	435	80	10	130	55	10	95
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	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	0.97	0.86		0.97	0.91	1.00	0.95	0.95	1.00		1.00	0.88
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	0.96	1.00		0.96	1.00
Satd. Flow (prot)	3367	6181		3433	5085	1524	1681	1704	1583		1578	2030
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	0.96	1.00		0.96	1.00
Satd. Flow (perm)	3367	6181		3433	5085	1524	1681	1704	1583		1578	2030
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)	397	1935	598	484	2049	473	87	11	141	60	11	103
RTOR Reduction (vph)	0	28	0	0	0	209	0	0	65	0	0	66
Lane Group Flow (vph)	397	2505	0	484	2049	264	49	49	76	0	71	37
Heavy Vehicles (%)	4%	2%	2%	2%	2%	6%	2%	2%	2%	18%	2%	40%
Turn Type	Prot	NA		Prot	NA	Prot	Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	1	6		5	2	2	3	3	3 5	4	4	4 1
Permitted Phases												
Actuated Green, G (s)	29.6	98.5		29.6	98.5	98.5	15.0	15.0	50.6		12.9	48.5
Effective Green, g (s)	31.6	100.5		31.6	100.5	100.5	15.0	15.0	50.6		12.9	48.5
Actuated g/C Ratio	0.18	0.56		0.18	0.56	0.56	0.08	0.08	0.28		0.07	0.27
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	1.5	3.0		2.5	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	591	3451		602	2839	850	140	142	444		113	546
v/s Ratio Prot	0.12	c0.41		c0.14	c0.40	0.17	c0.03	0.03	0.05		c0.04	0.02
v/s Ratio Perm												
v/c Ratio	0.67	0.73		0.80	0.72	0.31	0.35	0.35	0.17		0.63	0.07
Uniform Delay, d1	69.4	29.5		71.2	29.4	21.2	77.9	77.9	48.8		81.2	48.9
Progression Factor	0.80	0.62		1.05	0.96	1.88	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.4	0.8		5.0	1.1	0.6	1.5	1.5	0.2		10.4	0.1
Delay (s)	57.2	19.0		79.6	29.4	40.5	79.4	79.3	49.0		91.7	49.0
Level of Service	E	B		E	C	D	E	E	D		F	D
Approach Delay (s)		24.1			39.2			61.5			66.4	
Approach LOS		C			D			E			E	
Intersection Summary												
HCM 2000 Control Delay			33.9				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)		22.0			
Intersection Capacity Utilization			71.9%				ICU Level of Service			C		
Analysis Period (min)			15									
c	Critical Lane Group											

Queues

3: SR 869/SW 10th Street & I-95 SB Off-Ramp



Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	2117	816	2082	432	895
v/c Ratio	1.08dr	0.84	0.67	0.37	0.94
Control Delay	42.7	80.2	10.7	45.7	74.7
Queue Delay	0.0	0.0	0.2	0.0	0.0
Total Delay	42.7	80.2	10.9	45.7	74.7
Queue Length 50th (ft)	579	452	169	198	585
Queue Length 95th (ft)	#626	m531	317	250	#732
Internal Link Dist (ft)	925		307		
Turn Bay Length (ft)		500		500	500
Base Capacity (vph)	2253	991	3093	1174	953
Starvation Cap Reductn	0	0	336	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	0.82	0.76	0.37	0.94

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.


















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

3: SR 869/SW 10th Street & I-95 SB Off-Ramp

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1420	545	775	1915	0	0	0	0	410	0	850
Future Volume (vph)	0	1420	545	775	1915	0	0	0	0	410	0	850
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.5					4.4		4.4
Lane Util. Factor		0.81		0.97	0.91					0.97		0.88
Frt		0.96		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		7237		3433	5085					3433		2787
Flt Permitted		1.00		0.95	1.00					0.95		1.00
Satd. Flow (perm)		7237		3433	5085					3433		2787
Peak-hour factor, PHF	0.92	0.92	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	1543	574	816	2082	0	0	0	0	432	0	895
RTOR Reduction (vph)	0	37	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2080	0	816	2082	0	0	0	0	432	0	895
Turn Type		NA		Prot	NA					Prot		Prot
Protected Phases		6		5 4	2 4					3		3
Permitted Phases												
Actuated Green, G (s)		53.2		48.8	107.5					59.6		59.6
Effective Green, g (s)		55.2		46.4	105.1					61.6		61.6
Actuated g/C Ratio		0.31		0.26	0.58					0.34		0.34
Clearance Time (s)		6.0								6.4		6.4
Vehicle Extension (s)		3.0								2.0		2.0
Lane Grp Cap (vph)		2219		884	2969					1174		953
v/s Ratio Prot		c0.29		c0.24	0.41					0.13		c0.32
v/s Ratio Perm												
v/c Ratio		1.08dr		0.92	0.70					0.37		0.94
Uniform Delay, d1		60.7		65.1	26.4					44.6		57.4
Progression Factor		0.60		1.19	0.41					1.00		1.00
Incremental Delay, d2		7.0		13.2	0.7					0.1		16.1
Delay (s)		43.2		90.5	11.5					44.6		73.4
Level of Service		D		F	B					D		E
Approach Delay (s)		43.2			33.8			0.0			64.1	
Approach LOS		D			C			A				E
Intersection Summary												
HCM 2000 Control Delay			43.3			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)				16.8		
Intersection Capacity Utilization			74.2%			ICU Level of Service				D		
Analysis Period (min)			15									
dr Defacto Right Lane. Recode with 1 though lane as a right lane.												
c Critical Lane Group												

Queues



Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	1413	558	2402	811	495
v/c Ratio	0.41	0.20	0.41	0.93	0.78
Control Delay	1.2	0.1	6.6	89.5	80.6
Queue Delay	0.3	0.0	0.2	0.0	0.0
Total Delay	1.5	0.1	6.9	89.5	80.6
Queue Length 50th (ft)	14	0	120	339	248
Queue Length 95th (ft)	m15	m0	120	#417	307
Internal Link Dist (ft)	248		630	1225	
Turn Bay Length (ft)		700		410	430
Base Capacity (vph)	3423	2787	5846	876	633
Starvation Cap Reductn	1121	0	2241	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.20	0.67	0.93	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↗↘		↑↑↑↑	↖↗	↗↘
Traffic Volume (vph)	1300	530	0	2210	770	470
Future Volume (vph)	1300	530	0	2210	770	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	2.0		4.5	4.4	4.4
Lane Util. Factor	0.91	0.88		0.81	0.94	0.76
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	2787		7544	4990	3610
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	5085	2787		7544	4990	3610
Peak-hour factor, PHF	0.92	0.95	0.92	0.92	0.95	0.95
Adj. Flow (vph)	1413	558	0	2402	811	495
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1413	558	0	2402	811	495
Turn Type	NA	Free		NA	Prot	Prot
Protected Phases	6 3			2 3	4	4
Permitted Phases		Free				
Actuated Green, G (s)	118.8	180.0		137.6	29.6	29.6
Effective Green, g (s)	120.8	180.0		139.6	31.6	31.6
Actuated g/C Ratio	0.67	1.00		0.78	0.18	0.18
Clearance Time (s)					6.4	6.4
Vehicle Extension (s)					3.5	3.5
Lane Grp Cap (vph)	3412	2787		5850	876	633
v/s Ratio Prot	c0.28			c0.32	c0.16	0.14
v/s Ratio Perm		0.20				
v/c Ratio	0.41	0.20		0.41	0.93	0.78
Uniform Delay, d1	13.5	0.0		6.7	73.0	70.9
Progression Factor	0.08	1.00		0.97	1.00	1.00
Incremental Delay, d2	0.0	0.1		0.0	15.5	6.4
Delay (s)	1.0	0.1		6.5	88.6	77.3
Level of Service	A	A		A	F	E
Approach Delay (s)	0.8			6.5	84.3	
Approach LOS	A			A	F	

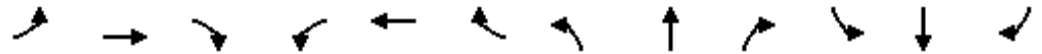
Intersection Summary

HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Queues

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	277	1304	342	228	1598	103	380	212	196	266	217	424
v/c Ratio	0.81	0.58	0.39	0.71	0.72	0.14	0.90	0.25	0.37	0.67	0.69	0.95
Control Delay	77.7	27.9	5.2	91.6	45.4	3.1	68.2	55.1	7.6	50.0	80.7	65.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.7	28.0	5.2	91.6	45.4	3.1	68.2	55.1	7.6	50.0	80.7	65.7
Queue Length 50th (ft)	160	259	55	136	580	0	347	107	0	225	243	265
Queue Length 95th (ft)	m#217	315	75	186	693	27	#435	138	65	284	323	401
Internal Link Dist (ft)		630			1233			1112			1327	
Turn Bay Length (ft)	300		300	200		200	260		260	170		170
Base Capacity (vph)	354	2256	868	354	2223	761	426	1026	598	405	417	523
Starvation Cap Reductn	0	252	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.65	0.39	0.64	0.72	0.14	0.89	0.21	0.33	0.66	0.52	0.81

Intersection Summary



































95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		  	  			 		 	 	
Traffic Volume (vph)	255	1200	315	210	1470	95	350	195	180	245	200	390
Future Volume (vph)	255	1200	315	210	1470	95	350	195	180	245	200	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4	4.4	4.4	4.4	4.4	5.7	5.7	5.7	5.7	5.7	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00
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	5085	1583	3433	5085	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.27	1.00	1.00	0.62	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	501	3539	1583	1153	1863	1583
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)	277	1304	342	228	1598	103	380	212	196	266	217	424
RTOR Reduction (vph)	0	0	166	0	0	58	0	0	150	0	0	181
Lane Group Flow (vph)	277	1304	176	228	1598	45	380	212	46	266	217	243
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Actuated Green, G (s)	16.1	77.8	77.8	14.9	76.6	76.6	68.8	42.6	42.6	50.9	30.4	30.4
Effective Green, g (s)	18.1	79.8	79.8	16.9	78.6	78.6	68.8	42.6	42.6	50.9	30.4	30.4
Actuated g/C Ratio	0.10	0.44	0.44	0.09	0.44	0.44	0.38	0.24	0.24	0.28	0.17	0.17
Clearance Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	5.7	5.7	5.7	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0	3.0	1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	345	2254	701	322	2220	691	422	837	374	396	314	267
v/s Ratio Prot	c0.08	0.26		0.07	c0.31		c0.16	0.06		0.08	0.12	
v/s Ratio Perm			0.11			0.03	c0.18		0.03	0.11		0.15
v/c Ratio	0.80	0.58	0.25	0.71	0.72	0.07	0.90	0.25	0.12	0.67	0.69	0.91
Uniform Delay, d1	79.2	37.5	31.4	79.2	41.7	29.4	45.5	55.8	54.0	54.5	70.4	73.4
Progression Factor	0.78	0.68	0.66	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.6	1.0	0.8	5.7	1.1	0.0	21.4	0.1	0.1	3.5	5.2	31.4
Delay (s)	72.0	26.6	21.4	84.9	42.8	29.4	66.9	55.8	54.1	58.1	75.6	104.8
Level of Service	E	C	C	F	D	C	E	E	D	E	E	F
Approach Delay (s)		32.2			47.1			60.7			84.1	
Approach LOS		C			D			E			F	
Intersection Summary												
HCM 2000 Control Delay			49.9			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			180.0	Sum of lost time (s)					20.2			
Intersection Capacity Utilization			85.1%	ICU Level of Service			E					
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: NW 5th Terr & Sample Road



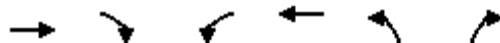
Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2538	174	1973	158	207
v/c Ratio	0.59	0.79	0.52	0.69	0.54
Control Delay	17.8	78.2	2.0	64.9	11.3
Queue Delay	0.0	1.5	0.1	0.0	0.0
Total Delay	17.8	79.7	2.0	64.9	11.3
Queue Length 50th (ft)	296	104	35	119	0
Queue Length 95th (ft)	374	#237	32	181	65
Internal Link Dist (ft)	575		175	531	
Turn Bay Length (ft)					
Base Capacity (vph)	4279	221	3791	545	631
Starvation Cap Reductn	0	7	458	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.59	0.81	0.59	0.29	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

1: NW 5th Terr & Sample Road



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑		↵	↑↑↑	↵	↵
Traffic Volume (vph)	2220	115	160	1815	145	190
Future Volume (vph)	2220	115	160	1815	145	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	9.0	9.0
Lane Util. Factor	0.81		1.00	0.91	1.00	1.00
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)	7488		1770	5085	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	7488		1770	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2413	125	174	1973	158	207
RTOR Reduction (vph)	5	0	0	0	0	180
Lane Group Flow (vph)	2533	0	174	1973	158	27
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2 3		1	1 2 3	4	
Permitted Phases					4	4
Actuated Green, G (s)	66.5		13.0	87.5	15.5	15.5
Effective Green, g (s)	68.5		15.0	89.5	15.5	15.5
Actuated g/C Ratio	0.57		0.12	0.75	0.13	0.13
Clearance Time (s)			8.0		9.0	9.0
Vehicle Extension (s)			1.5		2.0	2.0
Lane Grp Cap (vph)	4274		221	3792	228	204
v/s Ratio Prot	c0.34		c0.10	0.39	c0.09	
v/s Ratio Perm						0.02
v/c Ratio	0.59		0.79	0.52	0.69	0.13
Uniform Delay, d1	16.7		51.0	6.3	50.0	46.3
Progression Factor	1.00		1.10	0.22	1.00	1.00
Incremental Delay, d2	0.1		14.1	0.1	7.1	0.1
Delay (s)	16.8		69.9	1.4	57.1	46.4
Level of Service	B		E	A	E	D
Approach Delay (s)	16.8			7.0	51.0	
Approach LOS	B			A	D	

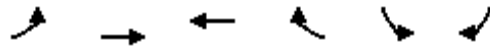
Intersection Summary

HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	61.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Queues

2: Sample Road & NW 5th Ave



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	103	2516	1967	92	272	179
v/c Ratio	0.78	0.53	0.49	0.09	0.61	0.53
Control Delay	70.9	2.7	10.7	1.2	54.8	15.9
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	70.9	2.7	10.7	1.2	54.8	15.9
Queue Length 50th (ft)	79	29	227	1	104	17
Queue Length 95th (ft)	m#175	46	278	m5	140	81
Internal Link Dist (ft)		175	1004		271	
Turn Bay Length (ft)				450		
Base Capacity (vph)	132	4778	3977	1017	1058	595
Starvation Cap Reductn	0	476	0	0	0	0
Spillback Cap Reductn	0	0	40	0	0	5
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.58	0.50	0.09	0.26	0.30

Intersection Summary

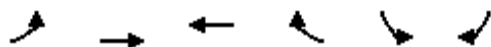
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Sample Road & NW 5th Ave



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	95	2315	1810	85	250	165
Future Volume (vph)	95	2315	1810	85	250	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	9.0	9.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.97	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	6408	6408	1583	3433	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	6408	6408	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	2516	1967	92	272	179
RTOR Reduction (vph)	0	0	0	35	0	135
Lane Group Flow (vph)	103	2516	1967	57	272	44
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	3	1 2 3	1 2		4	
Permitted Phases				1 2		4
Actuated Green, G (s)	7.0	87.5	72.5	72.5	15.5	15.5
Effective Green, g (s)	9.0	89.5	74.5	74.5	15.5	15.5
Actuated g/C Ratio	0.08	0.75	0.62	0.62	0.13	0.13
Clearance Time (s)	8.0				9.0	9.0
Vehicle Extension (s)	1.5				2.0	2.0
Lane Grp Cap (vph)	132	4779	3978	982	443	204
v/s Ratio Prot	c0.06	c0.39	0.31		c0.08	
v/s Ratio Perm				0.04		0.03
v/c Ratio	0.78	0.53	0.49	0.06	0.61	0.22
Uniform Delay, d1	54.5	6.4	12.4	8.9	49.4	46.8
Progression Factor	0.71	0.34	0.80	0.44	1.00	1.00
Incremental Delay, d2	20.0	0.0	0.0	0.0	1.8	0.2
Delay (s)	58.5	2.2	9.9	3.9	51.2	47.0
Level of Service	E	A	A	A	D	D
Approach Delay (s)		4.4	9.7		49.5	
Approach LOS		A	A		D	

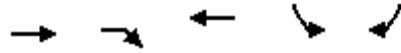
Intersection Summary

HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Queues

3: Sample Road & I-95 SB RAMP














Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	1712	1042	1478	521	563
v/c Ratio	0.47	0.66	0.52	0.60	0.80
Control Delay	6.1	9.8	7.6	22.9	31.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.1	9.8	7.6	22.9	31.2
Queue Length 50th (ft)	84	329	139	84	107
Queue Length 95th (ft)	164	453	164	128	#185
Internal Link Dist (ft)	1004		259		
Turn Bay Length (ft)		250			
Base Capacity (vph)	3605	1583	2861	886	719
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.66	0.52	0.59	0.78

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

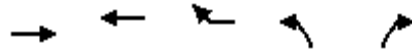
HCM Signalized Intersection Capacity Analysis

3: Sample Road & I-95 SB RAMP

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↗		↑↑↑		↘↗		↘↗		
Traffic Volume (vph)	0	1575	990	0	1360	0	495	0	535	0	0
Future Volume (vph)	0	1575	990	0	1360	0	495	0	535	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	2.0		5.5		5.5		5.5		
Lane Util. Factor		0.86	1.00		0.91		0.97		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)		6408	1583		5085		3433		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		6408	1583		5085		3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	1712	1042	0	1478	0	521	0	563	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1712	1042	0	1478	0	521	0	563	0	0
Turn Type		NA	Free		NA		Prot		Prot		
Protected Phases		6			2		3		3		
Permitted Phases			Free								
Actuated Green, G (s)		31.8	60.0		31.8		13.2		13.2		
Effective Green, g (s)		33.8	60.0		33.8		15.2		15.2		
Actuated g/C Ratio		0.56	1.00		0.56		0.25		0.25		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		3609	1583		2864		869		706		
v/s Ratio Prot		0.27			0.29		0.15		0.20		
v/s Ratio Perm			c0.66								
v/c Ratio		0.47	0.66		0.52		0.60		0.80		
Uniform Delay, d1		7.8	0.0		8.1		19.7		21.0		
Progression Factor		0.72	1.00		0.87		1.00		1.00		
Incremental Delay, d2		0.4	1.9		0.5		0.9		6.1		
Delay (s)		6.0	1.9		7.5		20.7		27.0		
Level of Service		A	A		A		C		C		
Approach Delay (s)		4.5			7.5			24.0		0.0	
Approach LOS		A			A			C		A	
Intersection Summary											
HCM 2000 Control Delay			9.3				HCM 2000 Level of Service			A	
HCM 2000 Volume to Capacity ratio			0.81								
Actuated Cycle Length (s)			60.0				Sum of lost time (s)			11.0	
Intersection Capacity Utilization			63.4%				ICU Level of Service			B	
Analysis Period (min)			15								

c Critical Lane Group

Queues















Lane Group	EBT	WBT	WBR	NBL2	NBR
Lane Group Flow (vph)	1272	1929	600	584	447
v/c Ratio	0.44	0.67	0.38	0.69	0.65
Control Delay	6.7	7.2	0.2	25.1	25.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	7.2	0.2	25.1	25.1
Queue Length 50th (ft)	109	165	0	96	81
Queue Length 95th (ft)	102	m158	m0	144	127
Internal Link Dist (ft)	270	1155			
Turn Bay Length (ft)			250		
Base Capacity (vph)	2891	2891	1583	886	719
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.44	0.67	0.38	0.66	0.62

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: I-95 NB RAMP & Sample Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	
Lane Configurations		↑↑↑			↑↑↑	↑	↑↑		↑↑			
Traffic Volume (vph)	0	1170	0	0	1775	570	555	0	425	0	0	
Future Volume (vph)	0	1170	0	0	1775	570	555	0	425	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.5			5.5	2.0	5.5		5.5			
Lane Util. Factor		0.91			0.91	1.00	0.97		0.88			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		5085			5085	1583	3433		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		5085			5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.92	0.95	0.92	0.92	
Adj. Flow (vph)	0	1272	0	0	1929	600	584	0	447	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	1272	0	0	1929	600	584	0	447	0	0	
Turn Type		NA			NA	Free	Prot		Prot			
Protected Phases		6			2		4		4			
Permitted Phases						Free						
Actuated Green, G (s)		32.1			32.1	60.0	12.9		12.9			
Effective Green, g (s)		34.1			34.1	60.0	14.9		14.9			
Actuated g/C Ratio		0.57			0.57	1.00	0.25		0.25			
Clearance Time (s)		7.5			7.5		7.5		7.5			
Vehicle Extension (s)		3.0			3.0		2.5		2.5			
Lane Grp Cap (vph)		2889			2889	1583	852		692			
v/s Ratio Prot		0.25			0.38		0.17		0.16			
v/s Ratio Perm						0.38						
v/c Ratio		0.44			0.67	0.38	0.69		0.65			
Uniform Delay, d1		7.5			9.0	0.0	20.4		20.2			
Progression Factor		0.83			0.75	1.00	1.00		1.00			
Incremental Delay, d2		0.4			0.3	0.2	2.1		1.8			
Delay (s)		6.6			7.1	0.2	22.5		22.0			
Level of Service		A			A	A	C		C			
Approach Delay (s)		6.6			5.4			22.3		0.0		
Approach LOS		A			A			C		A		
Intersection Summary												
HCM 2000 Control Delay			9.3			HCM 2000 Level of Service				A		
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)				11.0		
Intersection Capacity Utilization			59.1%			ICU Level of Service				B		
Analysis Period (min)			15									

c Critical Lane Group

Queues

5: NE 3rd Ave & Sample Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	424	1310	60	1820	250	228	82	109	223	571
v/c Ratio	1.00	0.60	0.48	0.99	0.72	0.45	0.15	0.32	0.45	1.07
Control Delay	87.9	20.8	66.9	56.9	44.6	39.3	0.6	28.9	40.3	88.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	20.8	66.9	56.9	44.6	39.3	0.6	28.9	40.3	88.2
Queue Length 50th (ft)	168	250	45	507	140	146	0	56	144	~390
Queue Length 95th (ft)	#281	301	91	#628	#220	225	0	98	222	#613
Internal Link Dist (ft)		1155		834		912			742	
Turn Bay Length (ft)	550		490		250		225	200		
Base Capacity (vph)	425	2194	131	1836	345	509	544	338	492	536
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.60	0.46	0.99	0.72	0.45	0.15	0.32	0.45	1.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: NE 3rd Ave & Sample Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	390	1060	145	55	1590	85	230	210	75	100	205	525
Future Volume (vph)	390	1060	145	55	1590	85	230	210	75	100	205	525
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91		1.00	0.91		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)	3400	4945		1752	4998		1752	1845	1568	1752	1845	1568
Flt Permitted	0.95	1.00		0.95	1.00		0.48	1.00	1.00	0.51	1.00	1.00
Satd. Flow (perm)	3400	4945		1752	4998		882	1845	1568	941	1845	1568
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)	424	1152	158	60	1728	92	250	228	82	109	223	571
RTOR Reduction (vph)	0	14	0	0	5	0	0	0	59	0	0	119
Lane Group Flow (vph)	424	1296	0	60	1815	0	250	228	23	109	223	452
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	13.0	49.5		5.5	42.0		40.1	33.1	33.1	37.9	32.0	32.0
Effective Green, g (s)	15.0	51.5		7.5	44.0		40.1	33.1	33.1	37.9	32.0	32.0
Actuated g/C Ratio	0.12	0.43		0.06	0.37		0.33	0.28	0.28	0.32	0.27	0.27
Clearance Time (s)	7.0	7.0		7.0	7.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	425	2122		109	1832		345	508	432	337	492	418
v/s Ratio Prot	c0.12	0.26		0.03	c0.36		c0.04	0.12		0.02	0.12	
v/s Ratio Perm							0.20		0.01	0.09		c0.29
v/c Ratio	1.00	0.61		0.55	0.99		0.72	0.45	0.05	0.32	0.45	1.08
Uniform Delay, d1	52.5	26.5		54.6	37.8		35.1	35.9	31.9	30.1	36.7	44.0
Progression Factor	0.89	0.77		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	40.2	1.2		3.4	18.9		6.3	0.2	0.0	0.2	0.2	67.8
Delay (s)	86.7	21.5		58.0	56.7		41.3	36.1	31.9	30.3	36.9	111.8
Level of Service	F	C		E	E		D	D	C	C	D	F
Approach Delay (s)		37.4			56.8			37.8			83.4	
Approach LOS		D			E			D			F	
Intersection Summary												
HCM 2000 Control Delay			52.8				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			1.00									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			22.0		
Intersection Capacity Utilization			92.0%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: SW 12th Avenue & Hillsboro Blvd



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	49	2294	299	2277	65	250	11	402	274	281	359
v/c Ratio	0.52	0.95	1.33	0.91	0.06	0.68	0.06	1.04	0.87	0.88	0.79
Control Delay	79.2	43.0	220.8	24.7	0.1	65.3	50.8	98.0	77.5	78.2	34.2
Queue Delay	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.2	43.0	220.8	25.8	0.1	65.3	50.8	98.0	77.5	78.2	34.2
Queue Length 50th (ft)	41	687	~172	231	0	106	8	~310	231	238	129
Queue Length 95th (ft)	#90	#873	m#248	#822	m0	146	27	#475	#369	#377	249
Internal Link Dist (ft)		580		548			436			396	
Turn Bay Length (ft)	450		375		350	225		250	200		
Base Capacity (vph)	95	2414	224	2493	1204	845	458	385	349	355	452
Starvation Cap Reductn	0	0	0	81	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.95	1.33	0.94	0.05	0.30	0.02	1.04	0.79	0.79	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.
























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

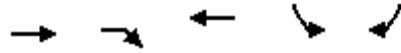
HCM Signalized Intersection Capacity Analysis

1: SW 12th Avenue & Hillsboro Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1965	145	275	2095	60	230	10	370	420	90	330
Future Volume (vph)	45	1965	145	275	2095	60	230	10	370	420	90	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.0	6.0	6.0	6.5	6.0	6.0	6.5
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	0.97	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (prot)	1770	5033		3433	5085	1583	3433	1863	1583	1681	1714	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00
Satd. Flow (perm)	1770	5033		3433	5085	1583	3433	1863	1583	1681	1714	1583
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)	49	2136	158	299	2277	65	250	11	402	457	98	359
RTOR Reduction (vph)	0	5	0	0	0	20	0	0	67	0	0	101
Lane Group Flow (vph)	49	2289	0	299	2277	45	250	11	335	274	281	258
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA		Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	pm+ov
Protected Phases	1	6		5	2	3	4	4	5	3	3	1
Permitted Phases						2			4			3
Actuated Green, G (s)	5.0	60.2		6.5	61.7	86.1	13.9	13.9	20.4	24.4	24.4	29.4
Effective Green, g (s)	7.0	62.2		8.5	63.7	90.1	13.9	13.9	20.4	24.4	24.4	29.4
Actuated g/C Ratio	0.05	0.48		0.07	0.49	0.69	0.11	0.11	0.16	0.19	0.19	0.23
Clearance Time (s)	6.5	6.5		6.5	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.5
Vehicle Extension (s)	1.5	3.0		2.0	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5
Lane Grp Cap (vph)	95	2408		224	2491	1097	367	199	248	315	321	358
v/s Ratio Prot	0.03	c0.45		c0.09	0.45	0.01	0.07	0.01	c0.07	0.16	c0.16	0.03
v/s Ratio Perm						0.02			0.14			0.14
v/c Ratio	0.52	0.95		1.33	0.91	0.04	0.68	0.06	1.35	0.87	0.88	0.72
Uniform Delay, d1	59.9	32.4		60.8	30.6	6.3	55.9	52.2	54.8	51.3	51.3	46.5
Progression Factor	1.00	1.00		1.17	0.60	0.05	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	10.0		170.1	4.7	0.0	4.1	0.0	181.3	21.0	21.7	6.0
Delay (s)	61.8	42.4		241.0	23.1	0.3	60.0	52.2	236.1	72.3	73.1	52.5
Level of Service	E	D		F	C	A	E	D	F	E	E	D
Approach Delay (s)		42.8			47.2			166.7			64.7	
Approach LOS		D			D			F			E	
Intersection Summary												
HCM 2000 Control Delay			60.1				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)			23.0		
Intersection Capacity Utilization			92.3%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

2: Hillsboro Blvd & I-95 SB RAMP



Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	2092	874	1989	695	632
v/c Ratio	0.41	0.55	0.80	0.89	0.51
Control Delay	0.1	1.2	24.6	47.4	27.2
Queue Delay	0.0	0.0	0.7	0.0	0.0
Total Delay	0.1	1.2	25.3	47.4	27.2
Queue Length 50th (ft)	0	0	400	512	207
Queue Length 95th (ft)	m0	m0	628	669	256
Internal Link Dist (ft)	548		319		
Turn Bay Length (ft)		150			
Base Capacity (vph)	5085	1583	2483	850	1339
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	202	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.41	0.55	0.87	0.82	0.47

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Hillsboro Blvd & I-95 SB RAMP



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↑		↑↑↑		↑		↑↑		
Traffic Volume (vph)	0	1925	830	0	1830	0	660	0	600	0	0
Future Volume (vph)	0	1925	830	0	1830	0	660	0	600	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		2.0	2.0		4.5		4.5		4.5		
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		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	2092	874	0	1989	0	695	0	632	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2092	874	0	1989	0	695	0	632	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type		NA	Perm		NA		Prot		Prot		
Protected Phases		Free!			2		8!		3		
Permitted Phases			Free								
Actuated Green, G (s)		130.0	130.0		61.5		55.5		55.5		
Effective Green, g (s)		130.0	130.0		63.5		57.5		57.5		
Actuated g/C Ratio		1.00	1.00		0.49		0.44		0.44		
Clearance Time (s)					6.5		6.5		6.5		
Vehicle Extension (s)					3.0		2.5		2.5		
Lane Grp Cap (vph)		5085	1583		2483		782		1232		
v/s Ratio Prot		0.41			c0.39		c0.39		0.23		
v/s Ratio Perm			0.55								
v/c Ratio		0.41	0.55		0.80		0.89		0.51		
Uniform Delay, d1		0.0	0.0		27.9		33.3		26.1		
Progression Factor		1.00	1.00		0.78		1.00		1.00		
Incremental Delay, d2		0.1	0.5		1.9		11.9		0.3		
Delay (s)		0.1	0.5		23.6		45.2		26.4		
Level of Service		A	A		C		D		C		
Approach Delay (s)		0.2			23.6			36.3		0.0	
Approach LOS		A			C			D		A	

Intersection Summary

HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Queues

3: I-95 NB Ramp & Hillsboro Blvd



Lane Group	EBT	WBT	WBR	NBL	NBR
Lane Group Flow (vph)	2103	2348	804	630	821
v/c Ratio	0.73	0.81	0.51	0.38	0.85
Control Delay	13.4	12.1	0.9	17.3	29.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.4	12.1	0.9	17.3	29.0
Queue Length 50th (ft)	226	228	0	65	155
Queue Length 95th (ft)	236	m320	m0	92	#263
Internal Link Dist (ft)	286	371			
Turn Bay Length (ft)			250	350	350
Base Capacity (vph)	2883	2883	1568	1688	982
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.73	0.81	0.51	0.37	0.84

Intersection Summary













95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

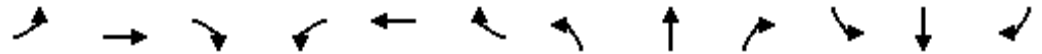
HCM Signalized Intersection Capacity Analysis

3: I-95 NB Ramp & Hillsboro Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑	↑	↑↑↑		↑↑			
Traffic Volume (vph)	0	1935	0	0	2160	740	580	0	780	0	0	0
Future Volume (vph)	0	1935	0	0	2160	740	580	0	780	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5	2.0	2.0		2.0			
Lane Util. Factor		0.91			0.91	1.00	0.94		0.88			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		5085			5085	1568	4990		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		5085			5085	1568	4990		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	2103	0	0	2348	804	630	0	821	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	39	0	0	0
Lane Group Flow (vph)	0	2103	0	0	2348	804	630	0	782	0	0	0
Heavy Vehicles (%)	3%	2%	2%	2%	2%	3%	2%	3%	2%	3%	3%	3%
Turn Type		NA			NA	Free	Prot		Prot			
Protected Phases		6			2		4		4			
Permitted Phases						Free						
Actuated Green, G (s)		34.9			34.9	65.0	19.6		19.6			
Effective Green, g (s)		36.9			36.9	65.0	21.6		21.6			
Actuated g/C Ratio		0.57			0.57	1.00	0.33		0.33			
Clearance Time (s)		6.5			6.5		4.0		4.0			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		2886			2886	1568	1658		926			
v/s Ratio Prot		0.41			c0.46		0.13		c0.28			
v/s Ratio Perm						0.51						
v/c Ratio		0.73			0.81	0.51	0.38		0.84			
Uniform Delay, d1		10.4			11.3	0.0	16.6		20.1			
Progression Factor		1.13			0.93	1.00	1.00		1.00			
Incremental Delay, d2		1.4			1.4	0.6	0.1		7.1			
Delay (s)		13.1			11.8	0.6	16.7		27.2			
Level of Service		B			B	A	B		C			
Approach Delay (s)		13.1			9.0			22.7			0.0	
Approach LOS		B			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			13.2			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.82									
Actuated Cycle Length (s)			65.0			Sum of lost time (s)				6.5		
Intersection Capacity Utilization			71.8%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	103	2511	337	152	2500	38	315	11	141	37	54	337
v/c Ratio	0.56	0.88	0.36	1.18	0.85	0.04	1.08	0.03	0.34	0.12	0.17	0.87
Control Delay	71.5	22.9	7.0	185.9	27.5	0.1	119.9	39.6	8.4	34.6	43.3	52.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.5	22.9	7.0	185.9	27.5	0.1	119.9	39.6	8.4	34.6	43.3	52.7
Queue Length 50th (ft)	42	556	73	~153	610	0	~276	8	0	24	39	174
Queue Length 95th (ft)	m57	#915	m173	#295	#886	0	#343	23	52	47	70	265
Internal Link Dist (ft)		660			631			513			402	
Turn Bay Length (ft)	300		150	100		200	125					340
Base Capacity (vph)	184	2846	943	129	2944	971	293	544	562	298	544	557
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.88	0.36	1.18	0.85	0.04	1.08	0.02	0.25	0.12	0.10	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.






























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.













HCM Signalized Intersection Capacity Analysis

4: SW Natura Boulevard/Fairway Drive & Hillsboro Blvd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  							
Traffic Volume (vph)	95	2310	310	140	2300	35	290	10	130	34	50	310
Future Volume (vph)	95	2310	310	140	2300	35	290	10	130	34	50	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	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	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	5085	1583	1770	5085	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.70	1.00	1.00	0.75	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	1770	5085	1583	1301	1863	1583	1398	1863	1583
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)	103	2511	337	152	2500	38	315	11	141	37	54	337
RTOR Reduction (vph)	0	0	58	0	0	16	0	0	114	0	0	109
Lane Group Flow (vph)	103	2511	279	152	2500	22	315	11	27	37	54	228
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Actuated Green, G (s)	5.0	69.6	69.6	7.5	72.1	72.1	28.7	24.7	24.7	27.1	23.9	23.9
Effective Green, g (s)	7.0	71.6	71.6	9.5	74.1	74.1	28.7	24.7	24.7	27.1	23.9	23.9
Actuated g/C Ratio	0.05	0.55	0.55	0.07	0.57	0.57	0.22	0.19	0.19	0.21	0.18	0.18
Clearance Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	3.0	3.0	1.5	3.0	3.0	1.5	2.0	2.0	2.0	2.0	2.0
Lane Grp Cap (vph)	184	2800	871	129	2898	902	301	353	300	300	342	291
v/s Ratio Prot	0.03	c0.49		c0.09	0.49		c0.03	0.01		0.00	0.03	
v/s Ratio Perm			0.18			0.01	c0.20		0.02	0.02		0.14
v/c Ratio	0.56	0.90	0.32	1.18	0.86	0.02	1.05	0.03	0.09	0.12	0.16	0.78
Uniform Delay, d1	60.0	25.9	15.9	60.2	23.6	12.2	50.4	42.9	43.4	41.6	44.6	50.6
Progression Factor	1.06	0.74	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.3	3.3	0.6	135.0	3.7	0.0	64.6	0.0	0.0	0.1	0.1	11.9
Delay (s)	64.8	22.5	10.1	195.3	27.3	12.2	114.9	42.9	43.4	41.7	44.7	62.5
Level of Service	E	C	B	F	C	B	F	D	D	D	D	E
Approach Delay (s)		22.5			36.6			91.6			58.4	
Approach LOS		C			D			F			E	
Intersection Summary												
HCM 2000 Control Delay			35.6				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.96									
Actuated Cycle Length (s)			130.0				Sum of lost time (s)		21.0			
Intersection Capacity Utilization			93.5%				ICU Level of Service		F			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: S Military Trail & SR 869/SW 10th Street

























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	359	978	201	538	1261	587	310	636	424	478	902	668
v/c Ratio	0.97	0.89	0.26	0.96	0.98	0.65	0.99	0.72	0.55	0.87	0.80	1.02
Control Delay	117.3	70.3	7.6	83.6	79.4	40.3	126.9	67.5	29.4	91.0	62.9	79.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	117.3	70.3	7.6	83.6	79.4	40.3	126.9	67.5	29.4	91.0	62.9	79.2
Queue Length 50th (ft)	221	583	23	336	788	442	192	368	272	287	517	-642
Queue Length 95th (ft)	#330	677	79	m#408	#938	m510	#301	444	389	#367	604	#899
Internal Link Dist (ft)		620			1082			752			457	
Turn Bay Length (ft)	550		500	550		500	300		300	650		650
Base Capacity (vph)	371	1097	767	558	1289	906	314	882	767	566	1122	655
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.89	0.26	0.96	0.98	0.65	0.99	0.72	0.55	0.84	0.80	1.02

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

1: S Military Trail & SR 869/SW 10th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	900	185	495	1160	540	285	585	390	440	830	615
Future Volume (vph)	330	900	185	495	1160	540	285	585	390	440	830	615
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	4.0	5.9	5.5	4.0	5.9	5.9	5.9	5.5	5.9	5.9	5.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
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	3433	3539	1583	3433	3539	1583	3433	3539	1583
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	3433	3539	1583	3433	3539	1583	3433	3539	1583
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)	359	978	201	538	1261	587	310	636	424	478	902	668
RTOR Reduction (vph)	0	0	101	0	0	36	0	0	67	0	0	153
Lane Group Flow (vph)	359	978	100	538	1261	551	310	636	357	478	902	515
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	1	6	7	5	2	3	7	4	5	3	8	
Permitted Phases			6			2			4			8
Actuated Green, G (s)	17.5	53.8	68.3	27.3	63.6	90.3	14.5	42.9	70.2	26.7	55.1	55.1
Effective Green, g (s)	19.5	55.8	72.3	29.3	65.6	94.3	16.5	44.9	74.2	28.7	57.1	57.1
Actuated g/C Ratio	0.11	0.31	0.40	0.16	0.36	0.52	0.09	0.25	0.41	0.16	0.32	0.32
Clearance Time (s)	7.5	6.0	7.9	7.5	6.0	7.9	7.9	7.9	7.5	7.9	7.9	7.9
Vehicle Extension (s)	2.0	3.0	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0	3.0	3.0
Lane Grp Cap (vph)	371	1097	635	558	1289	829	314	882	652	547	1122	502
v/s Ratio Prot	0.10	0.28	0.01	c0.16	c0.36	0.11	0.09	0.18	0.09	c0.14	0.25	
v/s Ratio Perm			0.05			0.24			0.14			c0.33
v/c Ratio	0.97	0.89	0.16	0.96	0.98	0.67	0.99	0.72	0.55	0.87	0.80	1.03
Uniform Delay, d1	79.9	59.2	34.4	74.8	56.5	31.3	81.6	61.8	40.2	73.9	56.3	61.5
Progression Factor	1.00	1.00	1.00	0.88	1.20	1.54	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	37.6	11.0	0.0	18.0	12.8	0.7	46.8	2.9	0.5	14.0	4.3	47.0
Delay (s)	117.5	70.2	34.4	83.5	80.7	49.1	128.4	64.7	40.7	87.9	60.6	108.4
Level of Service	F	E	C	F	F	D	F	E	D	F	E	F
Approach Delay (s)		76.6			73.6			71.7			82.6	
Approach LOS		E			E			E			F	
Intersection Summary												
HCM 2000 Control Delay			76.4				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)			21.3			
Intersection Capacity Utilization			91.4%			ICU Level of Service			F			
Analysis Period (min)			15									

c Critical Lane Group

Queues

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	103	2125	136	1973	130	246	243	511	168	554
v/c Ratio	0.69	0.82	0.61	0.91	0.18	0.68	0.66	0.88	0.55	0.91
Control Delay	82.9	31.1	95.8	57.6	8.5	74.8	74.1	59.0	71.8	73.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.9	31.1	95.8	57.6	8.5	74.8	74.1	59.0	71.8	73.0
Queue Length 50th (ft)	61	577	85	766	16	282	277	434	179	311
Queue Length 95th (ft)	m79	622	m117	858	m45	394	389	#640	266	#432
Internal Link Dist (ft)		818		925			616		185	
Turn Bay Length (ft)	700		750		750			150		
Base Capacity (vph)	149	2593	228	2172	725	373	375	582	316	618
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.82	0.60	0.91	0.18	0.66	0.65	0.88	0.53	0.90

Intersection Summary























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

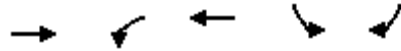
HCM Signalized Intersection Capacity Analysis

2: Newport Center Dr/SW 12th Avenue & SR 869/SW 10th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	1870	85	125	1815	120	435	15	470	150	5	510
Future Volume (vph)	95	1870	85	125	1815	120	435	15	470	150	5	510
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	6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	0.97	0.86		0.97	0.91	1.00	0.95	0.95	1.00		1.00	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	0.96	1.00		0.95	1.00
Satd. Flow (prot)	3367	6366		3433	5085	1524	1681	1691	1583		1542	2030
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	0.96	1.00		0.95	1.00
Satd. Flow (perm)	3367	6366		3433	5085	1524	1681	1691	1583		1542	2030
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)	103	2033	92	136	1973	130	473	16	511	163	5	554
RTOR Reduction (vph)	0	4	0	0	0	74	0	0	101	0	0	67
Lane Group Flow (vph)	103	2121	0	136	1973	56	246	243	410	0	168	487
Heavy Vehicles (%)	4%	2%	2%	2%	2%	6%	2%	2%	2%	18%	2%	40%
Turn Type	Prot	NA		Prot	NA	Prot	Split	NA	pt+ov	Split	NA	pt+ov
Protected Phases	1	6		5	2	2	3	3	3 5	4	4	4 1
Permitted Phases												
Actuated Green, G (s)	6.0	71.2		9.7	74.9	74.9	39.0	39.0	54.7		36.1	48.1
Effective Green, g (s)	8.0	73.2		11.7	76.9	76.9	39.0	39.0	54.7		36.1	48.1
Actuated g/C Ratio	0.04	0.41		0.06	0.43	0.43	0.22	0.22	0.30		0.20	0.27
Clearance Time (s)	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	1.5	3.0		2.5	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	149	2588		223	2172	651	364	366	481		309	542
v/s Ratio Prot	0.03	c0.33		0.04	c0.39	0.04	0.15	0.14	c0.26		0.11	c0.24
v/s Ratio Perm												
v/c Ratio	0.69	0.82		0.61	0.91	0.09	0.68	0.66	0.85		0.54	0.90
Uniform Delay, d1	84.8	47.5		81.9	48.3	30.6	64.7	64.5	58.9		64.6	63.6
Progression Factor	0.77	0.60		1.05	1.06	1.79	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	7.8	2.2		3.3	5.9	0.2	4.9	4.5	13.6		2.0	17.6
Delay (s)	73.2	30.8		88.9	57.2	55.1	69.6	69.0	72.5		66.5	81.2
Level of Service	E	C		F	E	E	E	E	E		E	F
Approach Delay (s)		32.7			59.0			70.9			77.8	
Approach LOS		C			E			E			E	
Intersection Summary												
HCM 2000 Control Delay			53.7				HCM 2000 Level of Service		D			
HCM 2000 Volume to Capacity ratio			0.95									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)		22.0			
Intersection Capacity Utilization			79.5%				ICU Level of Service		D			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

3: SR 869/SW 10th Street & I-95 SB Off-Ramp



Lane Group	EBT	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	2682	811	1620	316	600
v/c Ratio	1.12dr	0.82	0.44	0.40	0.93
Control Delay	59.1	40.2	8.4	60.4	89.3
Queue Delay	0.0	0.0	0.1	0.0	0.0
Total Delay	59.1	40.2	8.5	60.4	89.3
Queue Length 50th (ft)	812	350	183	164	399
Queue Length 95th (ft)	837	398	202	215	#527
Internal Link Dist (ft)	925		315		
Turn Bay Length (ft)		500		500	500
Base Capacity (vph)	2849	991	3658	793	644
Starvation Cap Reductn	0	0	851	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	0.82	0.58	0.40	0.93

Intersection Summary


















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

3: SR 869/SW 10th Street & I-95 SB Off-Ramp

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1780	710	770	1490	0	0	0	0	300	0	570
Future Volume (vph)	0	1780	710	770	1490	0	0	0	0	300	0	570
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.5					4.4		4.4
Lane Util. Factor		0.81		0.97	0.91					0.97		0.88
Frt		0.96		1.00	1.00					1.00		0.85
Flt Protected		1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)		7229		3433	5085					3433		2787
Flt Permitted		1.00		0.95	1.00					0.95		1.00
Satd. Flow (perm)		7229		3433	5085					3433		2787
Peak-hour factor, PHF	0.92	0.92	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	1935	747	811	1620	0	0	0	0	316	0	600
RTOR Reduction (vph)	0	39	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2644	0	811	1620	0	0	0	0	316	0	600
Turn Type		NA		Prot	NA					Prot		Prot
Protected Phases		6		5 4	2 4					3		3
Permitted Phases												
Actuated Green, G (s)		68.0		47.6	127.6					39.6		39.6
Effective Green, g (s)		70.0		51.6	129.6					41.6		41.6
Actuated g/C Ratio		0.39		0.29	0.72					0.23		0.23
Clearance Time (s)		6.0								6.4		6.4
Vehicle Extension (s)		3.0								2.0		2.0
Lane Grp Cap (vph)		2811		984	3661					793		644
v/s Ratio Prot		c0.37		c0.24	0.32					0.09		c0.22
v/s Ratio Perm												
v/c Ratio		1.12dr		0.82	0.44					0.40		0.93
Uniform Delay, d1		53.0		60.0	10.4					58.6		67.8
Progression Factor		1.05		0.94	0.76					1.00		1.00
Incremental Delay, d2		4.8		5.3	0.1					0.1		20.1
Delay (s)		60.5		61.8	8.0					58.7		87.9
Level of Service		E		E	A					E		F
Approach Delay (s)		60.5			26.0			0.0			77.9	
Approach LOS		E			C			A			E	
Intersection Summary												
HCM 2000 Control Delay			49.2			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			180.0			Sum of lost time (s)				16.8		
Intersection Capacity Utilization			70.7%			ICU Level of Service				C		
Analysis Period (min)			15									
dr Defacto Right Lane. Recode with 1 though lane as a right lane.												
c Critical Lane Group												

Queues

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street



Lane Group	EBT	EBR	WBT	NBL	NBR
Lane Group Flow (vph)	1326	905	2239	547	716
v/c Ratio	0.42	0.32	0.40	0.52	0.95
Control Delay	4.9	0.1	5.3	65.4	92.0
Queue Delay	0.0	0.0	0.1	0.0	0.0
Total Delay	4.9	0.1	5.3	65.4	92.0
Queue Length 50th (ft)	65	0	131	206	371
Queue Length 95th (ft)	m98	m0	127	249	#477
Internal Link Dist (ft)	240		630	1225	
Turn Bay Length (ft)		700		410	430
Base Capacity (vph)	3164	2787	5595	1042	754
Starvation Cap Reductn	186	0	1154	0	0
Spillback Cap Reductn	40	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.45	0.32	0.50	0.52	0.95

Intersection Summary

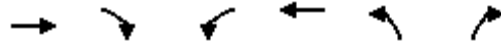
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: I-95 NB On/Off-Ramp & SR 869/SW 10th Street



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↑		↑↑↑↑	↑↑↑	↑↑↑
Traffic Volume (vph)	1220	860	0	2060	520	680
Future Volume (vph)	1220	860	0	2060	520	680
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	2.0		4.5	4.4	4.4
Lane Util. Factor	0.91	0.88		0.81	0.94	0.76
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	2787		7544	4990	3610
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	5085	2787		7544	4990	3610
Peak-hour factor, PHF	0.92	0.95	0.92	0.92	0.95	0.95
Adj. Flow (vph)	1326	905	0	2239	547	716
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1326	905	0	2239	547	716
Turn Type	NA	Free		NA	Prot	Prot
Protected Phases	6 3			2 3	4	4
Permitted Phases		Free				
Actuated Green, G (s)	107.6	180.0		131.5	35.6	35.6
Effective Green, g (s)	111.6	180.0		129.1	37.6	37.6
Actuated g/C Ratio	0.62	1.00		0.72	0.21	0.21
Clearance Time (s)					6.4	6.4
Vehicle Extension (s)					3.5	3.5
Lane Grp Cap (vph)	3152	2787		5410	1042	754
v/s Ratio Prot	c0.26			c0.30	0.11	c0.20
v/s Ratio Perm		0.32				
v/c Ratio	0.42	0.32		0.41	0.52	0.95
Uniform Delay, d1	17.6	0.0		10.2	63.3	70.3
Progression Factor	0.48	1.00		0.60	1.00	1.00
Incremental Delay, d2	0.0	0.1		0.0	0.5	21.3
Delay (s)	8.4	0.1		6.1	63.8	91.5
Level of Service	A	A		A	E	F
Approach Delay (s)	5.1			6.1	79.5	
Approach LOS	A			A	E	

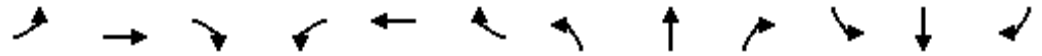
Intersection Summary

HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	54.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Queues

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	321	1435	310	375	1467	147	332	201	245	299	337	440
v/c Ratio	0.82	0.75	0.42	0.84	0.73	0.21	0.91	0.22	0.42	0.66	0.90	0.86
Control Delay	80.5	67.0	27.1	93.4	50.4	9.6	78.3	52.7	7.3	45.7	95.8	47.0
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.5	67.3	27.1	93.4	50.4	9.6	78.3	52.7	7.3	45.7	95.8	47.0
Queue Length 50th (ft)	205	480	120	225	561	17	316	98	0	242	389	245
Queue Length 95th (ft)	m245	m583	m181	287	639	72	#480	133	72	318	507	393
Internal Link Dist (ft)		630			1233			1112			1327	
Turn Bay Length (ft)	300		300	200		300	260		260	170		170
Base Capacity (vph)	411	1923	742	469	2003	699	377	1006	625	465	427	549
Starvation Cap Reductn	0	114	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.79	0.42	0.80	0.73	0.21	0.88	0.20	0.39	0.64	0.79	0.80

Intersection Summary

























95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

5: Research Park Boulevard/SW Natura Boulevard & SR 869/SW 10th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	295	1320	285	345	1350	135	305	185	225	275	310	405
Future Volume (vph)	295	1320	285	345	1350	135	305	185	225	275	310	405
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.4	4.4	4.4	4.4	4.4	4.4	5.7	5.7	5.7	5.7	5.7	5.7
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.95	1.00	1.00	1.00	1.00
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	5085	1583	3433	5085	1583	1770	3539	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.12	1.00	1.00	0.63	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	223	3539	1583	1165	1863	1583
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)	321	1435	310	375	1467	147	332	201	245	299	337	440
RTOR Reduction (vph)	0	0	144	0	0	75	0	0	183	0	0	193
Lane Group Flow (vph)	321	1435	166	375	1467	72	332	201	62	299	337	247
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2	4		4	8		8
Actuated Green, G (s)	18.6	66.1	66.1	21.4	68.9	68.9	74.0	45.8	45.8	58.9	36.4	36.4
Effective Green, g (s)	20.6	68.1	68.1	23.4	70.9	70.9	74.0	45.8	45.8	58.9	36.4	36.4
Actuated g/C Ratio	0.11	0.38	0.38	0.13	0.39	0.39	0.41	0.25	0.25	0.33	0.20	0.20
Clearance Time (s)	6.4	6.4	6.4	6.4	6.4	6.4	5.7	5.7	5.7	5.7	5.7	5.7
Vehicle Extension (s)	1.5	3.0	3.0	1.5	3.0	3.0	1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	392	1923	598	446	2002	623	365	900	402	456	376	320
v/s Ratio Prot	0.09	0.28		c0.11	c0.29		c0.16	0.06		0.08	0.18	
v/s Ratio Perm			0.11			0.05	c0.21		0.04	0.13		0.16
v/c Ratio	0.82	0.75	0.28	0.84	0.73	0.12	0.91	0.22	0.16	0.66	0.90	0.77
Uniform Delay, d1	77.9	48.5	38.9	76.5	46.5	34.6	52.8	53.0	52.1	49.1	70.0	67.9
Progression Factor	0.85	1.30	2.23	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.8	1.3	0.2	12.9	2.4	0.4	25.1	0.0	0.1	2.6	22.4	10.0
Delay (s)	76.1	64.1	86.8	89.3	48.9	35.0	78.0	53.1	52.1	51.7	92.4	77.9
Level of Service	E	E	F	F	D	D	E	D	D	D	F	E
Approach Delay (s)		69.4			55.5			63.4			75.1	
Approach LOS		E			E			E			E	
Intersection Summary												
HCM 2000 Control Delay			65.0				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)			20.2		
Intersection Capacity Utilization			85.4%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

1: NW 5th Terr & Sample Road



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	2761	272	2538	125	130
v/c Ratio	0.64	0.95	0.64	0.67	0.46
Control Delay	20.1	95.0	2.3	72.8	13.6
Queue Delay	0.0	43.4	0.3	0.0	0.0
Total Delay	20.2	138.4	2.6	72.8	13.6
Queue Length 50th (ft)	370	197	54	103	0
Queue Length 95th (ft)	444	#394	41	164	58
Internal Link Dist (ft)	575		175	531	
Turn Bay Length (ft)					
Base Capacity (vph)	4288	285	3961	503	543
Starvation Cap Reductn	0	56	613	0	0
Spillback Cap Reductn	154	0	0	0	2
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.67	1.19	0.76	0.25	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

1: NW 5th Terr & Sample Road

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↑		↘	↑↑↑	↘	↗
Traffic Volume (vph)	2445	95	250	2335	115	120
Future Volume (vph)	2445	95	250	2335	115	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0	9.0	9.0
Lane Util. Factor	0.81		1.00	0.91	1.00	1.00
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)	7502		1770	5085	1770	1583
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	7502		1770	5085	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2658	103	272	2538	125	130
RTOR Reduction (vph)	3	0	0	0	0	116
Lane Group Flow (vph)	2758	0	272	2538	125	14
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	2 3		1	1 2 3	4	
Permitted Phases					4	4
Actuated Green, G (s)	72.3		19.0	99.3	13.7	13.7
Effective Green, g (s)	74.3		21.0	101.3	13.7	13.7
Actuated g/C Ratio	0.57		0.16	0.78	0.11	0.11
Clearance Time (s)			8.0		9.0	9.0
Vehicle Extension (s)			1.5		2.0	2.0
Lane Grp Cap (vph)	4287		285	3962	186	166
v/s Ratio Prot	c0.37		c0.15	c0.50	c0.07	
v/s Ratio Perm						0.01
v/c Ratio	0.64		0.95	0.64	0.67	0.08
Uniform Delay, d1	18.9		54.0	6.3	56.0	52.5
Progression Factor	1.00		1.09	0.25	1.00	1.00
Incremental Delay, d2	0.3		34.5	0.2	7.3	0.1
Delay (s)	19.1		93.5	1.8	63.3	52.6
Level of Service	B		F	A	E	D
Approach Delay (s)	19.1			10.7	57.8	
Approach LOS	B			B	E	

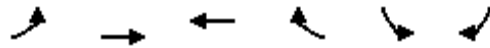
Intersection Summary

HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Queues

2: Sample Road & NW 5th Ave



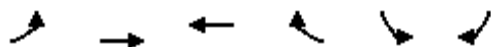
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	196	2592	2641	315	207	168
v/c Ratio	1.03	0.52	0.66	0.28	0.57	0.53
Control Delay	107.1	2.2	12.8	1.1	61.0	13.6
Queue Delay	0.0	0.1	0.1	0.0	0.0	0.1
Total Delay	107.1	2.2	12.9	1.1	61.0	13.8
Queue Length 50th (ft)	~177	25	333	11	87	0
Queue Length 95th (ft)	#335	38	429	m21	122	65
Internal Link Dist (ft)		175	1004		271	
Turn Bay Length (ft)				450		
Base Capacity (vph)	190	4992	4006	1107	977	570
Starvation Cap Reductn	0	737	0	0	0	0
Spillback Cap Reductn	0	0	188	0	0	60
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.61	0.69	0.28	0.21	0.33

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: Sample Road & NW 5th Ave



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	180	2385	2430	290	190	155
Future Volume (vph)	180	2385	2430	290	190	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	9.0	9.0
Lane Util. Factor	1.00	0.86	0.86	1.00	0.97	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	6408	6408	1583	3433	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	6408	6408	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	196	2592	2641	315	207	168
RTOR Reduction (vph)	0	0	0	118	0	150
Lane Group Flow (vph)	196	2592	2641	197	207	18
Turn Type	Prot	NA	NA	Perm	Prot	Perm
Protected Phases	3	1 2 3	1 2		4	
Permitted Phases				1 2		4
Actuated Green, G (s)	12.0	99.3	79.3	79.3	13.7	13.7
Effective Green, g (s)	14.0	101.3	81.3	81.3	13.7	13.7
Actuated g/C Ratio	0.11	0.78	0.63	0.63	0.11	0.11
Clearance Time (s)	8.0				9.0	9.0
Vehicle Extension (s)	1.5				2.0	2.0
Lane Grp Cap (vph)	190	4993	4007	989	361	166
v/s Ratio Prot	c0.11	0.40	c0.41		c0.06	
v/s Ratio Perm				0.12		0.01
v/c Ratio	1.03	0.52	0.66	0.20	0.57	0.11
Uniform Delay, d1	58.0	5.3	15.5	10.4	55.4	52.6
Progression Factor	0.68	0.33	0.77	0.58	1.00	1.00
Incremental Delay, d2	66.1	0.0	0.2	0.0	1.4	0.1
Delay (s)	105.6	1.8	12.0	6.1	56.7	52.7
Level of Service	F	A	B	A	E	D
Approach Delay (s)		9.1	11.4		54.9	
Approach LOS		A	B		D	

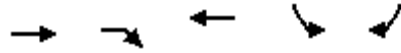
Intersection Summary

HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	27.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Queues

3: Sample Road & I-95 SB RAMP














Lane Group	EBT	EBR	WBT	SBL2	SBR
Lane Group Flow (vph)	2060	716	2130	568	800
v/c Ratio	0.62	0.45	0.81	0.52	0.91
Control Delay	12.4	2.0	15.5	20.4	38.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.4	2.0	15.5	20.4	38.6
Queue Length 50th (ft)	243	12	282	93	170
Queue Length 95th (ft)	346	47	294	137	#285
Internal Link Dist (ft)	1004		259		
Turn Bay Length (ft)		250			
Base Capacity (vph)	3302	1583	2620	1082	878
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	0.45	0.81	0.52	0.91

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

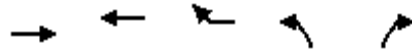
3: Sample Road & I-95 SB RAMP

											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↗		↑↑↑		↘↘		↘↘		
Traffic Volume (vph)	0	1895	680	0	1960	0	540	0	760	0	0
Future Volume (vph)	0	1895	680	0	1960	0	540	0	760	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	2.0		5.5		5.5		5.5		
Lane Util. Factor		0.86	1.00		0.91		0.97		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)		6408	1583		5085		3433		2787		
Flt Permitted		1.00	1.00		1.00		0.95		1.00		
Satd. Flow (perm)		6408	1583		5085		3433		2787		
Peak-hour factor, PHF	0.92	0.92	0.95	0.92	0.92	0.92	0.95	0.92	0.95	0.92	0.92
Adj. Flow (vph)	0	2060	716	0	2130	0	568	0	800	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2060	716	0	2130	0	568	0	800	0	0
Turn Type		NA	Free		NA		Prot		Prot		
Protected Phases		6			2		3		3		
Permitted Phases			Free								
Actuated Green, G (s)		31.5	65.0		31.5		18.5		18.5		
Effective Green, g (s)		33.5	65.0		33.5		20.5		20.5		
Actuated g/C Ratio		0.52	1.00		0.52		0.32		0.32		
Clearance Time (s)		7.5			7.5		7.5		7.5		
Vehicle Extension (s)		3.0			3.0		2.5		2.5		
Lane Grp Cap (vph)		3302	1583		2620		1082		878		
v/s Ratio Prot		0.32			0.42		0.17		0.29		
v/s Ratio Perm			0.45								
v/c Ratio		0.62	0.45		0.81		0.52		0.91		
Uniform Delay, d1		11.2	0.0		13.1		18.3		21.4		
Progression Factor		1.03	1.00		1.02		1.00		1.00		
Incremental Delay, d2		0.8	0.8		1.9		0.4		13.5		
Delay (s)		12.4	0.8		15.4		18.6		34.8		
Level of Service		B	A		B		B		C		
Approach Delay (s)		9.4			15.4			28.1		0.0	
Approach LOS		A			B			C		A	
Intersection Summary											
HCM 2000 Control Delay			15.5				HCM 2000 Level of Service			B	
HCM 2000 Volume to Capacity ratio			0.85								
Actuated Cycle Length (s)			65.0				Sum of lost time (s)			11.0	
Intersection Capacity Utilization			73.6%				ICU Level of Service			D	
Analysis Period (min)			15								

c Critical Lane Group

Queues

4: I-95 NB RAMP & Sample Road















Lane Group	EBT	WBT	WBR	NBL2	NBR
Lane Group Flow (vph)	1853	1848	453	1200	716
v/c Ratio	0.73	0.73	0.29	0.84	0.62
Control Delay	17.1	18.4	0.2	40.0	32.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.1	18.4	0.2	40.0	32.0
Queue Length 50th (ft)	346	194	0	453	260
Queue Length 95th (ft)	315	m272	m0	522	318
Internal Link Dist (ft)	270	1155			
Turn Bay Length (ft)			250		
Base Capacity (vph)	2537	2537	1583	1544	1254
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.73	0.73	0.29	0.78	0.57

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: I-95 NB RAMP & Sample Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	
Lane Configurations		↑↑↑			↑↑↑	↑	↑↑		↑↑			
Traffic Volume (vph)	0	1705	0	0	1700	430	1140	0	680	0	0	
Future Volume (vph)	0	1705	0	0	1700	430	1140	0	680	0	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.5			5.5	2.0	5.5		5.5			
Lane Util. Factor		0.91			0.91	1.00	0.97		0.88			
Frt		1.00			1.00	0.85	1.00		0.85			
Flt Protected		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)		5085			5085	1583	3433		2787			
Flt Permitted		1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)		5085			5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.92	0.95	0.92	0.92	
Adj. Flow (vph)	0	1853	0	0	1848	453	1200	0	716	0	0	
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	
Lane Group Flow (vph)	0	1853	0	0	1848	453	1200	0	716	0	0	
Turn Type		NA			NA	Free	Prot		Prot			
Protected Phases		6			2		4		4			
Permitted Phases						Free						
Actuated Green, G (s)		62.9			62.9	130.0	52.1		52.1			
Effective Green, g (s)		64.9			64.9	130.0	54.1		54.1			
Actuated g/C Ratio		0.50			0.50	1.00	0.42		0.42			
Clearance Time (s)		7.5			7.5		7.5		7.5			
Vehicle Extension (s)		3.0			3.0		2.5		2.5			
Lane Grp Cap (vph)		2538			2538	1583	1428		1159			
v/s Ratio Prot		c0.36			0.36		c0.35		0.26			
v/s Ratio Perm						0.29						
v/c Ratio		0.73			0.73	0.29	0.84		0.62			
Uniform Delay, d1		25.6			25.6	0.0	34.1		29.8			
Progression Factor		0.58			0.66	1.00	1.00		1.00			
Incremental Delay, d2		0.9			0.9	0.2	4.6		0.8			
Delay (s)		15.9			17.8	0.2	38.6		30.7			
Level of Service		B			B	A	D		C			
Approach Delay (s)		15.9			14.3			35.7		0.0		
Approach LOS		B			B			D		A		
Intersection Summary												
HCM 2000 Control Delay			21.5			HCM 2000 Level of Service				C		
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			130.0			Sum of lost time (s)				11.0		
Intersection Capacity Utilization			65.9%			ICU Level of Service				C		
Analysis Period (min)			15									

c Critical Lane Group

Queues

5: NE 3rd Ave & Sample Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	511	2082	114	1777	261	337	120	87	266	418
v/c Ratio	0.97	0.84	0.93	0.86	1.09	0.82	0.24	0.51	0.76	0.89
Control Delay	87.9	28.6	125.3	40.4	120.8	64.3	1.1	42.8	63.2	47.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	28.6	125.3	40.4	120.8	64.3	1.1	42.8	63.2	47.0
Queue Length 50th (ft)	234	346	97	491	~197	272	0	53	214	184
Queue Length 95th (ft)	#343	#611	#217	#662	#280	358	0	87	291	303
Internal Link Dist (ft)		1155		834		912			742	
Turn Bay Length (ft)	550		490		250		225	200		
Base Capacity (vph)	528	2491	122	2074	240	515	583	171	458	547
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.84	0.93	0.86	1.09	0.65	0.21	0.51	0.58	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.




























Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: NE 3rd Ave & Sample Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  							
Traffic Volume (vph)	470	1700	215	105	1505	130	240	310	110	80	245	385
Future Volume (vph)	470	1700	215	105	1505	130	240	310	110	80	245	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91		1.00	0.91		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)	3433	5000		1770	5025		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.25	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	3433	5000		1770	5025		473	1863	1583	477	1863	1583
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)	511	1848	234	114	1636	141	261	337	120	87	266	418
RTOR Reduction (vph)	0	11	0	0	7	0	0	0	94	0	0	170
Lane Group Flow (vph)	511	2071	0	114	1770	0	261	337	26	87	266	248
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases							4		4	8		8
Actuated Green, G (s)	18.0	62.5		7.0	51.5		38.6	28.6	28.6	30.4	24.5	24.5
Effective Green, g (s)	20.0	64.5		9.0	53.5		38.6	28.6	28.6	30.4	24.5	24.5
Actuated g/C Ratio	0.15	0.50		0.07	0.41		0.30	0.22	0.22	0.23	0.19	0.19
Clearance Time (s)	7.0	7.0		7.0	7.0		6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	1.5	3.0		1.5	3.0		1.5	2.0	2.0	1.5	2.0	2.0
Lane Grp Cap (vph)	528	2480		122	2067		240	409	348	170	351	298
v/s Ratio Prot	c0.15	c0.41		0.06	0.35		c0.08	c0.18		0.02	0.14	
v/s Ratio Perm							c0.24		0.02	0.10		0.16
v/c Ratio	0.97	0.84		0.93	0.86		1.09	0.82	0.08	0.51	0.76	0.83
Uniform Delay, d1	54.7	28.2		60.2	34.8		43.3	48.3	40.2	40.9	49.9	50.8
Progression Factor	1.14	0.89		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.2	2.6		60.3	4.8		83.4	12.1	0.0	1.1	8.1	17.1
Delay (s)	87.5	27.6		120.6	39.6		126.7	60.4	40.3	41.9	58.0	67.9
Level of Service	F	C		F	D		F	E	D	D	E	E
Approach Delay (s)		39.4			44.5			81.1			61.5	
Approach LOS		D			D			F			E	

Intersection Summary		
HCM 2000 Control Delay	48.9	HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio	0.99	
Actuated Cycle Length (s)	130.0	Sum of lost time (s) 22.0
Intersection Capacity Utilization	89.9%	ICU Level of Service E
Analysis Period (min)	15	

c Critical Lane Group