Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	718	0	0	279	69	104	312	124	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.94	1.00		0.91			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00			
Adj Sat Flow veh/h/ln	0.0	186.3	0.0	0.0	186.3	186.3	178.8	178.8	178.8			
Lanes	0	3	0	0	2	0	0	2	0			
Cap, veh/h	0	1621	0	0	1347	326	204	635	264			
Arrive On Green	0.00	0.16	0.00	0.00	0.48	0.48	0.12	0.12	0.12			
Sat Flow, veh/h	0	4843	0	0	2879	675	584	1814	754			
Grp Volume(v), veh/h	0	780	0	0	190	188	306	0	281			
Grp Sat Flow(s),veh/h/ln	0	1118	0	0	1770	1691	1580	0	1572			
Q Serve(g_s), s	0.0	12.7	0.0	0.0	3.7	3.9	11.0	0.0	10.1			
Cycle Q Clear(g_c), s	0.0	12.7	0.0	0.0	3.7	3.9	11.0	0.0	10.1			
Prop In Lane	0.00		0.00	0.00		0.40	0.37		0.48			
Lane Grp Cap(c), veh/h	0	1621	0	0	855	817	553	0	550			
V/C Ratio(X)	0.00	0.48	0.00	0.00	0.22	0.23	0.55	0.00	0.51			
Avail Cap(c_a), veh/h	0	1621	0	0	855	817	553	0	550			
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	18.4	0.0	0.0	9.0	9.0	22.1	0.0	21.7			
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	0.6	0.7	3.9	0.0	3.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	0.0	7.0	0.0	0.0	2.7	2.8	8.9	0.0	8.3			
Lane Grp Delay (d), s/veh	0.0	19.4	0.0	0.0	9.6	9.7	26.0	0.0	25.1			
Lane Grp LOS		B			A	A	C		C			
Approach Vol, veh/h		780			378			587				
Approach Delay, s/veh		19.4			9.6			25.6				
Approach LOS		B			A			C				

Timer				
Assigned Phs		6		2		4		
Phs Duration (G+Y+Rc), s		34.0		34.0		26.0		
Change Period (Y+Rc), s		6.0		6.0		6.0		
Max Green Setting (Gmax), s		28.0		28.0		20.0		
Max Q Clear Time (g_c+I1), s		14.7		5.9		13.0		
Green Ext Time (p_c), s		6.3		8.3		2.1		

Intersection Summary	
HCM 2010 Ctrl Delay	19.4
HCM 2010 LOS	B

Notes

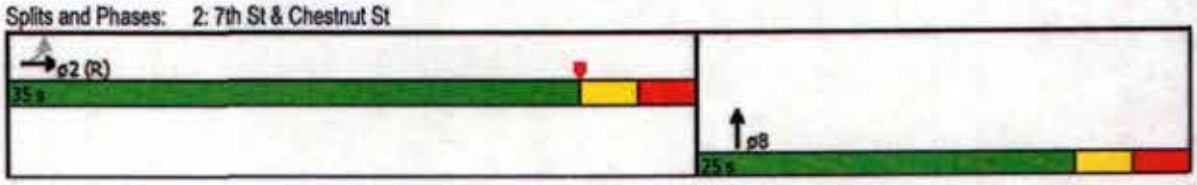
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	201	321	0	0	0	0	0	284	83	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	*0.60	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98						0.98				
Frt								0.966				
Flt Protected		0.981										
Satd. Flow (prot)	0	2047	0	0	0	0	0	3119	0	0	0	0
Flt Permitted		0.981										
Satd. Flow (perm)	0	1999	0	0	0	0	0	3119	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			393			327			565	
Travel Time (s)		10.2			8.9			7.4			12.8	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)	0						0					
Adj. Flow (vph)	218	349	0	0	0	0	0	309	90	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	567	0	0	0	0	0	399	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA						NA				
Protected Phases		2						8				
Permitted Phases	2											
Minimum Split (s)	23.0	23.0						23.0				
Total Split (s)	35.0	35.0						25.0				
Total Split (%)	58.3%	58.3%						41.7%				
Maximum Green (s)	29.0	29.0						19.0				
Yellow Time (s)	3.0	3.0						3.0				
All-Red Time (s)	3.0	3.0						3.0				
Lost Time Adjust (s)		-1.0						-1.0				
Total Lost Time (s)		5.0						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		30.0						20.0				
Actuated g/C Ratio		0.50						0.33				
v/c Ratio		0.57						0.38				
Control Delay		11.3						16.6				
Queue Delay		0.0						0.0				
Total Delay		11.3						16.6				
LOS		B						B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		11.3						16.6				
Approach LOS		B						B				
Queue Length 50th (ft)		82						56				
Queue Length 95th (ft)		165						90				
Internal Link Dist (ft)		370			313			247			485	
Turn Bay Length (ft)												
Base Capacity (vph)		999						1039				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.57						0.38				

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 13.5 Intersection LOS: B
Intersection Capacity Utilization 38.2% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 2: 7th St & Chestnut St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	201	321	0	0	0	0	0	284	83	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.91			
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow veh/h/ln	186.3	186.3	0.0				0.0	186.3	186.3			
Lanes	0	2	0				0	2	0			
Cap, veh/h	120	509	0				0	886	251			
Arrive On Green	0.17	0.17	0.00				0.00	0.33	0.33			
Sat Flow, veh/h	0	1695	0				0	2752	753			
Grp Volume(v), veh/h	218	349	0				0	203	196			
Grp Sat Flow(s),veh/h/ln	0	1017	0				0	1770	1642			
Q Serve(g_s), s	0.0	19.4	0.0				0.0	5.2	5.4			
Cycle Q Clear(g_c), s	30.0	19.4	0.0				0.0	5.2	5.4			
Prop In Lane	1.00		0.00				0.00		0.46			
Lane Grp Cap(c), veh/h	120	509	0				0	590	547			
V/C Ratio(X)	1.82	0.69	0.00				0.00	0.34	0.36			
Avail Cap(c_a), veh/h	120	509	0				0	590	547			
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	40.1	20.6	0.0				0.0	15.1	15.1			
Incr Delay (d2), s/veh	398.3	7.4	0.0				0.0	1.6	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	27.3	10.0	0.0				0.0	4.2	4.1			
Lane Grp Delay (d), s/veh	438.3	28.0	0.0				0.0	16.6	17.0			
Lane Grp LOS	F	C						B	B			
Approach Vol, veh/h		567						399				
Approach Delay, s/veh		185.8						16.8				
Approach LOS		F						B				
Timer												
Assigned Phs		2						8				
Phs Duration (G+Y+Rc), s		35.0						25.0				
Change Period (Y+Rc), s		6.0						6.0				
Max Green Setting (Gmax), s		29.0						19.0				
Max Q Clear Time (g_c+I1), s		32.0						7.4				
Green Ext Time (p_c), s		0.0						1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			116.0									
HCM 2010 LOS			F									
Notes												

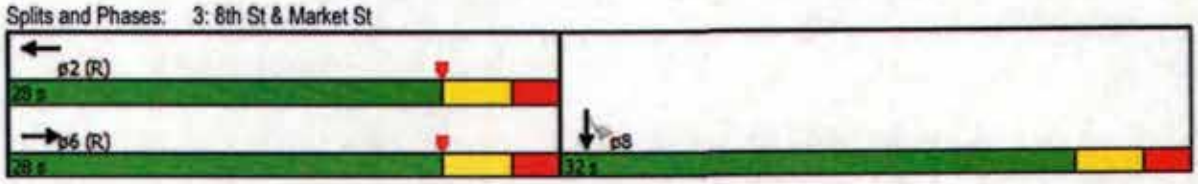
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	643	309	0	415	0	0	0	0	57	743	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	9	9	9
Lane Util. Factor	1.00	0.91	*0.60	1.00	*0.60	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.97									0.99	
Frt		0.951									0.992	
Flt Protected											0.997	
Satd. Flow (prot)	0	4384	0	0	2086	0	0	0	0	0	3137	0
Flt Permitted											0.997	
Satd. Flow (perm)	0	4384	0	0	2086	0	0	0	0	0	3123	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			450			190			386	
Travel Time (s)		10.2			10.2			4.3			8.8	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)												0
Adj. Flow (vph)	0	699	336	0	451	0	0	0	0	62	808	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1035	0	0	451	0	0	0	0	0	921	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA					Perm	NA	
Protected Phases		6			2						8	
Permitted Phases										8		
Minimum Split (s)		10.0			10.0					10.0	10.0	
Total Split (s)		28.0			28.0					32.0	32.0	
Total Split (%)		46.7%			46.7%					53.3%	53.3%	
Maximum Green (s)		22.0			22.0					26.0	26.0	
Yellow Time (s)		3.5			3.5					3.5	3.5	
All-Red Time (s)		2.5			2.5					2.5	2.5	
Lost Time Adjust (s)		-1.0			-1.0						-1.0	
Total Lost Time (s)		5.0			5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		23.0			23.0						27.0	
Actuated g/C Ratio		0.38			0.38						0.45	
v/c Ratio		0.62			0.56						0.66	
Control Delay		9.7			18.9						15.6	
Queue Delay		0.0			0.0						0.0	
Total Delay		9.7			18.9						15.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A			B						B	
Approach Delay		9.7			18.9						15.6	
Approach LOS		A			B						B	
Queue Length 50th (ft)		54			110						128	
Queue Length 95th (ft)		m85			185						186	
Internal Link Dist (ft)		370			370			110			306	
Turn Bay Length (ft)												
Base Capacity (vph)		1680			799						1405	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.62			0.56						0.66	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 13.7 Intersection LOS: B
Intersection Capacity Utilization 53.6% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: 8th St & Market St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	643	309	0	415	0	0	0	0	57	743	47
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00				1.00		0.93
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	0.90
Adj Sat Flow veh/h/ln	0.0	186.3	186.3	0.0	186.3	0.0				178.8	178.8	178.8
Lanes	0	3	0	0	2	0				0	2	0
Cap, veh/h	0	1300	559	0	857	0				97	1317	88
Arrive On Green	0.00	0.77	0.77	0.00	0.38	0.00				0.45	0.45	0.45
Sat Flow, veh/h	0	3558	1459	0	3725	0				215	2927	194
Grp Volume(v), veh/h	0	699	336	0	451	0				512	0	409
Grp Sat Flow(s),veh/h/ln	0	1695	1459	0	1118	0				1777	0	1559
Q Serve(g_s), s	0.0	4.9	6.0	0.0	9.4	0.0				13.4	0.0	11.7
Cycle Q Clear(g_c), s	0.0	4.9	6.0	0.0	9.4	0.0				13.4	0.0	11.7
Prop In Lane	0.00		1.00	0.00		0.00				0.12		0.12
Lane Grp Cap(c), veh/h	0	1300	559	0	857	0				800	0	701
V/C Ratio(X)	0.00	0.54	0.60	0.00	0.53	0.00				0.64	0.00	0.58
Avail Cap(c_a), veh/h	0	1300	559	0	857	0				800	0	701
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.9	5.0	0.0	14.3	0.0				12.7	0.0	12.3
Incr Delay (d2), s/veh	0.0	1.6	4.7	0.0	2.3	0.0				3.9	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile Back of Q (95%), veh/ln	0.0	2.6	3.4	0.0	4.7	0.0				10.0	0.0	8.2
Lane Grp Delay (d), s/veh	0.0	6.5	9.7	0.0	16.6	0.0				16.7	0.0	15.8
Lane Grp LOS		A	A		B					B		B
Approach Vol, veh/h		1035			451						921	
Approach Delay, s/veh		7.5			16.6						16.3	
Approach LOS		A			B						B	

Timer												
Assigned Phs		6			2						8	
Phs Duration (G+Y+Rc), s		28.0			28.0						32.0	
Change Period (Y+Rc), s		6.0			6.0						6.0	
Max Green Setting (Gmax), s		22.0			22.0						26.0	
Max Q Clear Time (g_c+I1), s		0.0			0.0						15.4	
Green Ext Time (p_c), s		0.0			0.0						0.0	

Intersection Summary			
HCM 2010 Ctrl Delay		12.6	
HCM 2010 LOS		B	

Notes

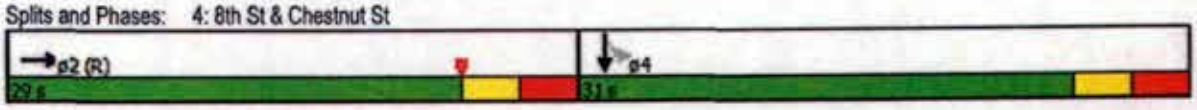
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	304	54	0	0	0	0	0	0	229	393	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	*0.60	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.99									0.97	
Frt		0.977										
Flt Protected											0.982	
Satd. Flow (prot)	0	3185	0	0	0	0	0	0	0	0	3244	0
Flt Permitted											0.982	
Satd. Flow (perm)	0	3185	0	0	0	0	0	0	0	0	3161	0
Right Turn on Red			No			No			No	No		No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			450			329			253	
Travel Time (s)		10.2			10.2			7.5			5.8	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)	0											0
Adj. Flow (vph)	0	330	59	0	0	0	0	0	0	249	427	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	389	0	0	0	0	0	0	0	0	676	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA								Perm	NA	
Protected Phases		2									4	
Permitted Phases										4		
Minimum Split (s)		24.0								24.0	24.0	
Total Split (s)		29.0								31.0	31.0	
Total Split (%)		48.3%								51.7%	51.7%	
Maximum Green (s)		23.0								25.0	25.0	
Yellow Time (s)		3.0								3.0	3.0	
All-Red Time (s)		3.0								3.0	3.0	
Lost Time Adjust (s)		-1.0									-1.0	
Total Lost Time (s)		5.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		24.0									26.0	
Actuated g/C Ratio		0.40									0.43	
v/c Ratio		0.31									0.49	
Control Delay		8.2									11.8	
Queue Delay		0.0									0.0	
Total Delay		8.2									11.8	
LOS		A									B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.2									11.8	
Approach LOS		A									B	
Queue Length 50th (ft)		28									66	
Queue Length 95th (ft)		42									116	
Internal Link Dist (ft)		370			370			249			173	
Turn Bay Length (ft)												
Base Capacity (vph)		1274									1369	
Starvation Cap Reductn		0									0	
Spillback Cap Reductn		0									0	
Storage Cap Reductn		0									0	
Reduced v/c Ratio		0.31									0.49	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 10.5 — Intersection LOS: B
Intersection Capacity Utilization 40.1% — ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 4: 8th St & Chestnut St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	304	54	0	0	0	0	0	0	229	393	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93							1.00		1.00
Parking Bus Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow veh/h/ln	0.0	186.3	186.3							186.3	186.3	0.0
Lanes	0	2	0							0	2	0
Cap, veh/h	0	1187	209							120	698	0
Arrive On Green	0.00	0.13	0.13							0.43	0.43	0.00
Sat Flow, veh/h	0	3062	522							0	1695	0
Grp Volume(v), veh/h	0	195	194							249	427	0
Grp Sat Flow(s),veh/h/ln	0	1770	1721							0	1610	0
Q Serve(g_s), s	0.0	5.9	6.1							0.0	12.3	0.0
Cycle Q Clear(g_c), s	0.0	5.9	6.1							26.0	12.3	0.0
Prop In Lane	0.00		0.30							1.00		0.00
Lane Grp Cap(c), veh/h	0	708	688							120	698	0
V/C Ratio(X)	0.00	0.27	0.28							2.07	0.61	0.00
Avail Cap(c_a), veh/h	0	708	688							120	698	0
HCM Platoon Ratio	0.00	0.00	0.00							0.00	0.00	0.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	18.2	18.3							30.0	13.1	0.0
Incr Delay (d2), s/veh	0.0	1.0	1.0							511.2	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile Back of Q (95%), veh/ln	0.0	5.1	5.1							33.8	8.7	0.0
Lane Grp Delay (d), s/veh	0.0	19.2	19.3							541.2	17.1	0.0
Lane Grp LOS		B	B							F	B	
Approach Vol, veh/h		389									676	
Approach Delay, s/veh		19.2									210.1	
Approach LOS		B									F	

Timer	
Assigned Phs	2	4
Phs Duration (G+Y+Rc), s	29.0	31.0
Change Period (Y+Rc), s	6.0	6.0
Max Green Setting (Gmax), s	23.0	25.0
Max Q Clear Time (g_c+I1), s	8.1	28.0
Green Ext Time (p_c), s	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	140.4
HCM 2010 LOS	F

Notes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	779	0	0	473	56	120	554	235	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	10	10	10
Lane Util. Factor	1.00	*0.60	1.00	1.00	*0.60	0.95	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor					0.99			0.97				
Frt					0.984			0.961				
Flt Protected								0.993				
Satd. Flow (prot)	0	3129	0	0	2036	0	0	2972	0	0	0	0
Flt Permitted								0.993				
Satd. Flow (perm)	0	3129	0	0	2036	0	0	2943	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		378			450			190			377	
Travel Time (s)		8.6			10.2			4.3			8.6	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)									0			
Adj. Flow (vph)	0	847	0	0	514	61	130	602	255	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	847	0	0	575	0	0	987	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA		Perm	NA				
Protected Phases		6			2			4				
Permitted Phases							4					
Minimum Split (s)		30.0			20.0		20.0	20.0				
Total Split (s)		31.0			31.0		29.0	29.0				
Total Split (%)		51.7%			51.7%		48.3%	48.3%				
Maximum Green (s)		25.0			25.0		23.0	23.0				
Yellow Time (s)		3.5			3.5		3.5	3.5				
All-Red Time (s)		2.5			2.5		2.5	2.5				
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		5.0			5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		26.0			26.0			24.0				
Actuated g/C Ratio		0.43			0.43			0.40				
v/c Ratio		0.63			0.65			0.84				
Control Delay		15.8			12.9			19.5				
Queue Delay		0.0			0.0			0.0				
Total Delay		15.8			12.9			19.5				

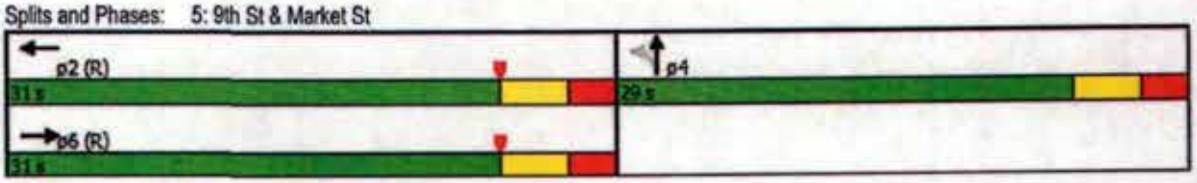
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			B				
Approach Delay		15.8			12.9			19.5				
Approach LOS		B			B			B				
Queue Length 50th (ft)		125			65			98				
Queue Length 95th (ft)		182			117			#163				
Internal Link Dist (ft)		298			370			110			297	
Turn Bay Length (ft)												
Base Capacity (vph)		1355			882			1177				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.63			0.65			0.84				

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 60
Control Type: Pretimed
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 16.6 Intersection LOS: B
Intersection Capacity Utilization 55.0% ICU Level of Service B
Analysis Period (min) 15

* User Entered Value
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: 9th St & Market St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	779	0	0	473	56	120	554	235	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.93			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90			
Adj Sat Flow veh/h/ln	0.0	186.3	0.0	0.0	186.3	186.3	178.8	178.8	178.8			
Lanes	0	3	0	0	2	0	0	2	0			
Cap, veh/h	0	1453	0	0	1124	133	159	756	343			
Arrive On Green	0.00	0.43	0.00	0.00	0.87	0.87	0.13	0.13	0.13			
Sat Flow, veh/h	0	4843	0	0	3338	307	398	1889	858			
Grp Volume(v), veh/h	0	847	0	0	221	354	578	0	409			
Grp Sat Flow(s),veh/h/ln	0	1118	0	0	1118	1782	1768	0	1376			
Q Serve(g_s), s	0.0	11.5	0.0	0.0	2.6	2.6	19.1	0.0	17.2			
Cycle Q Clear(g_c), s	0.0	11.5	0.0	0.0	2.6	2.6	19.1	0.0	17.2			
Prop In Lane	0.00		0.00	0.00		0.17	0.22		0.62			
Lane Grp Cap(c), veh/h	0	1453	0	0	484	772	707	0	551			
V/C Ratio(X)	0.00	0.58	0.00	0.00	0.46	0.46	0.82	0.00	0.74			
Avail Cap(c_a), veh/h	0	1453	0	0	484	772	707	0	551			
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33			
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	12.9	0.0	0.0	2.4	2.4	23.9	0.0	23.1			
Incr Delay (d2), s/veh	0.0	1.7	0.0	0.0	3.1	2.0	10.1	0.0	8.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	0.0	5.5	0.0	0.0	1.5	1.9	16.3	0.0	12.1			
Lane Grp Delay (d), s/veh	0.0	14.6	0.0	0.0	5.5	4.4	34.0	0.0	31.9			
Lane Grp LOS		B			A	A	C		C			
Approach Vol, veh/h		847			575			987				
Approach Delay, s/veh		14.6			4.8			33.1				
Approach LOS		B			A			C				
Timer												
Assigned Phs		6			2			4				
Phs Duration (G+Y+Rc), s		31.0			31.0			29.0				
Change Period (Y+Rc), s		6.0			6.0			6.0				
Max Green Setting (Gmax), s		25.0			25.0			23.0				
Max Q Clear Time (g_c+I1), s		0.0			0.0			21.1				
Green Ext Time (p_c), s		0.0			0.0			0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			19.9									
HCM 2010 LOS			B									
Notes												

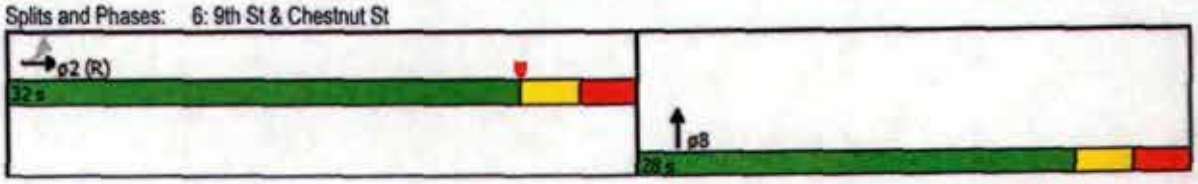
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	298	0	0	0	0	0	448	86	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	*0.60	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98						0.99				
Frt								0.976				
Flt Protected		0.989										
Satd. Flow (prot)	0	2063	0	0	0	0	0	3178	0	0	0	0
Flt Permitted		0.989										
Satd. Flow (perm)	0	2032	0	0	0	0	0	3178	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		442			450			343			375	
Travel Time (s)		10.0			10.2			7.8			8.5	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)	0								0			
Adj. Flow (vph)	95	324	0	0	0	0	0	487	93	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	419	0	0	0	0	0	580	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA						NA				
Protected Phases		2						8				
Permitted Phases	2											
Minimum Split (s)	23.0	23.0						23.0				
Total Split (s)	32.0	32.0						28.0				
Total Split (%)	53.3%	53.3%						46.7%				
Maximum Green (s)	26.0	26.0						22.0				
Yellow Time (s)	3.0	3.0						3.0				
All-Red Time (s)	3.0	3.0						3.0				
Lost Time Adjust (s)		-1.0						-1.0				
Total Lost Time (s)		5.0						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		27.0						23.0				
Actuated g/C Ratio		0.45						0.38				
v/c Ratio		0.46						0.48				
Control Delay		13.5						15.6				
Queue Delay		0.0						0.0				
Total Delay		13.5						15.6				
LOS		B						B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		13.5						15.6				
Approach LOS		B						B				
Queue Length 50th (ft)		82						80				
Queue Length 95th (ft)		136						121				
Internal Link Dist (ft)		362			370			263			295	
Turn Bay Length (ft)												
Base Capacity (vph)		914						1218				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.46						0.48				

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 14.7 Intersection LOS: B
Intersection Capacity Utilization 42.4% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 6: 9th St & Chestnut St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	298	0	0	0	0	0	448	86	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.92			
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	0.90			
Adj Sat Flow veh/h/ln	186.3	186.3	0.0				0.0	186.3	186.3			
Lanes	0	2	0				0	2	0			
Cap, veh/h	120	458	0				0	1064	201			
Arrive On Green	0.45	0.45	0.00				0.00	0.38	0.38			
Sat Flow, veh/h	0	1695	0				0	2869	525			
Grp Volume(v), veh/h	95	324	0				0	309	271			
Grp Sat Flow(s),veh/h/ln	0	1017	0				0	1770	1531			
Q Serve(g_s), s	0.0	15.4	0.0				0.0	7.8	8.0			
Cycle Q Clear(g_c), s	27.0	15.4	0.0				0.0	7.8	8.0			
Prop In Lane	1.00		0.00				0.00		0.34			
Lane Grp Cap(c), veh/h	120	458	0				0	678	587			
V/C Ratio(X)	0.79	0.71	0.00				0.00	0.46	0.46			
Avail Cap(c_a), veh/h	120	458	0				0	678	587			
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	30.0	13.3	0.0				0.0	13.8	13.9			
Incr Delay (d2), s/veh	40.0	8.9	0.0				0.0	2.2	2.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	4.9	7.2	0.0				0.0	6.3	5.6			
Lane Grp Delay (d), s/veh	70.0	22.2	0.0				0.0	16.0	16.5			
Lane Grp LOS	E	C						B	B			
Approach Vol, veh/h		419						580				
Approach Delay, s/veh		33.1						16.2				
Approach LOS		C						B				

Timer	
Assigned Phs	2
Phs Duration (G+Y+Rc), s	32.0
Change Period (Y+Rc), s	6.0
Max Green Setting (Gmax), s	26.0
Max Q Clear Time (g_c+I1), s	29.0
Green Ext Time (p_c), s	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Notes

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	0	0	651	401
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.943	
Flt Protected						
Satd. Flow (prot)	0	0	0	0	3115	0
Flt Permitted						
Satd. Flow (perm)	0	0	0	0	3115	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	446			122	190	
Travel Time (s)	10.1			2.8	4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	708	436
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	1144	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	338	535	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1504	3303	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1504	3303	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	446		375			190
Travel Time (s)	10.1		8.5			4.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	367	582	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	367	582	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 42.4%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	209	0	0	0	182	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt						
Flt Protected	0.950					0.986
Satd. Flow (prot)	1652	0	0	0	0	3257
Flt Permitted	0.950					0.986
Satd. Flow (perm)	1652	0	0	0	0	3257
Link Speed (mph)	30		30			30
Link Distance (ft)	354		253			122
Travel Time (s)	8.0		5.8			2.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	227	0	0	0	198	511
Shared Lane Traffic (%)						
Lane Group Flow (vph)	227	0	0	0	0	709
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 36.5%	ICU Level of Service A
Analysis Period (min) 15	

APPENDIX J

Synchro Capacity Analysis Worksheets
Build w/ Mitigation

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	921	0	0	263	77	67	672	80	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	10	10	10
Lane Util. Factor	1.00	*0.60	1.00	1.00	0.95	*0.60	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor					0.98			0.99				
Frt					0.966			0.985				
Flt Protected								0.996				
Satd. Flow (prot)	0	3129	0	0	3133	0	0	3099	0	0	0	0
Flt Permitted								0.996				
Satd. Flow (perm)	0	3129	0	0	3133	0	0	3080	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			379			565			375	
Travel Time (s)		10.2			8.6			12.8			8.5	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)							0					
Adj. Flow (vph)	0	1001	0	0	286	84	73	730	87	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1001	0	0	370	0	0	890	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA		Perm	NA				
Protected Phases		6			2			4				
Permitted Phases							4					
Minimum Split (s)		20.0			20.0		25.0	25.0				
Total Split (s)		31.0			31.0		29.0	29.0				
Total Split (%)		51.7%			51.7%		48.3%	48.3%				
Maximum Green (s)		25.0			25.0		23.0	23.0				
Yellow Time (s)		3.0			3.0		3.0	3.0				
All-Red Time (s)		3.0			3.0		3.0	3.0				
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		5.0			5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		26.0			26.0			24.0				
Actuated g/C Ratio		0.43			0.43			0.40				
v/c Ratio		0.74			0.27			0.72				
Control Delay		14.1			11.6			13.9				
Queue Delay		0.0			0.0			0.0				
Total Delay		14.1			11.6			13.9				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	921	0	0	263	77	67	672	80	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.93			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00			
Adj Sat Flow veh/h/ln	0.0	186.3	0.0	0.0	186.3	186.3	178.8	178.8	178.8			
Lanes	0	3	0	0	2	0	0	2	0			
Cap, veh/h	0	1453	0	0	1156	330	103	1079	135			
Arrive On Green	0.00	0.87	0.00	0.00	0.43	0.43	0.13	0.13	0.13			
Sat Flow, veh/h	0	4843	0	0	2762	762	258	2698	337			
Grp Volume(v), veh/h	0	1001	0	0	187	183	452	0	438			
Grp Sat Flow(s),veh/h/ln	0	1118	0	0	1770	1662	1597	0	1697			
Q Serve(g_s), s	0.0	5.9	0.0	0.0	4.0	4.2	16.3	0.0	14.7			
Cycle Q Clear(g_c), s	0.0	5.9	0.0	0.0	4.0	4.2	16.3	0.0	14.7			
Prop In Lane	0.00		0.00	0.00		0.46	0.16		0.20			
Lane Grp Cap(c), veh/h	0	1453	0	0	767	720	639	0	679			
V/C Ratio(X)	0.00	0.69	0.00	0.00	0.24	0.25	0.71	0.00	0.64			
Avail Cap(c_a), veh/h	0	1453	0	0	767	720	639	0	679			
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	2.7	0.0	0.0	10.8	10.8	22.7	0.0	22.0			
Incr Delay (d2), s/veh	0.0	2.7	0.0	0.0	0.8	0.9	6.5	0.0	4.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	0.0	1.8	0.0	0.0	3.1	3.1	12.7	0.0	12.0			
Lane Grp Delay (d), s/veh	0.0	5.4	0.0	0.0	11.5	11.7	29.2	0.0	26.7			
Lane Grp LOS		A			B	B	C		C			
Approach Vol, veh/h		1001			370			890				
Approach Delay, s/veh		5.4			11.6			28.0				
Approach LOS		A			B			C				
Timer												
Assigned Phs		6			2			4				
Phs Duration (G+Y+Rc), s		31.0			31.0			29.0				
Change Period (Y+Rc), s		6.0			6.0			6.0				
Max Green Setting (Gmax), s		25.0			25.0			23.0				
Max Q Clear Time (g_c+I1), s		0.0			6.2			18.3				
Green Ext Time (p_c), s		0.0			0.0			0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			15.3									
HCM 2010 LOS			B									
Notes												

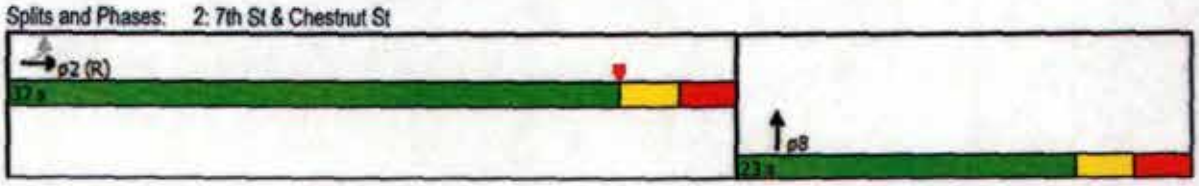
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	279	357	0	0	0	0	0	378	132	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	*0.60	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98						0.97				
Frt								0.961				
Flt Protected		0.979										
Satd. Flow (prot)	0	2042	0	0	0	0	0	3084	0	0	0	0
Flt Permitted		0.979										
Satd. Flow (perm)	0	1992	0	0	0	0	0	3084	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			393			327			565	
Travel Time (s)		10.2			8.9			7.4			12.8	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)	0						0					
Adj. Flow (vph)	303	388	0	0	0	0	0	411	143	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	691	0	0	0	0	0	554	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA						NA				
Protected Phases		2						8				
Permitted Phases	2											
Minimum Split (s)	23.0	23.0						23.0				
Total Split (s)	37.0	37.0						23.0				
Total Split (%)	61.7%	61.7%						38.3%				
Maximum Green (s)	31.0	31.0						17.0				
Yellow Time (s)	3.0	3.0						3.0				
All-Red Time (s)	3.0	3.0						3.0				
Lost Time Adjust (s)		-1.0						-1.0				
Total Lost Time (s)		5.0						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		32.0						18.0				
Actuated g/C Ratio		0.53						0.30				
v/c Ratio		0.65						0.60				
Control Delay		10.8						21.2				
Queue Delay		0.0						0.0				
Total Delay		10.8						21.2				
LOS		B						C				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.8						21.2				
Approach LOS		B						C				
Queue Length 50th (ft)		92						88				
Queue Length 95th (ft)		180						134				
Internal Link Dist (ft)		370			313			247			485	
Turn Bay Length (ft)												
Base Capacity (vph)		1062						925				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.65						0.60				

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
Natural Cycle: 55
Control Type: Pretimed
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 15.4 Intersection LOS: B
Intersection Capacity Utilization 46.7% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 2: 7th St & Chestnut St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	279	357	0	0	0	0	0	378	132	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.90			
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow veh/h/ln	186.3	186.3	0.0				0.0	186.3	186.3			
Lanes	0	2	0				0	2	0			
Cap, veh/h	120	542	0				0	753	257			
Arrive On Green	0.18	0.18	0.00				0.00	0.30	0.30			
Sat Flow, veh/h	0	1695	0				0	2604	858			
Grp Volume(v), veh/h	303	388	0				0	287	267			
Grp Sat Flow(s),veh/h/ln	0	1017	0				0	1770	1599			
Q Serve(g_s), s	0.0	21.6	0.0				0.0	8.1	8.4			
Cycle Q Clear(g_c), s	32.0	21.6	0.0				0.0	8.1	8.4			
Prop In Lane	1.00		0.00				0.00		0.54			
Lane Grp Cap(c), veh/h	120	542	0				0	531	480			
V/C Ratio(X)	2.52	0.72	0.00				0.00	0.54	0.56			
Avail Cap(c_a), veh/h	120	542	0				0	531	480			
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	40.7	20.4	0.0				0.0	17.5	17.6			
Incr Delay (d2), s/veh	710.2	7.9	0.0				0.0	3.9	4.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	46.1	10.9	0.0				0.0	6.9	6.7			
Lane Grp Delay (d), s/veh	751.0	28.3	0.0				0.0	21.5	22.2			
Lane Grp LOS	F	C						C	C			
Approach Vol, veh/h		691						554				
Approach Delay, s/veh		345.2						21.8				
Approach LOS		F						C				

Timer	
Assigned Phs	2
Phs Duration (G+Y+Rc), s	37.0
Change Period (Y+Rc), s	6.0
Max Green Setting (Gmax), s	31.0
Max Q Clear Time (g_c+I1), s	34.0
Green Ext Time (p_c), s	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	201.3
HCM 2010 LOS	F

Notes

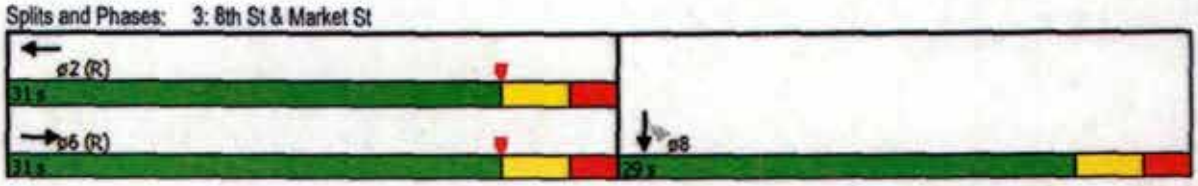
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	895	320	0	546	0	0	0	0	63	695	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	9	9	9
Lane Util. Factor	1.00	0.91	*0.60	1.00	*0.60	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.98									0.99	
Frt		0.960									0.991	
Flt Protected											0.996	
Satd. Flow (prot)	0	4461	0	0	2086	0	0	0	0	0	3128	0
Flt Permitted											0.996	
Satd. Flow (perm)	0	4461	0	0	2086	0	0	0	0	0	3110	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			450			190			386	
Travel Time (s)		10.2			10.2			4.3			8.8	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)												0
Adj. Flow (vph)	0	973	348	0	593	0	0	0	0	68	755	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1321	0	0	593	0	0	0	0	0	875	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA					Perm	NA	
Protected Phases		6			2						8	
Permitted Phases										8		
Minimum Split (s)		10.0			10.0					10.0	10.0	
Total Split (s)		31.0			31.0					29.0	29.0	
Total Split (%)		51.7%			51.7%					48.3%	48.3%	
Maximum Green (s)		25.0			25.0					23.0	23.0	
Yellow Time (s)		3.5			3.5					3.5	3.5	
All-Red Time (s)		2.5			2.5					2.5	2.5	
Lost Time Adjust (s)		-1.0			-1.0						-1.0	
Total Lost Time (s)		5.0			5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		26.0			26.0						24.0	
Actuated g/C Ratio		0.43			0.43						0.40	
v/c Ratio		0.68			0.66						0.70	
Control Delay		10.2			13.3						18.8	
Queue Delay		0.0			0.0						0.0	
Total Delay		10.2			13.3						18.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B						B	
Approach Delay		10.2			13.3						18.6	
Approach LOS		B			B						B	
Queue Length 50th (ft)		63			87						133	
Queue Length 95th (ft)		117			129						193	
Internal Link Dist (ft)		370			370			110			306	
Turn Bay Length (ft)												
Base Capacity (vph)		1933			903						1244	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.68			0.66						0.70	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 13.5 — Intersection LOS: B
Intersection Capacity Utilization 57.3% — ICU Level of Service B
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 3: 8th St & Market St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	895	320	0	546	0	0	0	0	63	695	48
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		1.00				1.00		0.93
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	0.90
Adj Sat Flow veh/h/ln	0.0	186.3	186.3	0.0	186.3	0.0				178.8	178.8	178.8
Lanes	0	3	0	0	2	0				0	2	0
Cap, veh/h	0	1568	560	0	969	0				99	1149	83
Arrive On Green	0.00	0.87	0.87	0.00	0.87	0.00				0.40	0.40	0.40
Sat Flow, veh/h	0	3787	1292	0	3725	0				248	2873	208
Grp Volume(v), veh/h	0	911	410	0	593	0				487	0	388
Grp Sat Flow(s),veh/h/ln	0	1695	1522	0	1118	0				1776	0	1553
Q Serve(g_s), s	0.0	4.7	4.7	0.0	4.5	0.0				13.6	0.0	12.0
Cycle Q Clear(g_c), s	0.0	4.7	4.7	0.0	4.5	0.0				13.6	0.0	12.0
Prop In Lane	0.00		0.85	0.00		0.00				0.14		0.13
Lane Grp Cap(c), veh/h	0	1469	659	0	969	0				710	0	621
V/C Ratio(X)	0.00	0.62	0.62	0.00	0.61	0.00				0.69	0.00	0.62
Avail Cap(c_a), veh/h	0	1469	659	0	969	0				710	0	621
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.6	2.6	0.0	2.6	0.0				14.9	0.0	14.4
Incr Delay (d2), s/veh	0.0	2.0	4.4	0.0	2.9	0.0				5.3	0.0	4.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile Back of Q (95%), veh/ln	0.0	2.2	2.8	0.0	1.7	0.0				10.5	0.0	8.5
Lane Grp Delay (d), s/veh	0.0	4.6	6.9	0.0	5.5	0.0				20.2	0.0	19.1
Lane Grp LOS		A	A		A					C		B
Approach Vol, veh/h		1321			593						875	
Approach Delay, s/veh		5.3			5.5						19.7	
Approach LOS		A			A						B	

Timer			
Assigned Phs	6	2	8
Phs Duration (G+Y+Rc), s	31.0	31.0	29.0
Change Period (Y+Rc), s	6.0	6.0	6.0
Max Green Setting (Gmax), s	25.0	25.0	23.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	15.6
Green Ext Time (p_c), s	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	9.9
HCM 2010 LOS	A

Notes

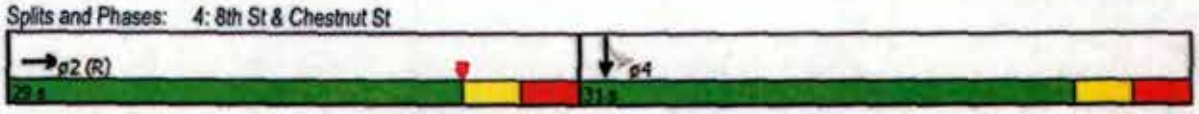
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	368	102	0	0	0	0	0	0	236	471	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	*0.60	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.98									0.98	
Frt		0.967										
Flt Protected											0.984	
Satd. Flow (prot)	0	3135	0	0	0	0	0	0	0	0	3250	0
Flt Permitted											0.984	
Satd. Flow (perm)	0	3135	0	0	0	0	0	0	0	0	3175	0
Right Turn on Red			No			No			No	No		No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			450			329			253	
Travel Time (s)		10.2			10.2			7.5			5.8	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)	0											0
Adj. Flow (vph)	0	400	111	0	0	0	0	0	0	257	512	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	511	0	0	0	0	0	0	0	0	769	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA								Perm	NA	
Protected Phases		2									4	
Permitted Phases										4		
Minimum Split (s)		24.0								24.0	24.0	
Total Split (s)		29.0								31.0	31.0	
Total Split (%)		48.3%								51.7%	51.7%	
Maximum Green (s)		23.0								25.0	25.0	
Yellow Time (s)		3.0								3.0	3.0	
All-Red Time (s)		3.0								3.0	3.0	
Lost Time Adjust (s)		-1.0									-1.0	
Total Lost Time (s)		5.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		24.0									26.0	
Actuated g/C Ratio		0.40									0.43	
v/c Ratio		0.41									0.56	
Control Delay		9.2									12.1	
Queue Delay		0.0									0.0	
Total Delay		9.2									12.1	
LOS		A									B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.2									12.1	
Approach LOS		A									B	
Queue Length 50th (ft)		43									73	
Queue Length 95th (ft)		61									133	
Internal Link Dist (ft)		370			370			249			173	
Turn Bay Length (ft)												
Base Capacity (vph)		1254									1375	
Starvation Cap Reductn		0									0	
Spillback Cap Reductn		0									0	
Storage Cap Reductn		0									0	
Reduced v/c Ratio		0.41									0.56	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.56
Intersection Signal Delay: 11.0 — Intersection LOS: B
Intersection Capacity Utilization 46.2% — ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 4: 8th St & Chestnut St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	368	102	0	0	0	0	0	0	236	471	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93							1.00		1.00
Parking Bus Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow veh/h/ln	0.0	186.3	186.3							186.3	186.3	0.0
Lanes	0	2	0							0	2	0
Cap, veh/h	0	1078	294							120	698	0
Arrive On Green	0.00	0.13	0.13							0.43	0.43	0.00
Sat Flow, veh/h	0	2789	736							0	1695	0
Grp Volume(v), veh/h	0	260	251							257	512	0
Grp Sat Flow(s),veh/h/ln	0	1770	1663							0	1610	0
Q Serve(g_s), s	0.0	8.1	8.3							0.0	15.8	0.0
Cycle Q Clear(g_c), s	0.0	8.1	8.3							26.0	15.8	0.0
Prop In Lane	0.00		0.44							1.00		0.00
Lane Grp Cap(c), veh/h	0	708	665							120	698	0
V/C Ratio(X)	0.00	0.37	0.38							2.14	0.73	0.00
Avail Cap(c_a), veh/h	0	708	665							120	698	0
HCM Platoon Ratio	0.00	0.00	0.00							0.00	0.00	0.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	19.1	19.2							30.0	14.1	0.0
Incr Delay (d2), s/veh	0.0	1.5	1.6							540.5	6.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile Back of Q (95%), veh/ln	0.0	7.3	7.1							35.5	11.0	0.0
Lane Grp Delay (d), s/veh	0.0	20.6	20.8							570.5	20.9	0.0
Lane Grp LOS		C	C							F	C	
Approach Vol, veh/h		511									769	
Approach Delay, s/veh		20.7									204.5	
Approach LOS		C									F	

Timer		
Assigned Phs	2	4
Phs Duration (G+Y+Rc), s	29.0	31.0
Change Period (Y+Rc), s	6.0	6.0
Max Green Setting (Gmax), s	23.0	25.0
Max Q Clear Time (g_c+I1), s	10.3	28.0
Green Ext Time (p_c), s	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	131.2
HCM 2010 LOS	F

Notes

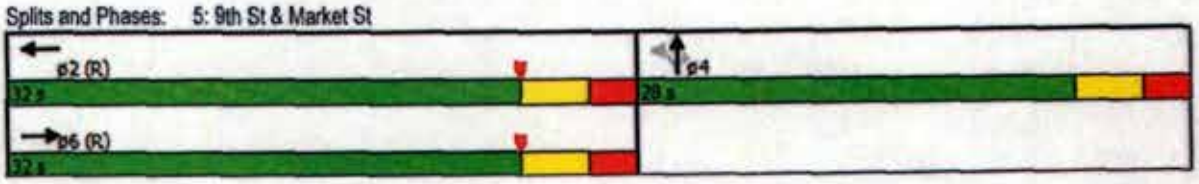
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	919	0	0	475	51	138	566	247	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	10	10	10
Storage Length (ft)	0		0	0		0	0		100	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	*0.60	1.00	1.00	*0.60	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor					0.99			0.98	0.91			
Frt					0.986				0.850			
Flt Protected								0.990				
Satd. Flow (prot)	0	3129	0	0	2042	0	0	3153	1283	0	0	0
Flt Permitted								0.990				
Satd. Flow (perm)	0	3129	0	0	2042	0	0	3105	1169	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		378			450			190			377	
Travel Time (s)		8.6			10.2			4.3			8.6	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)									0			
Adj. Flow (vph)	0	999	0	0	516	55	150	615	268	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	999	0	0	571	0	0	765	268	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.30	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA		Perm	NA	Perm			
Protected Phases		6			2			4				
Permitted Phases							4		4			
Minimum Split (s)		30.0			20.0		20.0	20.0	20.0			
Total Split (s)		32.0			32.0		28.0	28.0	28.0			
Total Split (%)		53.3%			53.3%		46.7%	46.7%	46.7%			
Maximum Green (s)		26.0			26.0		22.0	22.0	22.0			
Yellow Time (s)		3.5			3.5		3.5	3.5	3.5			
All-Red Time (s)		2.5			2.5		2.5	2.5	2.5			
Lost Time Adjust (s)		-1.0			-1.0			-1.0	-1.0			
Total Lost Time (s)		5.0			5.0			5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		27.0			27.0			23.0	23.0			
Actuated g/C Ratio		0.45			0.45			0.38	0.38			
v/c Ratio		0.71			0.62			0.64	0.60			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		16.8			9.9			14.9	18.3			
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		16.8			9.9			14.9	18.3			
LOS		B			A			B	B			
Approach Delay		16.8			9.9			15.8				
Approach LOS		B			A			B				
Queue Length 50th (ft)		152			45			75	50			
Queue Length 95th (ft)		220			106			130	108			
Internal Link Dist (ft)		298			370			110			297	
Turn Bay Length (ft)									100			
Base Capacity (vph)		1408			918			1190	448			
Starvation Cap Reductn		0			0			0	0			
Spillback Cap Reductn		0			0			0	0			
Storage Cap Reductn		0			0			0	0			
Reduced v/c Ratio		0.71			0.62			0.64	0.60			

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 55
Control Type: Pretimed
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 14.9 Intersection LOS: B
Intersection Capacity Utilization 49.0% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 5: 9th St & Market St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	919	0	0	475	51	138	566	247	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.92			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90			
Adj Sat Flow veh/h/ln	0.0	186.3	0.0	0.0	186.3	186.3	178.8	178.8	178.8			
Lanes	0	3	0	0	2	0	0	2	1			
Cap, veh/h	0	1509	0	0	1183	126	248	1076	483			
Arrive On Green	0.00	0.45	0.00	0.00	0.90	0.90	0.13	0.13	0.13			
Sat Flow, veh/h	0	4843	0	0	3373	279	647	2807	1261			
Grp Volume(v), veh/h	0	999	0	0	219	352	407	358	268			
Grp Sat Flow(s),veh/h/ln	0	1118	0	0	1118	1790	1756	1699	1261			
Q Serve(g_s), s	0.0	14.0	0.0	0.0	1.9	1.9	13.1	11.9	12.0			
Cycle Q Clear(g_c), s	0.0	14.0	0.0	0.0	1.9	1.9	13.1	11.9	12.0			
Prop In Lane	0.00		0.00	0.00		0.16	0.37		1.00			
Lane Grp Cap(c), veh/h	0	1509	0	0	503	805	673	651	483			
V/C Ratio(X)	0.00	0.66	0.00	0.00	0.43	0.44	0.60	0.55	0.55			
Avail Cap(c_a), veh/h	0	1509	0	0	503	805	673	651	483			
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33			
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	0.0	12.9	0.0	0.0	1.7	1.7	21.9	21.3	21.4			
Incr Delay (d2), s/veh	0.0	2.3	0.0	0.0	2.7	1.7	4.0	3.3	4.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	0.0	6.7	0.0	0.0	1.2	1.5	11.2	9.9	8.1			
Lane Grp Delay (d), s/veh	0.0	15.2	0.0	0.0	4.5	3.5	25.9	24.7	25.9			
Lane Grp LOS		B			A	A	C	C	C			
Approach Vol, veh/h		999			571			1033				
Approach Delay, s/veh		15.2			3.9			25.5				
Approach LOS		B			A			C				
Timer												
Assigned Phs		6			2			4				
Phs Duration (G+Y+Rc), s		32.0			32.0			28.0				
Change Period (Y+Rc), s		6.0			6.0			6.0				
Max Green Setting (Gmax), s		26.0			26.0			22.0				
Max Q Clear Time (g_c+I1), s		0.0			0.0			15.1				
Green Ext Time (p_c), s		0.0			0.0			0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			16.8									
HCM 2010 LOS			B									
Notes												

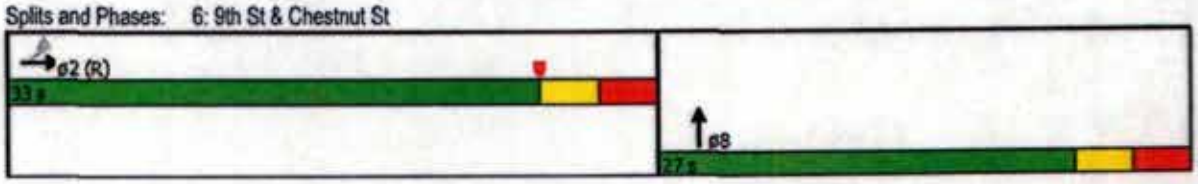
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	345	0	0	0	0	0	453	132	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	*0.60	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98						0.98				
Frt								0.966				
Flt Protected		0.988										
Satd. Flow (prot)	0	2061	0	0	0	0	0	3125	0	0	0	0
Flt Permitted		0.988										
Satd. Flow (perm)	0	2029	0	0	0	0	0	3125	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		442			450			343			375	
Travel Time (s)		10.0			10.2			7.8			8.5	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)	0								0			
Adj. Flow (vph)	121	375	0	0	0	0	0	492	143	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	496	0	0	0	0	0	635	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA						NA				
Protected Phases		2						8				
Permitted Phases	2											
Minimum Split (s)	23.0	23.0						23.0				
Total Split (s)	33.0	33.0						27.0				
Total Split (%)	55.0%	55.0%						45.0%				
Maximum Green (s)	27.0	27.0						21.0				
Yellow Time (s)	3.0	3.0						3.0				
All-Red Time (s)	3.0	3.0						3.0				
Lost Time Adjust (s)		-1.0						-1.0				
Total Lost Time (s)		5.0						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		28.0						22.0				
Actuated g/C Ratio		0.47						0.37				
v/c Ratio		0.52						0.55				
Control Delay		13.8						17.4				
Queue Delay		0.0						0.0				
Total Delay		13.8						17.4				
LOS		B						B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		13.8						17.4				
Approach LOS		B						B				
Queue Length 50th (ft)		99						93				
Queue Length 95th (ft)		161						138				
Internal Link Dist (ft)		362			370			263			295	
Turn Bay Length (ft)												
Base Capacity (vph)		946						1145				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.52						0.55				

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 15.8 Intersection LOS: B
Intersection Capacity Utilization 44.4% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 6: 9th St & Chestnut St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	111	345	0	0	0	0	0	453	132	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.92			
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	0.90			
Adj Sat Flow veh/h/ln	186.3	186.3	0.0				0.0	186.3	186.3			
Lanes	0	2	0				0	2	0			
Cap, veh/h	120	475	0				0	923	266			
Arrive On Green	0.47	0.47	0.00				0.00	0.37	0.37			
Sat Flow, veh/h	0	1695	0				0	2611	724			
Grp Volume(v), veh/h	121	375	0				0	344	291			
Grp Sat Flow(s),veh/h/ln	0	1017	0				0	1770	1473			
Q Serve(g_s), s	0.0	18.7	0.0				0.0	9.2	9.3			
Cycle Q Clear(g_c), s	28.0	18.7	0.0				0.0	9.2	9.3			
Prop In Lane	1.00		0.00				0.00		0.49			
Lane Grp Cap(c), veh/h	120	475	0				0	649	540			
V/C Ratio(X)	1.01	0.79	0.00				0.00	0.53	0.54			
Avail Cap(c_a), veh/h	120	475	0				0	649	540			
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	30.0	13.5	0.0				0.0	14.9	15.0			
Incr Delay (d2), s/veh	84.4	12.6	0.0				0.0	3.1	3.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	8.1	8.7	0.0				0.0	7.5	6.6			
Lane Grp Delay (d), s/veh	114.4	26.1	0.0				0.0	18.0	18.8			
Lane Grp LOS	F	C						B	B			
Approach Vol, veh/h		496						635				
Approach Delay, s/veh		47.6						18.4				
Approach LOS		D						B				

Timer	
Assigned Phs	2
Phs Duration (G+Y+Rc), s	33.0
Change Period (Y+Rc), s	6.0
Max Green Setting (Gmax), s	27.0
Max Q Clear Time (g_c+I1), s	30.0
Green Ext Time (p_c), s	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Notes

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	0	0	696	319
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.953	
Flt Protected						
Satd. Flow (prot)	0	0	0	0	3148	0
Flt Permitted						
Satd. Flow (perm)	0	0	0	0	3148	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	446			122	190	
Travel Time (s)	10.1			2.8	4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	757	347
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	1104	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 32.8%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑			
Volume (vph)	0	358	564	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1504	3303	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1504	3303	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	446		375			190
Travel Time (s)	10.1		8.5			4.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	389	613	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	389	613	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 44.4%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	215	0	0	0	154	542
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt						
Flt Protected	0.950					0.989
Satd. Flow (prot)	1652	0	0	0	0	3267
Flt Permitted	0.950					0.989
Satd. Flow (perm)	1652	0	0	0	0	3267
Link Speed (mph)	30		30			30
Link Distance (ft)	354		253			122
Travel Time (s)	8.0		5.8			2.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	234	0	0	0	167	589
Shared Lane Traffic (%)						
Lane Group Flow (vph)	234	0	0	0	0	756
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 38.0%	ICU Level of Service A
Analysis Period (min) 15	

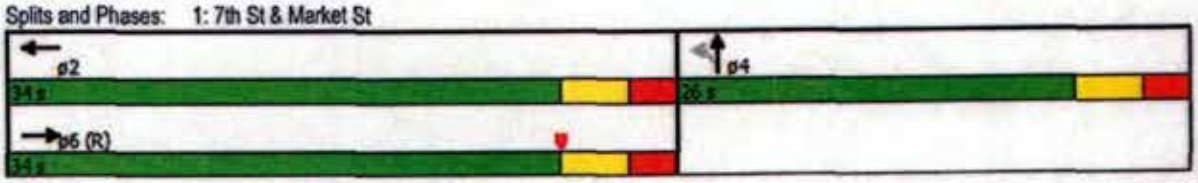
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	718	0	0	279	69	104	312	124	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	10	10	10
Lane Util. Factor	1.00	*0.60	1.00	1.00	0.95	*0.60	0.95	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor					0.99			0.96				
Frt					0.970			0.966				
Flt Protected								0.990				
Satd. Flow (prot)	0	3129	0	0	3158	0	0	2979	0	0	0	0
Flt Permitted								0.990				
Satd. Flow (perm)	0	3129	0	0	3158	0	0	2930	0	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			379			565			375	
Travel Time (s)		10.2			8.6			12.8			8.5	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)							0					
Adj. Flow (vph)	0	780	0	0	303	75	113	339	135	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	780	0	0	378	0	0	587	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA		Perm	NA				
Protected Phases		6			2			4				
Permitted Phases							4					
Minimum Split (s)		30.0			20.0		20.0	20.0				
Total Split (s)		34.0			34.0		26.0	26.0				
Total Split (%)		56.7%			56.7%		43.3%	43.3%				
Maximum Green (s)		28.0			28.0		20.0	20.0				
Yellow Time (s)		3.5			3.5		3.5	3.5				
All-Red Time (s)		2.5			2.5		2.5	2.5				
Lost Time Adjust (s)		-1.0			-1.0			-1.0				
Total Lost Time (s)		5.0			5.0			5.0				
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		29.0			29.0			21.0				
Actuated g/C Ratio		0.48			0.48			0.35				
v/c Ratio		0.52			0.25			0.57				
Control Delay		15.9			9.6			20.1				
Queue Delay		0.0			0.0			0.0				
Total Delay		15.9			9.6			20.1				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			A			C				
Approach Delay		15.9			9.6			20.1				
Approach LOS		B			A			C				
Queue Length 50th (ft)		166			39			95				
Queue Length 95th (ft)		221			62			135				
Internal Link Dist (ft)		370			299			485			295	
Turn Bay Length (ft)												
Base Capacity (vph)		1512			1526			1025				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.52			0.25			0.57				

Intersection Summary

Area Type: *Other*
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 34 (57%), Referenced to phase 6:EBT, Start of Yellow
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 15.9 Intersection LOS: B
Intersection Capacity Utilization 53.6% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 1: 7th St & Market St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	718	0	0	279	69	104	312	124	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.94	1.00		0.91			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00			
Adj Sat Flow veh/h/ln	0.0	186.3	0.0	0.0	186.3	186.3	178.8	178.8	178.8			
Lanes	0	3	0	0	2	0	0	2	0			
Cap, veh/h	0	1621	0	0	1347	326	204	635	264			
Arrive On Green	0.00	0.16	0.00	0.00	0.48	0.48	0.12	0.12	0.12			
Sat Flow, veh/h	0	4843	0	0	2879	675	584	1814	754			
Grp Volume(v), veh/h	0	780	0	0	190	188	306	0	281			
Grp Sat Flow(s),veh/h/ln	0	1118	0	0	1770	1691	1580	0	1572			
Q Serve(g_s), s	0.0	12.7	0.0	0.0	3.7	3.9	11.0	0.0	10.1			
Cycle Q Clear(g_c), s	0.0	12.7	0.0	0.0	3.7	3.9	11.0	0.0	10.1			
Prop In Lane	0.00		0.00	0.00		0.40	0.37		0.48			
Lane Grp Cap(c), veh/h	0	1621	0	0	855	817	553	0	550			
V/C Ratio(X)	0.00	0.48	0.00	0.00	0.22	0.23	0.55	0.00	0.51			
Avail Cap(c_a), veh/h	0	1621	0	0	855	817	553	0	550			
HCM Platoon Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	0.0	18.4	0.0	0.0	9.0	9.0	22.1	0.0	21.7			
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.0	0.6	0.7	3.9	0.0	3.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	0.0	7.0	0.0	0.0	2.7	2.8	8.9	0.0	8.3			
Lane Grp Delay (d), s/veh	0.0	19.4	0.0	0.0	9.6	9.7	26.0	0.0	25.1			
Lane Grp LOS		B			A	A	C		C			
Approach Vol, veh/h		780			378			587				
Approach Delay, s/veh		19.4			9.6			25.6				
Approach LOS		B			A			C				
Timer												
Assigned Phs		6			2			4				
Phs Duration (G+Y+Rc), s		34.0			34.0			26.0				
Change Period (Y+Rc), s		6.0			6.0			6.0				
Max Green Setting (Gmax), s		28.0			28.0			20.0				
Max Q Clear Time (g_c+I1), s		14.7			5.9			13.0				
Green Ext Time (p_c), s		6.3			8.3			2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			19.4									
HCM 2010 LOS			B									
Notes												

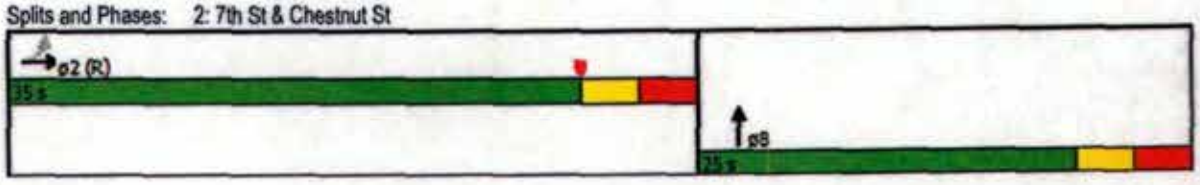
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	201	321	0	0	0	0	0	284	83	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	*0.60	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98						0.98				
Frt								0.966				
Flt Protected		0.981										
Satd. Flow (prot)	0	2047	0	0	0	0	0	3119	0	0	0	0
Flt Permitted		0.981										
Satd. Flow (perm)	0	1999	0	0	0	0	0	3119	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			393			327			565	
Travel Time (s)		10.2			8.9			7.4			12.8	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)	0						0					
Adj. Flow (vph)	218	349	0	0	0	0	0	309	90	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	567	0	0	0	0	0	399	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA						NA				
Protected Phases		2						8				
Permitted Phases	2											
Minimum Split (s)	23.0	23.0						23.0				
Total Split (s)	35.0	35.0						25.0				
Total Split (%)	58.3%	58.3%						41.7%				
Maximum Green (s)	29.0	29.0						19.0				
Yellow Time (s)	3.0	3.0						3.0				
All-Red Time (s)	3.0	3.0						3.0				
Lost Time Adjust (s)		-1.0						-1.0				
Total Lost Time (s)		5.0						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		30.0						20.0				
Actuated g/C Ratio		0.50						0.33				
v/c Ratio		0.57						0.38				
Control Delay		11.3						16.6				
Queue Delay		0.0						0.0				
Total Delay		11.3						16.6				
LOS		B						B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		11.3						16.6				
Approach LOS		B						B				
Queue Length 50th (ft)		82						56				
Queue Length 95th (ft)		165						90				
Internal Link Dist (ft)		370			313			247			485	
Turn Bay Length (ft)												
Base Capacity (vph)		999						1039				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.57						0.38				

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 13.5 Intersection LOS: B
Intersection Capacity Utilization 38.2% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 2: 7th St & Chestnut St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	201	321	0	0	0	0	0	284	83	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.91			
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	1.00			
Adj Sat Flow veh/h/ln	186.3	186.3	0.0				0.0	186.3	186.3			
Lanes	0	2	0				0	2	0			
Cap, veh/h	120	509	0				0	886	251			
Arrive On Green	0.17	0.17	0.00				0.00	0.33	0.33			
Sat Flow, veh/h	0	1695	0				0	2752	753			
Grp Volume(v), veh/h	218	349	0				0	203	196			
Grp Sat Flow(s),veh/h/ln	0	1017	0				0	1770	1642			
Q Serve(g_s), s	0.0	19.4	0.0				0.0	5.2	5.4			
Cycle Q Clear(g_c), s	30.0	19.4	0.0				0.0	5.2	5.4			
Prop In Lane	1.00		0.00				0.00		0.46			
Lane Grp Cap(c), veh/h	120	509	0				0	590	547			
V/C Ratio(X)	1.82	0.69	0.00				0.00	0.34	0.36			
Avail Cap(c_a), veh/h	120	509	0				0	590	547			
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	40.1	20.6	0.0				0.0	15.1	15.1			
Incr Delay (d2), s/veh	398.3	7.4	0.0				0.0	1.6	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	27.3	10.0	0.0				0.0	4.2	4.1			
Lane Grp Delay (d), s/veh	438.3	28.0	0.0				0.0	16.6	17.0			
Lane Grp LOS	F	C						B	B			
Approach Vol, veh/h		567						399				
Approach Delay, s/veh		185.8						16.8				
Approach LOS		F						B				

Timer	
Assigned Phs	2
Phs Duration (G+Y+Rc), s	35.0
Change Period (Y+Rc), s	6.0
Max Green Setting (Gmax), s	29.0
Max Q Clear Time (g_c+I1), s	32.0
Green Ext Time (p_c), s	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	116.0
HCM 2010 LOS	F

Notes

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	643	309	0	415	0	0	0	0	57	743	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	10	10	10	9	9	9
Lane Util. Factor	1.00	0.91	*0.60	1.00	*0.60	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.97									0.99	
Frt		0.951									0.992	
Flt Protected											0.997	
Satd. Flow (prot)	0	4384	0	0	2086	0	0	0	0	0	3137	0
Flt Permitted											0.997	
Satd. Flow (perm)	0	4384	0	0	2086	0	0	0	0	0	3123	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			450			190			386	
Travel Time (s)		10.2			10.2			4.3			8.8	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)												0
Adj. Flow (vph)	0	699	336	0	451	0	0	0	0	62	808	51
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1035	0	0	451	0	0	0	0	0	921	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.14
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA					Perm	NA	
Protected Phases		6			2						8	
Permitted Phases										8		
Minimum Split (s)		10.0			10.0					10.0	10.0	
Total Split (s)		28.0			28.0					32.0	32.0	
Total Split (%)		46.7%			46.7%					53.3%	53.3%	
Maximum Green (s)		22.0			22.0					26.0	26.0	
Yellow Time (s)		3.5			3.5					3.5	3.5	
All-Red Time (s)		2.5			2.5					2.5	2.5	
Lost Time Adjust (s)		-1.0			-1.0						-1.0	
Total Lost Time (s)		5.0			5.0						5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		23.0			23.0						27.0	
Actuated g/C Ratio		0.38			0.38						0.45	
v/c Ratio		0.62			0.56						0.66	
Control Delay		9.8			18.9						15.6	
Queue Delay		0.0			0.0						0.0	
Total Delay		9.8			18.9						15.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A			B						B	
Approach Delay		9.8			18.9						15.6	
Approach LOS		A			B						B	
Queue Length 50th (ft)		56			110						128	
Queue Length 95th (ft)		80			185						186	
Internal Link Dist (ft)		370			370			110			306	
Turn Bay Length (ft)												
Base Capacity (vph)		1680			799						1405	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.62			0.56						0.66	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 13.7 — Intersection LOS: B
Intersection Capacity Utilization 53.6% — ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 3: 8th St & Market St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	643	309	0	415	0	0	0	0	57	743	47
Number	1	6	16	5	2	12				3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		1.00				1.00		0.93
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	0.90
Adj Sat Flow veh/h/ln	0.0	186.3	186.3	0.0	186.3	0.0				178.8	178.8	178.8
Lanes	0	3	0	0	2	0				0	2	0
Cap, veh/h	0	1300	559	0	857	0				97	1317	88
Arrive On Green	0.00	0.77	0.77	0.00	0.38	0.00				0.45	0.45	0.45
Sat Flow, veh/h	0	3558	1459	0	3725	0				215	2927	194
Grp Volume(v), veh/h	0	699	336	0	451	0				512	0	409
Grp Sat Flow(s),veh/h/ln	0	1695	1459	0	1118	0				1777	0	1559
Q Serve(g_s), s	0.0	4.9	6.0	0.0	9.4	0.0				13.4	0.0	11.7
Cycle Q Clear(g_c), s	0.0	4.9	6.0	0.0	9.4	0.0				13.4	0.0	11.7
Prop In Lane	0.00		1.00	0.00		0.00				0.12		0.12
Lane Grp Cap(c), veh/h	0	1300	559	0	857	0				800	0	701
V/C Ratio(X)	0.00	0.54	0.60	0.00	0.53	0.00				0.64	0.00	0.58
Avail Cap(c_a), veh/h	0	1300	559	0	857	0				800	0	701
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	4.9	5.0	0.0	14.3	0.0				12.7	0.0	12.3
Incr Delay (d2), s/veh	0.0	1.6	4.7	0.0	2.3	0.0				3.9	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile Back of Q (95%), veh/ln	0.0	2.6	3.4	0.0	4.7	0.0				10.0	0.0	8.2
Lane Grp Delay (d), s/veh	0.0	6.5	9.7	0.0	16.6	0.0				16.7	0.0	15.8
Lane Grp LOS		A	A		B					B		B
Approach Vol, veh/h		1035			451						921	
Approach Delay, s/veh		7.5			16.6						16.3	
Approach LOS		A			B						B	

Timer												
Assigned Phs		6			2						8	
Phs Duration (G+Y+Rc), s		28.0			28.0						32.0	
Change Period (Y+Rc), s		6.0			6.0						6.0	
Max Green Setting (Gmax), s		22.0			22.0						26.0	
Max Q Clear Time (g_c+I1), s		0.0			0.0						15.4	
Green Ext Time (p_c), s		0.0			0.0						0.0	

Intersection Summary			
HCM 2010 Ctrl Delay		12.6	
HCM 2010 LOS		B	

Notes

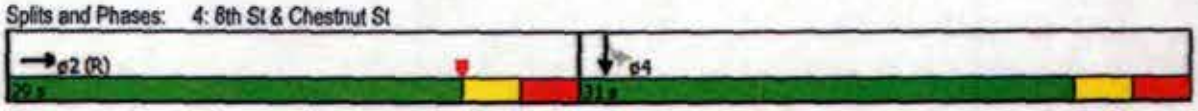
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	304	54	0	0	0	0	0	0	229	393	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	*0.60	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.99									0.97	
Frt		0.977										
Flt Protected											0.982	
Satd. Flow (prot)	0	3185	0	0	0	0	0	0	0	0	3244	0
Flt Permitted											0.982	
Satd. Flow (perm)	0	3185	0	0	0	0	0	0	0	0	3161	0
Right Turn on Red			No			No			No	No		No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		450			450			329			253	
Travel Time (s)		10.2			10.2			7.5			5.8	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)	0											0
Adj. Flow (vph)	0	330	59	0	0	0	0	0	0	249	427	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	389	0	0	0	0	0	0	0	0	676	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA								Perm	NA	
Protected Phases		2									4	
Permitted Phases										4		
Minimum Split (s)		24.0								24.0	24.0	
Total Split (s)		29.0								31.0	31.0	
Total Split (%)		48.3%								51.7%	51.7%	
Maximum Green (s)		23.0								25.0	25.0	
Yellow Time (s)		3.0								3.0	3.0	
All-Red Time (s)		3.0								3.0	3.0	
Lost Time Adjust (s)		-1.0									-1.0	
Total Lost Time (s)		5.0									5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		24.0									26.0	
Actuated g/C Ratio		0.40									0.43	
v/c Ratio		0.31									0.49	
Control Delay		8.2									11.9	
Queue Delay		0.0									0.0	
Total Delay		8.2									11.9	
LOS		A									B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.2									11.9	
Approach LOS		A									B	
Queue Length 50th (ft)		28									68	
Queue Length 95th (ft)		42									116	
Internal Link Dist (ft)		370			370			249			173	
Turn Bay Length (ft)												
Base Capacity (vph)		1274									1369	
Starvation Cap Reductn		0									0	
Spillback Cap Reductn		0									0	
Storage Cap Reductn		0									0	
Reduced v/c Ratio		0.31									0.49	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 10.6 — Intersection LOS: B
Intersection Capacity Utilization 40.1% — ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 4: 8th St & Chestnut St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	304	54	0	0	0	0	0	0	229	393	0
Number	5	2	12							7	4	14
Initial Q (Qb), veh	0	0	0							0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93							1.00		1.00
Parking Bus Adj	1.00	1.00	1.00							1.00	1.00	1.00
Adj Sat Flow veh/h/ln	0.0	186.3	186.3							186.3	186.3	0.0
Lanes	0	2	0							0	2	0
Cap, veh/h	0	1187	209							120	698	0
Arrive On Green	0.00	0.13	0.13							0.43	0.43	0.00
Sat Flow, veh/h	0	3062	522							0	1695	0
Grp Volume(v), veh/h	0	195	194							249	427	0
Grp Sat Flow(s),veh/h/ln	0	1770	1721							0	1610	0
Q Serve(g_s), s	0.0	5.9	6.1							0.0	12.3	0.0
Cycle Q Clear(g_c), s	0.0	5.9	6.1							26.0	12.3	0.0
Prop In Lane	0.00		0.30							1.00		0.00
Lane Grp Cap(c), veh/h	0	708	688							120	698	0
V/C Ratio(X)	0.00	0.27	0.28							2.07	0.61	0.00
Avail Cap(c_a), veh/h	0	708	688							120	698	0
HCM Platoon Ratio	0.00	0.00	0.00							0.00	0.00	0.00
Upstream Filter(I)	0.00	1.00	1.00							1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	18.2	18.3							30.0	13.1	0.0
Incr Delay (d2), s/veh	0.0	1.0	1.0							511.2	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0							0.0	0.0	0.0
%ile Back of Q (95%), veh/ln	0.0	5.1	5.1							33.8	8.7	0.0
Lane Grp Delay (d), s/veh	0.0	19.2	19.3							541.2	17.1	0.0
Lane Grp LOS		B	B							F	B	
Approach Vol, veh/h		389									676	
Approach Delay, s/veh		19.2									210.1	
Approach LOS		B									F	
Timer												
Assigned Phs		2									4	
Phs Duration (G+Y+Rc), s		29.0									31.0	
Change Period (Y+Rc), s		6.0									6.0	
Max Green Setting (Gmax), s		23.0									25.0	
Max Q Clear Time (g_c+I1), s		8.1									28.0	
Green Ext Time (p_c), s		0.0									0.0	
Intersection Summary												
HCM 2010 Ctrl Delay			140.4									
HCM 2010 LOS			F									
Notes												

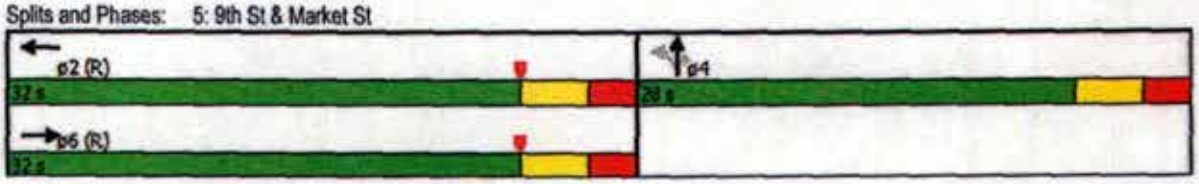
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	779	0	0	473	56	120	554	235	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	9	9	9	10	10	10
Storage Length (ft)	0		0	0		0	0		100	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	*0.60	1.00	1.00	*0.60	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor					0.99			0.99	0.91			
Frt					0.984				0.850			
Flt Protected								0.991				
Satd. Flow (prot)	0	3129	0	0	2036	0	0	3157	1283	0	0	0
Flt Permitted								0.991				
Satd. Flow (perm)	0	3129	0	0	2036	0	0	3113	1169	0	0	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		378			450			190			377	
Travel Time (s)		8.6			10.2			4.3			8.6	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)									0			
Adj. Flow (vph)	0	847	0	0	514	61	130	602	255	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	847	0	0	575	0	0	732	255	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.14	1.14	1.30	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type		NA			NA		Perm	NA	Perm			
Protected Phases		6			2			4				
Permitted Phases							4		4			
Minimum Split (s)		30.0			20.0		20.0	20.0	20.0			
Total Split (s)		32.0			32.0		28.0	28.0	28.0			
Total Split (%)		53.3%			53.3%		46.7%	46.7%	46.7%			
Maximum Green (s)		26.0			26.0		22.0	22.0	22.0			
Yellow Time (s)		3.5			3.5		3.5	3.5	3.5			
All-Red Time (s)		2.5			2.5		2.5	2.5	2.5			
Lost Time Adjust (s)		-1.0			-1.0			-1.0	-1.0			
Total Lost Time (s)		5.0			5.0			5.0	5.0			
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		27.0			27.0			23.0	23.0			
Actuated g/C Ratio		0.45			0.45			0.38	0.38			
v/c Ratio		0.60			0.63			0.61	0.57			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay		14.7			12.1			13.7	16.7			
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		14.7			12.1			13.7	16.7			
LOS		B			B			B	B			
Approach Delay		14.7			12.1			14.5				
Approach LOS		B			B			B				
Queue Length 50th (ft)		121			64			71	47			
Queue Length 95th (ft)		175			116			114	95			
Internal Link Dist (ft)		298			370			110			297	
Turn Bay Length (ft)									100			
Base Capacity (vph)		1408			916			1193	448			
Starvation Cap Reductn		0			0			0	0			
Spillback Cap Reductn		0			0			0	0			
Storage Cap Reductn		0			0			0	0			
Reduced v/c Ratio		0.60			0.63			0.61	0.57			

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 55
Control Type: Pretimed
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 14.0 Intersection LOS: B
Intersection Capacity Utilization 45.9% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 5: 9th St & Market St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	779	0	0	473	56	120	554	235	0	0	0
Number	1	6	16	5	2	12	7	4	14			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.93	1.00		0.92			
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90			
Adj Sat Flow veh/h/ln	0.0	186.3	0.0	0.0	186.3	186.3	178.8	178.8	178.8			
Lanes	0	3	0	0	2	0	0	2	1			
Cap, veh/h	0	1509	0	0	1167	138	225	1100	483			
Arrive On Green	0.00	0.45	0.00	0.00	0.90	0.90	0.13	0.13	0.13			
Sat Flow, veh/h	0	4843	0	0	3339	307	587	2871	1261			
Grp Volume(v), veh/h	0	847	0	0	221	354	390	342	255			
Grp Sat Flow(s),veh/h/ln	0	1118	0	0	1118	1783	1759	1699	1261			
Q Serve(g_s), s	0.0	11.2	0.0	0.0	2.0	2.0	12.5	11.3	11.4			
Cycle Q Clear(g_c), s	0.0	11.2	0.0	0.0	2.0	2.0	12.5	11.3	11.4			
Prop In Lane	0.00		0.00	0.00		0.17	0.33		1.00			
Lane Grp Cap(c), veh/h	0	1509	0	0	503	802	674	651	483			
V/C Ratio(X)	0.00	0.56	0.00	0.00	0.44	0.44	0.58	0.53	0.53			
Avail Cap(c_a), veh/h	0	1509	0	0	503	802	674	651	483			
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33			
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	0.0	12.1	0.0	0.0	1.7	1.7	21.6	21.1	21.1			
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.0	2.8	1.8	3.6	3.0	4.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	0.0	5.2	0.0	0.0	1.2	1.5	10.7	9.5	7.7			
Lane Grp Delay (d), s/veh	0.0	13.7	0.0	0.0	4.5	3.5	25.2	24.1	25.2			
Lane Grp LOS		B			A	A	C	C	C			
Approach Vol, veh/h		847			575			987				
Approach Delay, s/veh		13.7			3.9			24.8				
Approach LOS		B			A			C				

Timer			
Assigned Phs	6	2	4
Phs Duration (G+Y+Rc), s	32.0	32.0	28.0
Change Period (Y+Rc), s	6.0	6.0	6.0
Max Green Setting (Gmax), s	26.0	26.0	22.0
Max Q Clear Time (g_c+I1), s	0.0	0.0	14.5
Green Ext Time (p_c), s	0.0	0.0	0.1

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Notes

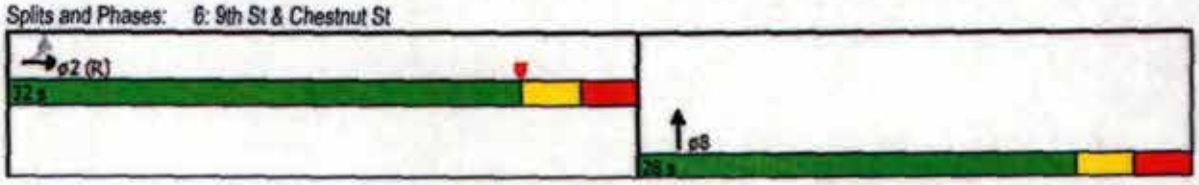
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	298	0	0	0	0	0	448	86	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	*0.60	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.98						0.99				
Frt								0.976				
Flt Protected		0.989										
Satd. Flow (prot)	0	2063	0	0	0	0	0	3178	0	0	0	0
Flt Permitted		0.989										
Satd. Flow (perm)	0	2032	0	0	0	0	0	3178	0	0	0	0
Right Turn on Red	No		No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		442			450			343			375	
Travel Time (s)		10.0			10.2			7.8			8.5	
Confl. Peds. (#/hr)	100		100	100		100	100		100	100		100
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
Parking (#/hr)	0								0			
Adj. Flow (vph)	95	324	0	0	0	0	0	487	93	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	419	0	0	0	0	0	580	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA						NA				
Protected Phases		2						8				
Permitted Phases	2											
Minimum Split (s)	23.0	23.0						23.0				
Total Split (s)	32.0	32.0						28.0				
Total Split (%)	53.3%	53.3%						46.7%				
Maximum Green (s)	26.0	26.0						22.0				
Yellow Time (s)	3.0	3.0						3.0				
All-Red Time (s)	3.0	3.0						3.0				
Lost Time Adjust (s)		-1.0						-1.0				
Total Lost Time (s)		5.0						5.0				
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		27.0						23.0				
Actuated g/C Ratio		0.45						0.38				
v/c Ratio		0.46						0.48				
Control Delay		13.5						15.6				
Queue Delay		0.0						0.0				
Total Delay		13.5						15.6				
LOS		B						B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		13.5						15.6				
Approach LOS		B						B				
Queue Length 50th (ft)		82						80				
Queue Length 95th (ft)		136						121				
Internal Link Dist (ft)		362			370			263			295	
Turn Bay Length (ft)												
Base Capacity (vph)		914						1218				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.46						0.48				

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Yellow
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.48
Intersection Signal Delay: 14.7 Intersection LOS: B
Intersection Capacity Utilization 42.4% ICU Level of Service A
Analysis Period (min) 15
* User Entered Value

Splits and Phases: 6: 9th St & Chestnut St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	298	0	0	0	0	0	448	86	0	0	0
Number	5	2	12				3	8	18			
Initial Q (Qb), veh	0	0	0				0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.92			
Parking Bus Adj	1.00	1.00	1.00				1.00	1.00	0.90			
Adj Sat Flow veh/h/ln	186.3	186.3	0.0				0.0	186.3	186.3			
Lanes	0	2	0				0	2	0			
Cap, veh/h	120	458	0				0	1064	201			
Arrive On Green	0.45	0.45	0.00				0.00	0.38	0.38			
Sat Flow, veh/h	0	1695	0				0	2869	525			
Grp Volume(v), veh/h	95	324	0				0	309	271			
Grp Sat Flow(s),veh/h/ln	0	1017	0				0	1770	1531			
Q Serve(g_s), s	0.0	15.4	0.0				0.0	7.8	8.0			
Cycle Q Clear(g_c), s	27.0	15.4	0.0				0.0	7.8	8.0			
Prop In Lane	1.00		0.00				0.00		0.34			
Lane Grp Cap(c), veh/h	120	458	0				0	678	587			
V/C Ratio(X)	0.79	0.71	0.00				0.00	0.46	0.46			
Avail Cap(c_a), veh/h	120	458	0				0	678	587			
HCM Platoon Ratio	0.00	0.00	0.00				0.00	0.00	0.00			
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00			
Uniform Delay (d), s/veh	30.0	13.3	0.0				0.0	13.8	13.9			
Incr Delay (d2), s/veh	40.0	8.9	0.0				0.0	2.2	2.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0			
%ile Back of Q (95%), veh/ln	4.9	7.2	0.0				0.0	6.3	5.6			
Lane Grp Delay (d), s/veh	70.0	22.2	0.0				0.0	16.0	16.5			
Lane Grp LOS	E	C						B	B			
Approach Vol, veh/h		419						580				
Approach Delay, s/veh		33.1						16.2				
Approach LOS		C						B				

Timer	
Assigned Phs	2
Phs Duration (G+Y+Rc), s	32.0
Change Period (Y+Rc), s	6.0
Max Green Setting (Gmax), s	26.0
Max Q Clear Time (g_c+I1), s	29.0
Green Ext Time (p_c), s	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Notes

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations					↑↑	
Volume (vph)	0	0	0	0	651	401
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.943	
Flt Protected						
Satd. Flow (prot)	0	0	0	0	3115	0
Flt Permitted						
Satd. Flow (perm)	0	0	0	0	3115	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	446			122	190	
Travel Time (s)	10.1			2.8	4.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	708	436
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	1144	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 34.2%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑			
Volume (vph)	0	338	535	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00
Frt		0.865				
Flt Protected						
Satd. Flow (prot)	0	1504	3303	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1504	3303	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	446		375			190
Travel Time (s)	10.1		8.5			4.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	367	582	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	367	582	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	209	0	0	0	182	470
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt						
Flt Protected	0.950					0.986
Satd. Flow (prot)	1652	0	0	0	0	3257
Flt Permitted	0.950					0.986
Satd. Flow (perm)	1652	0	0	0	0	3257
Link Speed (mph)	30		30			30
Link Distance (ft)	354		253			122
Travel Time (s)	8.0		5.8			2.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	227	0	0	0	198	511
Shared Lane Traffic (%)						
Lane Group Flow (vph)	227	0	0	0	0	709
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	10		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 36.5% ICU Level of Service A
Analysis Period (min) 15

APPENDIX 34
LOCAL IMPACT REPORT
SEE PGCB WEBSITE

APPENDIX 36

DETAILS OF COMPULSIVE OR PROBLEM GAMBLING PLAN

See attached.

CONFIDENTIAL

Market East Associates, LP

COMPULSIVE AND PROBLEM GAMBLING
PLAN

November 15, 2012

TABLE OF CONTENTS

SECTION	DESCRIPTION
1.	The goals of the plan, procedures and timetables to implement the plan
2.	Commitment to train employees and annual reinforcement training
3.	Individual(s) (or Committee) who will be responsible for the implementation and maintenance of the plan
4.	Duties and responsibilities of employees designated to implement and participate in the plan (a) Security Department (b) Surveillance Department (c) Slots Department (d) Table Games Department (e) Credit Department (f) Cashier's Cage (g) Marketing Department (h) Food and Beverage Department (i) Valet Department
5.	The responsibility of patrons
6.	Procedures to identify patrons and employees with suspected or known compulsive and problem gambling behavior
7.	Procedures for employees to report suspected or identified compulsive or problem gamblers to a designated key employee or other supervisory employee
8.	Procedures for providing information to individuals with suspected or known compulsive and problem gambling behavior
9.	Procedures for responding to patron requests for information
10.	Procedures to keep the identity of an individual suspected of problem gambling confidential
11.	Provision of printed material to educate patrons about compulsive and problem gambling and to inform them about treatment services available
12.	Estimated cost for development, implementation and administration

of the plan

13. List of community, public and private treatment services

14. Certification process to verify completion of required training and annual reinforcement training by employees

15. Procedures to prevent underage gambling
    - (a) Security Department
    - (b) Surveillance Department
    - (c) Slots Department
    - (d) Table Games Department
    - (e) Credit Department
    - (f) Cashier's Cage
    - (g) Marketing Department
    - (h) Food and Beverage Department

16. Procedures to prevent excluded persons from gambling
    - (a) Security Department
    - (b) Surveillance Department
    - (c) Slots Department
    - (d) Table Games Department
    - (e) Credit Department
    - (f) Cashier's Cage
    - (g) Marketing Department

17. Procedures to prevent self-excluded persons from gambling
    - (a) Security Department
    - (b) Surveillance Department
    - (c) Slots Department
    - (d) Table Games Department
    - (e) Credit Department
    - (f) Cashier's Cage
    - (g) Marketing Department

18. Procedures to prevent intoxicated patrons from gambling
    - (a) Security Department
    - (b) Surveillance Department
    - (c) Slots Department
    - (d) Table Games Department
    - (e) Credit Department
    - (f) Food and Beverage Department
    - (g) Valet Department

19. Procedures to ensure that certain individuals may not obtain credit

20. Plan for posting approved signs in the facility and materials offered to the public

21. Other policies and procedures intended to be used beyond what is required

22. *Procedures to prevent cashing of certain checks*

23. Promotions and Promotions Advertising

SECTION #1

Goals of Market East Associates, LP's Compulsive and Problem Gambling Plan and procedures and timetables to implement the plan

Market East Associates, LP ("MEA") has developed, and will maintain, amend and adjust as necessary, the goals, procedures and timetables of this CPG Plan as outlined below. The procedures set forth in this CPG Plan and its attachments will be followed by the designated employees. The CPG Plan will be implemented on or before the opening of the casino.

All employees of MEA are expected to be knowledgeable of, and follow approved procedures consistent with, this CPG Plan. As part of their new employee orientation and annually as reinforcement training, all employees will receive training on the scope, practice and procedures of this CPG Plan as well as training on the CPG Plan itself.

The CPG Plan will be implemented upon the opening of the facility.

MEA will:

1. Educate all employees on responsible gaming.
2. Educate all employees on how to recognize some signs of compulsive and problem gambling.
3. Educate all employees on the social and economic costs of compulsive and problem gambling.
4. Educate all employees regarding the relationship between compulsive and problem gambling and other addictive behaviors.
5. Educate all employees on where to locate and how to provide compulsive and problem gambling literature to patrons seeking such information.
6. Educate all employees on the process of reaching out to a patron suspected of compulsive and problem gambling and deliver problem-gambling literature on voluntary treatment services.
7. Make publicly available to patrons brochures and other literature describing responsible gaming, explaining characteristics of compulsive and problem gambling, and where to find professional assistance and/or treatment.
8. Prevent underage gambling.
9. Prevent gambling by intoxicated patrons.
10. Conspicuously place signage bearing the toll-free helpline number for the Compulsive Gamblers hotline as specified in the section titled *Plans for posting signs.*
11. Serve alcoholic beverages responsibly.
12. Advertise responsibly and to avoid using individuals who appear to be under 21 years of age in advertisements.
13. Educate all employees regarding self-exclusion including where to direct a patron who requests to be self-excluded.
14. Establish effective procedures to ensure that all aspects of section 1516 of the act (concerning self-exclusion) are complied with.
15. Mandate attendance at employee orientation and mandate attendance at annual