












# 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)	489	816	1098	255	0	1502
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)	543	907	1220	283	0	1669
RTOR Reduction (vph)	0	286	0	117	0	0
Lane Group Flow (vph)	543	621	1220	166	0	1669
Turn Type		Prot		Perm		
Protected Phases	3	3	2			2 4
Permitted Phases				2		
Actuated Green, G (s)	20.4	20.4	70.5	70.5		87.5
Effective Green, g (s)	20.4	20.4	70.5	70.5		80.5
Actuated g/C Ratio	0.17	0.17	0.59	0.59		0.67
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)	567	460	2020	904		2306
v/s Ratio Prot	0.16	c0.23	0.35			c0.49
v/s Ratio Perm				0.11		
v/c Ratio	0.96	1.35	0.60	0.18		0.72
Uniform Delay, d1	49.4	49.8	15.8	11.4		12.6
Progression Factor	1.00	1.00	0.47	0.85		1.14
Incremental Delay, d2	27.5	171.8	0.3	0.1		0.5
Delay (s)	76.9	221.6	7.8	9.9		14.9
Level of Service	E	F	A	A		B
Approach Delay (s)	167.4		8.2			14.9
Approach LOS	F		A			B
<b>Intersection Summary</b>						
HCM Average Control Delay			60.6		HCM Level of Service	E
HCM Volume to Capacity ratio			0.85			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	18.6
Intersection Capacity Utilization			69.0%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						