












HCM Signalized Intersection Capacity Analysis

10: I-85 NB Ramps & Woodruff Rd

5/27/2011

						
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	753	823	1187	1548	0	2142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.5	6.5		6.5
Lane Util. Factor	0.97	0.88	0.95	1.00		0.95
Frt	1.00	0.85	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00	1.00		1.00
Satd. Flow (prot)	3335	2707	3438	1538		3438
Flt Permitted	0.95	1.00	1.00	1.00		1.00
Satd. Flow (perm)	3335	2707	3438	1538		3438
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	837	914	1319	1720	0	2380
RTOR Reduction (vph)	0	288	0	505	0	0
Lane Group Flow (vph)	837	626	1319	1215	0	2380
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	24.4	24.4	64.5	64.5		83.5
Effective Green, g (s)	24.4	24.4	64.5	64.5		76.5
Actuated g/C Ratio	0.20	0.20	0.54	0.54		0.64
Clearance Time (s)	5.6	5.6	6.5	6.5		
Vehicle Extension (s)	4.3	4.3	4.3	4.3		
Lane Grp Cap (vph)	678	550	1848	827		2192
v/s Ratio Prot	c0.25	0.23	0.38			c0.69
v/s Ratio Perm				c0.79		
v/c Ratio	1.23	1.14	0.71	1.47		1.09
Uniform Delay, d1	47.8	47.8	20.8	27.8		21.8
Progression Factor	1.00	1.00	2.09	6.26		0.93
Incremental Delay, d2	118.0	82.8	0.2	212.0		39.5
Delay (s)	165.8	130.6	43.7	385.6		59.6
Level of Service	F	F	D	F		E
Approach Delay (s)	147.4		237.2			59.6
Approach LOS	F		F			E
Intersection Summary						
HCM Average Control Delay			156.4		HCM Level of Service	F
HCM Volume to Capacity ratio			1.36			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	18.6
Intersection Capacity Utilization			101.3%		ICU Level of Service	G
Analysis Period (min)			15			
c Critical Lane Group						