























*Appendix B. Traffic Modeling*





												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.86		0.97	0.86	
Fr <sub>t</sub>	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	1.00	
Fl <sub>t</sub> Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4940		1770	5085	1583	1770	6338		3433	6387	
Fl <sub>t</sub> Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4940		1770	5085	1583	1770	6338		3433	6387	
Volume (vph)	41	1084	254	105	654	711	424	1542	121	684	1432	32
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	1178	276	114	711	773	461	1676	132	743	1557	35
RTOR Reduction (vph)	0	42	0	0	0	348	0	13	0	0	4	0
Lane Group Flow (vph)	45	1412	0	114	711	425	461	1795	0	743	1588	0
Turn Type	Prot			Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	3.3	21.3		5.5	23.5	23.5	23.1	28.5		18.5	23.9	
Effective Green, g (s)	5.8	23.8		8.0	26.0	26.0	25.6	31.0		21.0	26.4	
Actuated g/C Ratio	0.06	0.26		0.09	0.28	0.28	0.28	0.34		0.23	0.29	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	112	1281		154	1440	448	494	2140		785	1837	
v/s Ratio Prot	0.03	0.29		c0.06	0.14		c0.26	c0.29		c0.22	0.25	
v/s Ratio Perm						0.49						
v/c Ratio	0.40	1.10		0.74	0.49	0.95	0.93	0.84		0.95	0.86	
Uniform Delay, d <sub>1</sub>	41.3	34.0		40.9	27.4	32.2	32.3	28.1		34.8	31.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d <sub>2</sub>	2.4	58.0		17.3	0.3	29.3	24.8	3.1		20.0	4.5	
Delay (s)	43.7	92.0		58.2	27.7	61.6	57.0	31.1		54.9	35.5	
Level of Service	D	F		E	C	E	E	C		D	D	
Approach Delay (s)		90.5			46.3			36.4			41.7	
Approach LOS		F			D			D			D	

Intersection Summary			
HCM Average Control Delay	50.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	91.8	Sum of lost time (s)	4.0
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			