



INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

New Carlisle Crosswalk Study
Tech Memo

Appendix C – Capacity Analysis (Synchro)

Timings
15: Main & Jefferson

12/31/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Volume (vph)	34	114	9	15	50	114	1	107	5	165	312	21
Satd. Flow (prot)	0	1643	0	1593	1504	0	0	1286	0	0	1379	0
Flt Permitted		0.870		0.606				0.997			0.826	
Satd. Flow (perm)	0	1448	0	1016	1504	0	0	1282	0	0	1159	0
Satd. Flow (RTOR)		5			156			5			9	
Lane Group Flow (vph)	0	233	0	30	228	0	0	201	0	0	560	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.8	25.8		25.8	25.8		25.5	25.5		25.5	25.5	
Total Split (s)	25.8	25.8		25.8	25.8		34.2	34.2		34.2	34.2	
Total Split (%)	43.0%	43.0%		43.0%	43.0%		57.0%	57.0%		57.0%	57.0%	
Yellow Time (s)	3.6	3.6		3.6	3.6		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.2	1.2		1.2	1.2		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.8		4.8	4.8			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Act Effct Green (s)		21.0		21.0	21.0			29.7			29.7	
Actuated g/C Ratio		0.35		0.35	0.35			0.50			0.50	
v/c Ratio		0.46		0.08	0.36			0.32			0.97	
Control Delay		18.3		13.9	7.2			10.6			49.1	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		18.3		13.9	7.2			10.6			49.1	
LOS		B		B	A			B			D	
Approach Delay		18.3			8.0			10.6			49.1	
Approach LOS		B			A			B			D	

Intersection Summary

Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green, Master Intersection	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 28.7	Intersection LOS: C
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 15: Main & Jefferson



HCM Unsignalized Intersection Capacity Analysis

12: Main & Washington

12/31/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	3	1	3	0	1	2	0	246	3	5	494	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.50	0.50	0.92	0.50	0.50	0.92	0.81	0.50	0.63	0.92	0.50
Hourly flow rate (vph)	6	2	6	0	2	4	0	304	6	8	537	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	868	866	540	870	866	307	543			310		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	868	866	540	870	866	307	543			310		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	99	99	100	99	99	100			99		
cM capacity (veh/h)	269	290	542	266	290	733	1026			1251		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	14	6	310	551
Volume Left	6	0	0	8
Volume Right	6	4	6	6
cSH	347	485	1026	1251
Volume to Capacity	0.04	0.01	0.00	0.01
Queue Length 95th (ft)	3	1	0	0
Control Delay (s)	15.8	12.5	0.0	0.2
Lane LOS	C	B		A
Approach Delay (s)	15.8	12.5	0.0	0.2
Approach LOS	C	B		

Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

9: Main & Jackson

12/31/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (veh/h)	3	0	1	3	0	4	2	239	4	7	510	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.92	0.50	0.75	0.92	0.50	0.50	0.72	0.50	0.58	0.96	0.50
Hourly flow rate (vph)	4	0	2	4	0	8	4	332	8	12	531	6
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								796			937	
pX, platoon unblocked												
vC, conflicting volume	906	906	534	901	905	336	537			340		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	906	906	534	901	905	336	537			340		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	98	100	99	100			99		
cM capacity (veh/h)	251	272	546	255	272	706	1031			1219		




















Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	6	12	4	340	12	537
Volume Left	4	4	4	0	12	0
Volume Right	2	8	0	8	0	6
cSH	306	444	1031	1700	1219	1700
Volume to Capacity	0.02	0.03	0.00	0.20	0.01	0.32
Queue Length 95th (ft)	1	2	0	0	1	0
Control Delay (s)	17.0	13.3	8.5	0.0	8.0	0.0
Lane LOS	C	B	A		A	
Approach Delay (s)	17.0	13.3	0.1		0.2	
Approach LOS	C	B				

Intersection Summary		
Average Delay		0.4
Intersection Capacity Utilization	40.0%	ICU Level of Service A
Analysis Period (min)		15

HCM Unsignalized Intersection Capacity Analysis

6: Main & Lincoln

12/31/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	0	4	0	0	4	1	236	4	0	507	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	0	4	0	0	4	1	257	4	0	551	0
Pedestrians					1							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					4.0							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								1177			556	
pX, platoon unblocked	0.96	0.96	0.96	0.96	0.96		0.96					
vC, conflicting volume	814	815	551	817	813	260	551			262		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	786	787	512	789	785	260	512			262		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	5.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	3.1			2.2		
p0 queue free %	99	100	99	100	100	99	100			100		
cM capacity (veh/h)	295	310	540	293	311	778	668			1301		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	9	4	1	261	0	551						
Volume Left	4	0	1	0	0	0						
Volume Right	4	4	0	4	0	0						
cSH	382	778	668	1700	1700	1700						
Volume to Capacity	0.02	0.01	0.00	0.15	0.00	0.32						
Queue Length 95th (ft)	2	0	0	0	0	0						
Control Delay (s)	14.6	9.7	10.4	0.0	0.0	0.0						
Lane LOS	B	A	B									
Approach Delay (s)	14.6	9.7	0.0		0.0							
Approach LOS	B	A										
Intersection Summary												
Average Delay			0.2									
Intersection Capacity Utilization			40.9%	ICU Level of Service	A							
Analysis Period (min)			15									

Timings
3: Main & Lake

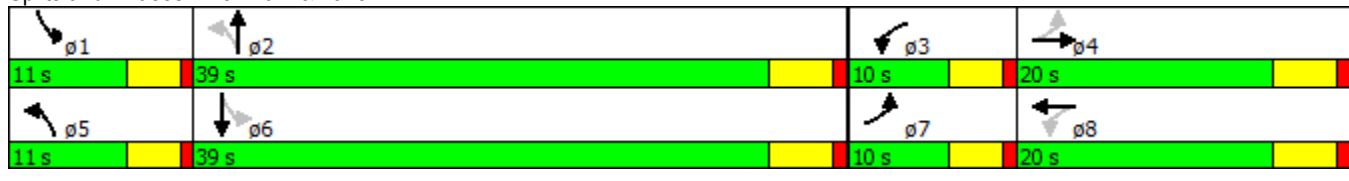
12/31/2013

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	62	85	43	29	37	31	127	31	21	262	24
Satd. Flow (prot)	1593	1523	0	1593	1512	0	1518	1489	0	1365	1612	0
Flt Permitted	0.700			0.559			0.458			0.622		
Satd. Flow (perm)	1171	1523	0	937	1512	0	732	1489	0	894	1612	0
Satd. Flow (RTOR)		54			56			27			13	
Lane Group Flow (vph)	64	203	0	52	88	0	48	218	0	36	333	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	10.0	18.8		10.0	18.8		11.0	36.8		11.0	36.8	
Total Split (s)	10.0	20.0		10.0	20.0		11.0	39.0		11.0	39.0	
Total Split (%)	12.5%	25.0%		12.5%	25.0%		13.8%	48.8%		13.8%	48.8%	
Yellow Time (s)	3.2	3.8		3.2	3.8		3.2	3.8		3.2	3.8	
All-Red Time (s)	0.8	1.0		0.8	1.0		0.8	1.0		0.8	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.8		4.0	4.8		4.0	4.8		4.0	4.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
Act Effct Green (s)	15.2	11.3		15.2	11.3		28.1	25.0		27.4	23.0	
Actuated g/C Ratio	0.28	0.20		0.28	0.20		0.51	0.45		0.50	0.42	
v/c Ratio	0.17	0.57		0.16	0.25		0.10	0.32		0.07	0.49	
Control Delay	15.6	24.3		15.5	13.5		8.6	13.7		8.6	18.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.6	24.3		15.5	13.5		8.6	13.7		8.6	18.3	
LOS	B	C		B	B		A	B		A	B	
Approach Delay		22.2			14.2			12.8			17.4	
Approach LOS		C			B			B			B	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 55.2
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 17.0
 Intersection Capacity Utilization 51.9%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 3: Main & Lake



Timings
15: Main & Jefferson

12/31/2013

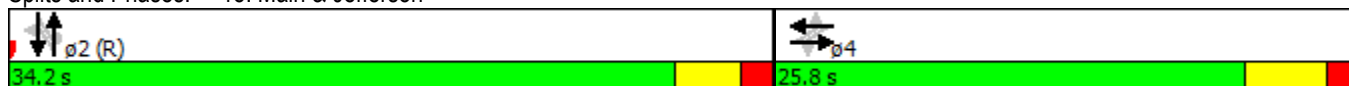


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↕			↕	
Volume (vph)	53	87	12	29	133	177	10	346	24	104	243	43
Satd. Flow (prot)	0	1592	0	1593	1512	0	0	1404	0	0	1370	0
Flt Permitted		0.711		0.655				0.980			0.805	
Satd. Flow (perm)	0	1150	0	1098	1512	0	0	1378	0	0	1117	0
Satd. Flow (RTOR)		13			126			12			13	
Lane Group Flow (vph)	0	192	0	40	388	0	0	432	0	0	476	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		
Detector Phase	4	4		4	4		2	2		2	2	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	25.8	25.8		25.8	25.8		25.5	25.5		25.5	25.5	
Total Split (s)	25.8	25.8		25.8	25.8		34.2	34.2		34.2	34.2	
Total Split (%)	43.0%	43.0%		43.0%	43.0%		57.0%	57.0%		57.0%	57.0%	
Yellow Time (s)	3.6	3.6		3.6	3.6		3.0	3.0		3.0	3.0	
All-Red Time (s)	1.2	1.2		1.2	1.2		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		4.8		4.8	4.8			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max		Max	Max		Max	Max	
Act Effct Green (s)		21.0		21.0	21.0			29.7			29.7	
Actuated g/C Ratio		0.35		0.35	0.35			0.50			0.50	
v/c Ratio		0.47		0.10	0.64			0.63			0.85	
Control Delay		18.7		14.1	16.3			15.8			30.9	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		18.7		14.1	16.3			15.8			30.9	
LOS		B		B	B			B			C	
Approach Delay		18.7			16.1			15.8			30.9	
Approach LOS		B			B			B			C	

Intersection Summary

Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green, Master Intersection
 Natural Cycle: 60
 Control Type: Pretimed
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 21.0
 Intersection LOS: C
 Intersection Capacity Utilization 90.5%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 15: Main & Jefferson



HCM Unsignalized Intersection Capacity Analysis

12: Main & Washington

12/31/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	3	1	15	3	1	5	6	605	0	5	389	11
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.50	0.75	1.00	0.50	0.63	0.50	0.92	0.92	0.63	0.94	0.69
Hourly flow rate (vph)	4	2	20	3	2	8	12	658	0	8	414	16
Pedestrians		1									3	
Lane Width (ft)		12.0									12.0	
Walking Speed (ft/s)		4.0									4.0	
Percent Blockage		0									0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								402				
pX, platoon unblocked	0.88	0.88		0.88	0.88	0.88				0.88		
vC, conflicting volume	1132	1120	423	1140	1128	661	431			658		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1083	1070	423	1093	1079	549	431			546		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	99	97	98	99	98	99			99		
cM capacity (veh/h)	164	191	630	160	189	471	1128			904		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	26	13	670	438
Volume Left	4	3	12	8
Volume Right	20	8	0	16
cSH	391	280	1128	904
Volume to Capacity	0.07	0.05	0.01	0.01
Queue Length 95th (ft)	5	4	1	1
Control Delay (s)	14.9	18.5	0.3	0.3
Lane LOS	B	C	A	A
Approach Delay (s)	14.9	18.5	0.3	0.3
Approach LOS	B	C		

Intersection Summary			
Average Delay		0.8	
Intersection Capacity Utilization	50.2%		ICU Level of Service A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

9: Main & Jackson

12/31/2013



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Volume (veh/h)	9	0	6	2	1	6	12	566	6	11	372	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.92	0.50	0.50	0.50	0.50	0.75	0.84	0.75	0.50	0.92	0.75
Hourly flow rate (vph)	12	0	12	4	2	12	16	674	8	22	404	4
Pedestrians		1										
Lane Width (ft)		12.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								796			937	
pX, platoon unblocked												
vC, conflicting volume	1170	1165	407	1170	1163	678	409			682		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1170	1165	407	1170	1163	678	409			682		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	100	98	98	99	97	99			98		
cM capacity (veh/h)	159	187	643	162	187	452	1149			911		



















Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	24	18	16	682	22	408
Volume Left	12	4	16	0	22	0
Volume Right	12	12	0	8	0	4
cSH	255	291	1149	1700	911	1700
Volume to Capacity	0.09	0.06	0.01	0.40	0.02	0.24
Queue Length 95th (ft)	8	5	1	0	2	0
Control Delay (s)	20.6	18.2	8.2	0.0	9.0	0.0
Lane LOS	C	C	A		A	
Approach Delay (s)	20.6	18.2	0.2		0.5	
Approach LOS	C	C				

Intersection Summary		
Average Delay		1.0
Intersection Capacity Utilization	43.5%	ICU Level of Service
Analysis Period (min)	15	A

HCM Unsignalized Intersection Capacity Analysis

6: Main & Lincoln

12/31/2013

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	0	11	0	0	3	9	651	3	1	396	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.92	0.69	0.92	0.92	0.50	0.50	0.85	0.75	0.50	0.92	0.67
Hourly flow rate (vph)	8	0	16	0	0	6	18	766	4	2	430	12
Pedestrians		4			7							
Lane Width (ft)		12.0			12.0							
Walking Speed (ft/s)		4.0			4.0							
Percent Blockage		0			1							
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								1177			556	
pX, platoon unblocked	0.96	0.96	0.96	0.96	0.96		0.96					
vC, conflicting volume	1252	1257	440	1261	1261	775	446			777		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1242	1247	396	1251	1251	775	403			777		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	100	97	100	100	98	98			100		
cM capacity (veh/h)	140	162	625	136	161	396	1106			835		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2						
Volume Total	24	6	18	770	2	442						
Volume Left	8	0	18	0	2	0						
Volume Right	16	6	0	4	0	12						
cSH	289	396	1106	1700	835	1700						
Volume to Capacity	0.08	0.02	0.02	0.45	0.00	0.26						
Queue Length 95th (ft)	7	1	1	0	0	0						
Control Delay (s)	18.6	14.2	8.3	0.0	9.3	0.0						
Lane LOS	C	B	A		A							
Approach Delay (s)	18.6	14.2	0.2		0.0							
Approach LOS	C	B										
Intersection Summary												
Average Delay			0.6									
Intersection Capacity Utilization			50.0%		ICU Level of Service				A			
Analysis Period (min)			15									

Timings
3: Main & Lake

12/31/2013



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	58	47	46	79	78	48	407	74	56	249	70
Satd. Flow (prot)	1593	1530	0	1593	1523	0	1593	1632	0	1593	1616	0
Flt Permitted	0.437			0.673			0.433			0.268		
Satd. Flow (perm)	727	1530	0	1117	1523	0	726	1632	0	449	1616	0
Satd. Flow (RTOR)		49			50			12			22	
Lane Group Flow (vph)	104	132	0	56	196	0	60	527	0	64	368	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	6.0	8.0		6.0	8.0		7.0	20.0		7.0	20.0	
Minimum Split (s)	14.0	18.8		10.0	18.8		14.0	36.8		11.0	36.8	
Total Split (s)	14.0	18.8		14.0	18.8		14.0	36.8		14.0	36.8	
Total Split (%)	16.7%	22.5%		16.7%	22.5%		16.7%	44.0%		16.7%	44.0%	
Yellow Time (s)	3.2	3.8		3.2	3.8		3.2	3.8		3.2	3.8	
All-Red Time (s)	0.8	1.0		0.8	1.0		0.8	1.0		0.8	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.8		4.0	4.8		4.0	4.8		4.0	4.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
Act Effct Green (s)	21.6	15.8		18.7	12.2		33.7	29.0		33.8	29.0	
Actuated g/C Ratio	0.32	0.23		0.28	0.18		0.50	0.43		0.50	0.43	
v/c Ratio	0.30	0.33		0.15	0.62		0.13	0.74		0.18	0.52	
Control Delay	20.1	21.6		18.5	32.7		9.4	27.4		10.0	19.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.1	21.6		18.5	32.7		9.4	27.4		10.0	19.5	
LOS	C	C		B	C		A	C		A	B	
Approach Delay		20.9			29.5			25.5			18.1	
Approach LOS		C			C			C			B	

Intersection Summary

Cycle Length: 83.6
 Actuated Cycle Length: 67.4
 Natural Cycle: 85
 Control Type: Semi Act-Uncoord
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 23.3
 Intersection Capacity Utilization 65.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 3: Main & Lake

