





















HCM Signalized Intersection Capacity Analysis

15: Woodruff Road & I-385 NB Ramps

5/27/2011

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Volume (vph)	686	1710	0	0	1559	963	883	0	361	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1719	3438			3438	1538	1719		1538			
Flt Permitted	0.08	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	142	3438			3438	1538	1719		1538			
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	762	1900	0	0	1732	1070	981	0	401	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	387	0	0	12	0	0	0
Lane Group Flow (vph)	762	1900	0	0	1732	683	981	0	389	0	0	0
Turn Type	pm+pt					Perm	Prot		custom			
Protected Phases	5	2			6		8					
Permitted Phases	2					6			8			
Actuated Green, G (s)	74.9	74.9			44.9	44.9	34.0		34.0			
Effective Green, g (s)	74.9	74.9			44.9	44.9	34.0		34.0			
Actuated g/C Ratio	0.62	0.62			0.37	0.37	0.28		0.28			
Clearance Time (s)	6.1	6.1			6.1	6.1	5.0		5.0			
Vehicle Extension (s)	4.3	4.3			4.3	4.3	4.3		4.3			
Lane Grp Cap (vph)	403	2146			1286	575	487		436			
v/s Ratio Prot	c0.38	0.55			0.50		c0.57					
v/s Ratio Perm	c0.80					0.44			0.25			
v/c Ratio	1.89	0.89			1.35	1.19	2.01		0.89			
Uniform Delay, d1	39.2	18.9			37.5	37.5	43.0		41.2			
Progression Factor	0.85	1.16			0.84	0.57	1.00		1.00			
Incremental Delay, d2	401.7	0.6			156.6	86.0	463.7		20.6			
Delay (s)	434.9	22.5			188.1	107.5	506.7		61.8			
Level of Service	F	C			F	F	F		E			
Approach Delay (s)		140.6			157.3		377.6				0.0	
Approach LOS		F			F		F				A	
Intersection Summary												
HCM Average Control Delay		195.3			HCM Level of Service		F					
HCM Volume to Capacity ratio		1.87										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)		11.1					
Intersection Capacity Utilization		220.7%			ICU Level of Service		H					
Analysis Period (min)		15										
c Critical Lane Group												