

Appendix B: Synchro Report

Prepared for the City of Littleton | February 2024



Existing Conditions - Synchro Results
Main Street & Prince Street

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕	↗	↖	↑			↑	↗
Traffic Volume (veh/h)	0	0	0	103	397	37	67	202	0	0	196	25
Future Volume (veh/h)	0	0	0	103	397	37	67	202	0	0	196	25
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1841	1856	1767	1841	1870	0	0	1841	1841
Adj Flow Rate, veh/h				123	473	44	80	240	0	0	233	30
Peak Hour Factor				0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %				4	3	9	4	2	0	0	4	4
Cap, veh/h				289	1180	614	487	916	0	0	734	622
Arrive On Green				0.41	0.41	0.41	0.08	0.98	0.00	0.00	0.40	0.40
Sat Flow, veh/h				706	2877	1497	1753	1870	0	0	1841	1560
Grp Volume(v), veh/h				317	279	44	80	240	0	0	233	30
Grp Sat Flow(s),veh/h/ln				1820	1763	1497	1753	1870	0	0	1841	1560
Q Serve(g_s), s				12.4	11.1	1.8	2.6	0.3	0.0	0.0	8.7	1.2
Cycle Q Clear(g_c), s				12.4	11.1	1.8	2.6	0.3	0.0	0.0	8.7	1.2
Prop In Lane				0.39		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				746	723	614	487	916	0	0	734	622
V/C Ratio(X)				0.42	0.39	0.07	0.16	0.26	0.00	0.00	0.32	0.05
Avail Cap(c_a), veh/h				746	723	614	537	916	0	0	734	622
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.82	0.82	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				21.1	20.7	17.9	15.2	0.5	0.0	0.0	20.7	18.4
Incr Delay (d2), s/veh				1.8	1.6	0.2	0.0	0.6	0.0	0.0	1.1	0.1
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 BackOfQ(50%),veh/ln				5.5	4.8	0.6	1.0	0.3	0.0	0.0	3.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				22.8	22.2	18.2	15.3	1.1	0.0	0.0	21.8	18.6
LnGrp LOS				C	C	B	B	A	A	A	C	B
Approach Vol, veh/h					640			320			263	
Approach Delay, s/veh					22.3			4.6			21.5	
Approach LOS					C			A			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.1	44.9		46.0		54.0						
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0						
Max Green Setting (Gmax), s	7.0	37.0		41.0		49.0						
Max Q Clear Time (g_c+I1), s	4.6	10.7		14.4		2.3						
Green Ext Time (p_c), s	0.0	0.9		2.5		0.9						
Intersection Summary												
HCM 6th Ctrl Delay											17.5	
HCM 6th LOS											B	

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕	↗	↖	↑			↕	↗
Traffic Volume (veh/h)	0	0	0	78	633	65	115	232	0	0	264	45
Future Volume (veh/h)	0	0	0	78	633	65	115	232	0	0	264	45
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1885	1885	1885	1900	1885	0	0	1900	1900
Adj Flow Rate, veh/h				81	659	68	120	242	0	0	275	47
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				1	1	1	0	1	0	0	0	0
Cap, veh/h				157	1342	655	474	924	0	0	728	617
Arrive On Green				0.41	0.41	0.41	0.11	0.98	0.00	0.00	0.38	0.38
Sat Flow, veh/h				383	3274	1598	1810	1885	0	0	1900	1610
Grp Volume(v), veh/h				395	345	68	120	242	0	0	275	47
Grp Sat Flow(s),veh/h/ln				1866	1791	1598	1810	1885	0	0	1900	1610
Q Serve(g_s), s				15.8	14.1	2.6	3.9	0.3	0.0	0.0	10.4	1.9
Cycle Q Clear(g_c), s				15.8	14.1	2.6	3.9	0.3	0.0	0.0	10.4	1.9
Prop In Lane				0.21		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				765	734	655	474	924	0	0	728	617
V/C Ratio(X)				0.52	0.47	0.10	0.25	0.26	0.00	0.00	0.38	0.08
Avail Cap(c_a), veh/h				765	734	655	498	924	0	0	728	617
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.83	0.83	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.1	21.6	18.2	15.5	0.5	0.0	0.0	22.2	19.6
Incr Delay (d2), s/veh				2.5	2.2	0.3	0.1	0.6	0.0	0.0	1.5	0.2
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 BackOfQ(50%),veh/ln				7.3	6.2	1.0	1.5	0.3	0.0	0.0	4.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				24.6	23.7	18.5	15.6	1.1	0.0	0.0	23.7	19.8
LnGrp LOS				C	C	B	B	A	A	A	C	B
Approach Vol, veh/h					808			362			322	
Approach Delay, s/veh					23.7			5.9			23.2	
Approach LOS					C			A			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.7	43.3		46.0		54.0						
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0						
Max Green Setting (Gmax), s	7.0	37.0		41.0		49.0						
Max Q Clear Time (g_c+I1), s	5.9	12.4		17.8		2.3						
Green Ext Time (p_c), s	0.0	1.1		3.2		0.9						

Intersection Summary

HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕	↗	↖	↑			↑	↗
Traffic Volume (veh/h)	0	0	0	82	586	71	107	161	0	0	176	61
Future Volume (veh/h)	0	0	0	82	586	71	107	161	0	0	176	61
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1870	1885	1900	1885	1885	0	0	1885	1900
Adj Flow Rate, veh/h				93	666	81	122	183	0	0	200	69
Peak Hour Factor				0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %				2	1	0	1	1	0	0	1	0
Cap, veh/h				162	1219	608	549	964	0	0	748	639
Arrive On Green				0.38	0.38	0.38	0.12	1.00	0.00	0.00	0.40	0.40
Sat Flow, veh/h				428	3227	1610	1795	1885	0	0	1885	1610
Grp Volume(v), veh/h				405	354	81	122	183	0	0	200	69
Grp Sat Flow(s),veh/h/ln				1864	1791	1610	1795	1885	0	0	1885	1610
Q Serve(g_s), s				15.5	13.8	3.0	3.5	0.0	0.0	0.0	6.4	2.4
Cycle Q Clear(g_c), s				15.5	13.8	3.0	3.5	0.0	0.0	0.0	6.4	2.4
Prop In Lane				0.23		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				704	677	608	549	964	0	0	748	639
V/C Ratio(X)				0.58	0.52	0.13	0.22	0.19	0.00	0.00	0.27	0.11
Avail Cap(c_a), veh/h				704	677	608	664	964	0	0	748	639
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.93	0.93	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.3	21.7	18.3	12.8	0.0	0.0	0.0	18.3	17.1
Incr Delay (d2), s/veh				3.4	2.9	0.5	0.1	0.4	0.0	0.0	0.9	0.3
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 BackOfQ(50%),veh/ln				7.2	6.1	1.2	1.2	0.1	0.0	0.0	2.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				25.7	24.6	18.8	12.8	0.4	0.0	0.0	19.2	17.4
LnGrp LOS				C	C	B	B	A	A	A	B	B
Approach Vol, veh/h					840			305			269	
Approach Delay, s/veh					24.5			5.4			18.7	
Approach LOS					C			A			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.3	40.7		39.0		51.0						
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0						
Max Green Setting (Gmax), s	11.0	30.0		34.0		46.0						
Max Q Clear Time (g_c+I1), s	5.5	8.4		17.5		2.0						
Green Ext Time (p_c), s	0.1	0.8		3.0		0.7						
Intersection Summary												
HCM 6th Ctrl Delay				19.3								
HCM 6th LOS				B								

Existing Conditions - Synchro Results
Alamo Avenue & Prince Street

Existing AM
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑	↗	↘	↑	
Traffic Volume (veh/h)	35	663	147	0	0	0	0	234	117	98	198	0
Future Volume (veh/h)	35	663	147	0	0	0	0	234	117	98	198	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1811	1856	1885				0	1885	1870	1841	1841	0
Adj Flow Rate, veh/h	40	762	169				0	269	134	113	228	0
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	6	3	1				0	1	2	4	4	0
Cap, veh/h	46	910	214				0	566	476	622	1056	0
Arrive On Green	0.33	0.33	0.33				0.00	0.30	0.30	0.45	1.00	0.00
Sat Flow, veh/h	141	2789	656				0	1885	1585	1753	1841	0
Grp Volume(v), veh/h	523	0	448				0	269	134	113	228	0
Grp Sat Flow(s),veh/h/ln	1848	0	1737				0	1885	1585	1753	1841	0
Q Serve(g_s), s	26.6	0.0	23.4				0.0	11.7	6.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	26.6	0.0	23.4				0.0	11.7	6.5	0.0	0.0	0.0
Prop In Lane	0.08		0.38				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	603	0	567				0	566	476	622	1056	0
V/C Ratio(X)	0.87	0.00	0.79				0.00	0.48	0.28	0.18	0.22	0.00
Avail Cap(c_a), veh/h	832	0	782				0	566	476	622	1056	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	31.7	0.0	30.6				0.0	28.6	26.8	14.6	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.0	2.5				0.0	2.9	1.5	0.0	0.5	0.0
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 BackOfQ(50%),veh/ln	12.5	0.0	9.9				0.0	5.6	2.6	1.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	0.0	33.0				0.0	31.4	28.2	14.6	0.5	0.0
LnGrp LOS	D	A	C				A	C	C	B	A	A
Approach Vol, veh/h		971						403			341	
Approach Delay, s/veh		35.4						30.4			5.1	
Approach LOS		D						C			A	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		62.4			27.4	35.0		37.6				
Change Period (Y+Rc), s		5.0			5.0	* 5		5.0				
Max Green Setting (Gmax), s		45.0			11.0	* 30		45.0				
Max Q Clear Time (g_c+I1), s		2.0			2.0	13.7		28.6				
Green Ext Time (p_c), s		0.9			0.1	1.1		4.0				

Intersection Summary

HCM 6th Ctrl Delay	28.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Existing PM
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑	↗	↘	↑	
Traffic Volume (veh/h)	56	525	115	0	0	0	0	282	167	115	235	0
Future Volume (veh/h)	56	525	115	0	0	0	0	282	167	115	235	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1885				0	1885	1885	1856	1885	0
Adj Flow Rate, veh/h	58	541	119				0	291	172	119	242	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	1				0	1	1	3	1	0
Cap, veh/h	69	664	154				0	679	575	714	1238	0
Arrive On Green	0.24	0.24	0.24				0.00	0.36	0.36	0.49	1.00	0.00
Sat Flow, veh/h	282	2727	633				0	1885	1598	1767	1885	0
Grp Volume(v), veh/h	385	0	333				0	291	172	119	242	0
Grp Sat Flow(s),veh/h/ln	1871	0	1771				0	1885	1598	1767	1885	0
Q Serve(g_s), s	19.6	0.0	17.5				0.0	11.7	7.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	19.6	0.0	17.5				0.0	11.7	7.7	0.0	0.0	0.0
Prop In Lane	0.15		0.36				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	455	0	431				0	679	575	714	1238	0
V/C Ratio(X)	0.85	0.00	0.77				0.00	0.43	0.30	0.17	0.20	0.00
Avail Cap(c_a), veh/h	692	0	655				0	679	575	714	1238	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.93	0.93	0.00
Uniform Delay (d), s/veh	36.0	0.0	35.3				0.0	24.2	23.0	10.3	0.0	0.0
Incr Delay (d2), s/veh	3.8	0.0	1.3				0.0	2.0	1.3	0.0	0.3	0.0
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 BackOfQ(50%),veh/ln	9.3	0.0	7.6				0.0	5.5	3.1	1.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	0.0	36.6				0.0	26.2	24.3	10.4	0.3	0.0
LnGrp LOS	D	A	D				A	C	C	B	A	A
Approach Vol, veh/h		718						463			361	
Approach Delay, s/veh		38.3						25.5			3.6	
Approach LOS		D						C			A	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.7			29.7	41.0		29.3				
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0				
Max Green Setting (Gmax), s		53.0			12.0	36.0		37.0				
Max Q Clear Time (g_c+I1), s		2.0			2.0	13.7		21.6				
Green Ext Time (p_c), s		1.0			0.1	1.4		2.7				
Intersection Summary												
HCM 6th Ctrl Delay			26.4									
HCM 6th LOS			C									

Existing SAT
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑	↗	↘	↑	
Traffic Volume (veh/h)	90	516	106	0	0	0	0	174	124	122	147	0
Future Volume (veh/h)	90	516	106	0	0	0	0	174	124	122	147	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1885				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	98	561	115				0	189	135	133	160	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	1				0	1	1	2	2	0
Cap, veh/h	117	699	151				0	607	515	755	1166	0
Arrive On Green	0.27	0.27	0.27				0.00	0.32	0.32	0.49	1.00	0.00
Sat Flow, veh/h	442	2636	569				0	1885	1598	1781	1870	0
Grp Volume(v), veh/h	413	0	361				0	189	135	133	160	0
Grp Sat Flow(s),veh/h/ln	1863	0	1783				0	1885	1598	1781	1870	0
Q Serve(g_s), s	18.9	0.0	16.8				0.0	6.8	5.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	18.9	0.0	16.8				0.0	6.8	5.6	0.0	0.0	0.0
Prop In Lane	0.24		0.32				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	494	0	473				0	607	515	755	1166	0
V/C Ratio(X)	0.84	0.00	0.76				0.00	0.31	0.26	0.18	0.14	0.00
Avail Cap(c_a), veh/h	766	0	733				0	607	515	755	1166	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.97	0.97	0.00
Uniform Delay (d), s/veh	31.2	0.0	30.4				0.0	23.0	22.6	9.3	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	1.0				0.0	1.3	1.2	0.0	0.2	0.0
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 BackOfQ(50%),veh/ln	8.6	0.0	7.1				0.0	3.2	2.2	1.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	0.0	31.4				0.0	24.3	23.8	9.3	0.2	0.0
LnGrp LOS	C	A	C				A	C	C	A	A	A
Approach Vol, veh/h		774						324			293	
Approach Delay, s/veh		32.8						24.1			4.4	
Approach LOS		C						C			A	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		61.1			27.1	34.0		28.9				
Change Period (Y+Rc), s		5.0			5.0	* 5		5.0				
Max Green Setting (Gmax), s		43.0			10.0	* 29		37.0				
Max Q Clear Time (g_c+I1), s		2.0			2.0	8.8		20.9				
Green Ext Time (p_c), s		0.6			0.1	0.9		3.0				

Intersection Summary

HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Prince Street Bike Lane Alternatives Analysis - Synchro Results
Chicane and The Network Concepts
Main Street & Prince Street

Prince Street Bike Lane Alternative AM
 HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑		↑	↑			↑	
Traffic Volume (veh/h)	0	0	0	103	397	37	67	202	0	0	196	25
Future Volume (veh/h)	0	0	0	103	397	37	67	202	0	0	196	25
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No		No		No		No		No
Adj Sat Flow, veh/h/ln				1841	1856	1767	1841	1870	0	0	1841	1841
Adj Flow Rate, veh/h				123	473	44	80	240	0	0	233	30
Peak Hour Factor				0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %				4	3	9	4	2	0	0	4	4
Cap, veh/h				273	1108	107	470	916	0	0	637	82
Arrive On Green				0.41	0.41	0.41	0.08	0.98	0.00	0.00	0.40	0.40
Sat Flow, veh/h				667	2702	262	1753	1870	0	0	1598	206
Grp Volume(v), veh/h				336	0	304	80	240	0	0	0	263
Grp Sat Flow(s),veh/h/ln				1822	0	1808	1753	1870	0	0	0	1804
Q Serve(g_s), s				13.3	0.0	11.9	2.6	0.3	0.0	0.0	0.0	10.3
Cycle Q Clear(g_c), s				13.3	0.0	11.9	2.6	0.3	0.0	0.0	0.0	10.3
Prop In Lane				0.37		0.14	1.00		0.00	0.00		0.11
Lane Grp Cap(c), veh/h				747	0	741	470	916	0	0	0	719
V/C Ratio(X)				0.45	0.00	0.41	0.17	0.26	0.00	0.00	0.00	0.37
Avail Cap(c_a), veh/h				747	0	741	520	916	0	0	0	719
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.82	0.82	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				21.3	0.0	20.9	15.4	0.5	0.0	0.0	0.0	21.2
Incr Delay (d2), s/veh				2.0	0.0	1.7	0.1	0.6	0.0	0.0	0.0	1.4
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 BackOfQ(50%),veh/ln				6.0	0.0	5.3	1.0	0.3	0.0	0.0	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				23.3	0.0	22.6	15.5	1.1	0.0	0.0	0.0	22.6
LnGrp LOS				C	A	C	B	A	A	A	A	C
Approach Vol, veh/h					640			320				263
Approach Delay, s/veh					23.0			4.7				22.6
Approach LOS					C			A				C
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.1	44.9		46.0		54.0						
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0						
Max Green Setting (Gmax), s	7.0	37.0		41.0		49.0						
Max Q Clear Time (g_c+I1), s	4.6	12.3		15.3		2.3						
Green Ext Time (p_c), s	0.0	1.0		2.7		0.9						
Intersection Summary												
HCM 6th Ctrl Delay					18.1							
HCM 6th LOS					B							

Prince Street Bike Lane Alternative PM
 HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑		↑	↑			↑	
Traffic Volume (veh/h)	0	0	0	78	633	65	115	232	0	0	264	45
Future Volume (veh/h)	0	0	0	78	633	65	115	232	0	0	264	45
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1885	1885	1885	1900	1885	0	0	1900	1900
Adj Flow Rate, veh/h				81	659	68	120	242	0	0	275	47
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				1	1	1	0	1	0	0	0	0
Cap, veh/h				145	1236	134	447	924	0	0	606	104
Arrive On Green				0.41	0.41	0.41	0.11	0.98	0.00	0.00	0.38	0.38
Sat Flow, veh/h				354	3014	326	1810	1885	0	0	1581	270
Grp Volume(v), veh/h				427	0	381	120	242	0	0	0	322
Grp Sat Flow(s),veh/h/ln				1867	0	1826	1810	1885	0	0	0	1851
Q Serve(g_s), s				17.5	0.0	15.5	3.9	0.3	0.0	0.0	0.0	13.0
Cycle Q Clear(g_c), s				17.5	0.0	15.5	3.9	0.3	0.0	0.0	0.0	13.0
Prop In Lane				0.19		0.18	1.00		0.00	0.00		0.15
Lane Grp Cap(c), veh/h				766	0	749	447	924	0	0	0	709
V/C Ratio(X)				0.56	0.00	0.51	0.27	0.26	0.00	0.00	0.00	0.45
Avail Cap(c_a), veh/h				766	0	749	471	924	0	0	0	709
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.83	0.83	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				22.6	0.0	22.0	15.9	0.5	0.0	0.0	0.0	23.0
Incr Delay (d2), s/veh				2.9	0.0	2.5	0.1	0.6	0.0	0.0	0.0	2.1
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 BackOfQ(50%),veh/ln				8.1	0.0	7.0	1.5	0.3	0.0	0.0	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				25.5	0.0	24.4	16.0	1.1	0.0	0.0	0.0	25.1
LnGrp LOS				C	A	C	B	A	A	A	A	C
Approach Vol, veh/h					808			362			322	
Approach Delay, s/veh					25.0			6.0			25.1	
Approach LOS					C			A			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.7	43.3		46.0		54.0						
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0						
Max Green Setting (Gmax), s	7.0	37.0		41.0		49.0						
Max Q Clear Time (g_c+I1), s	5.9	15.0		19.5		2.3						
Green Ext Time (p_c), s	0.0	1.2		3.4		0.9						
Intersection Summary												
HCM 6th Ctrl Delay					20.4							
HCM 6th LOS					C							

Prince Street Bike Lane Alternative SAT
 HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑		↑	↑			↑	
Traffic Volume (veh/h)	0	0	0	82	586	71	107	161	0	0	176	61
Future Volume (veh/h)	0	0	0	82	586	71	107	161	0	0	176	61
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1870	1885	1900	1885	1885	0	0	1885	1900
Adj Flow Rate, veh/h				93	666	81	122	183	0	0	200	69
Peak Hour Factor				0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %				2	1	0	1	1	0	0	1	0
Cap, veh/h				147	1103	141	511	964	0	0	532	184
Arrive On Green				0.38	0.38	0.38	0.12	1.00	0.00	0.00	0.40	0.40
Sat Flow, veh/h				390	2921	373	1795	1885	0	0	1340	462
Grp Volume(v), veh/h				445	0	395	122	183	0	0	0	269
Grp Sat Flow(s),veh/h/ln				1866	0	1818	1795	1885	0	0	0	1802
Q Serve(g_s), s				17.5	0.0	15.5	3.5	0.0	0.0	0.0	0.0	9.5
Cycle Q Clear(g_c), s				17.5	0.0	15.5	3.5	0.0	0.0	0.0	0.0	9.5
Prop In Lane				0.21		0.21	1.00		0.00	0.00		0.26
Lane Grp Cap(c), veh/h				705	0	687	511	964	0	0	0	715
V/C Ratio(X)				0.63	0.00	0.57	0.24	0.19	0.00	0.00	0.00	0.38
Avail Cap(c_a), veh/h				705	0	687	625	964	0	0	0	715
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.93	0.93	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				22.9	0.0	22.3	13.1	0.0	0.0	0.0	0.0	19.2
Incr Delay (d2), s/veh				4.3	0.0	3.5	0.1	0.4	0.0	0.0	0.0	1.5
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 BackOfQ(50%),veh/ln				8.2	0.0	7.0	1.2	0.1	0.0	0.0	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.1	0.0	25.7	13.2	0.4	0.0	0.0	0.0	20.7
LnGrp LOS				C	A	C	B	A	A	A	A	C
Approach Vol, veh/h					840			305			269	
Approach Delay, s/veh					26.5			5.5			20.7	
Approach LOS					C			A			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.3	40.7		39.0		51.0						
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0						
Max Green Setting (Gmax), s	11.0	30.0		34.0		46.0						
Max Q Clear Time (g_c+I1), s	5.5	11.5		19.5		2.0						
Green Ext Time (p_c), s	0.1	1.0		3.2		0.7						
Intersection Summary												
HCM 6th Ctrl Delay											20.9	
HCM 6th LOS											C	

Prince Street Bike Lane Alternatives Analysis - Synchro Results
Chicane and The Network Concepts
Alamo Avenue & Prince Street

Prince Street Bike Lane Alternative - AM
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑		↑	↑	
Traffic Volume (veh/h)	35	663	147	0	0	0	0	234	117	98	198	0
Future Volume (veh/h)	35	663	147	0	0	0	0	234	117	98	198	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1811	1856	1885				0	1885	1870	1841	1841	0
Adj Flow Rate, veh/h	40	762	169				0	269	134	113	228	0
Peak Hour Factor	0.87	0.87	0.87				0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	6	3	1				0	1	2	4	4	0
Cap, veh/h	46	910	214				0	356	177	537	1056	0
Arrive On Green	0.33	0.33	0.33				0.00	0.30	0.30	0.45	1.00	0.00
Sat Flow, veh/h	141	2789	656				0	1187	591	1753	1841	0
Grp Volume(v), veh/h	523	0	448				0	0	403	113	228	0
Grp Sat Flow(s),veh/h/ln	1848	0	1737				0	0	1779	1753	1841	0
Q Serve(g_s), s	26.6	0.0	23.4				0.0	0.0	20.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	26.6	0.0	23.4				0.0	0.0	20.5	0.0	0.0	0.0
Prop In Lane	0.08		0.38				0.00		0.33	1.00		0.00
Lane Grp Cap(c), veh/h	603	0	567				0	0	534	537	1056	0
V/C Ratio(X)	0.87	0.00	0.79				0.00	0.00	0.76	0.21	0.22	0.00
Avail Cap(c_a), veh/h	832	0	782				0	0	534	537	1056	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	0.00	1.00	0.94	0.94	0.00
Uniform Delay (d), s/veh	31.7	0.0	30.6				0.0	0.0	31.7	19.1	0.0	0.0
Incr Delay (d2), s/veh	5.7	0.0	2.5				0.0	0.0	9.6	0.1	0.4	0.0
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 BackOfQ(50%),veh/ln	12.5	0.0	9.9				0.0	0.0	10.0	1.5	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	0.0	33.0				0.0	0.0	41.3	19.2	0.4	0.0
LnGrp LOS	D	A	C				A	A	D	B	A	A
Approach Vol, veh/h		971						403			341	
Approach Delay, s/veh		35.4						41.3			6.6	
Approach LOS		D						D			A	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		62.4			27.4	35.0		37.6				
Change Period (Y+Rc), s		5.0			5.0	* 5		5.0				
Max Green Setting (Gmax), s		45.0			11.0	* 30		45.0				
Max Q Clear Time (g_c+I1), s		2.0			2.0	22.5		28.6				
Green Ext Time (p_c), s		0.9			0.1	1.0		4.0				
Intersection Summary												
HCM 6th Ctrl Delay			31.0									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Prince Street Bike Lane Alternative - PM
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑		↑	↑	
Traffic Volume (veh/h)	56	525	115	0	0	0	0	282	167	115	235	0
Future Volume (veh/h)	56	525	115	0	0	0	0	282	167	115	235	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1885				0	1885	1885	1856	1885	0
Adj Flow Rate, veh/h	58	541	119				0	291	172	119	242	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	1	1				0	1	1	3	1	0
Cap, veh/h	69	664	154				0	400	236	612	1238	0
Arrive On Green	0.24	0.24	0.24				0.00	0.36	0.36	0.49	1.00	0.00
Sat Flow, veh/h	282	2727	633				0	1111	656	1767	1885	0
Grp Volume(v), veh/h	385	0	333				0	0	463	119	242	0
Grp Sat Flow(s),veh/h/ln	1871	0	1771				0	0	1767	1767	1885	0
Q Serve(g_s), s	19.6	0.0	17.5				0.0	0.0	22.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	19.6	0.0	17.5				0.0	0.0	22.7	0.0	0.0	0.0
Prop In Lane	0.15		0.36				0.00		0.37	1.00		0.00
Lane Grp Cap(c), veh/h	455	0	431				0	0	636	612	1238	0
V/C Ratio(X)	0.85	0.00	0.77				0.00	0.00	0.73	0.19	0.20	0.00
Avail Cap(c_a), veh/h	692	0	655				0	0	636	612	1238	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	0.00	1.00	0.89	0.89	0.00
Uniform Delay (d), s/veh	36.0	0.0	35.3				0.0	0.0	27.8	15.1	0.0	0.0
Incr Delay (d2), s/veh	3.8	0.0	1.3				0.0	0.0	7.1	0.1	0.3	0.0
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 BackOfQ(50%),veh/ln	9.3	0.0	7.6				0.0	0.0	10.6	1.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	0.0	36.6				0.0	0.0	34.9	15.2	0.3	0.0
LnGrp LOS	D	A	D				A	A	C	B	A	A
Approach Vol, veh/h		718						463			361	
Approach Delay, s/veh		38.3						34.9			5.2	
Approach LOS		D						C			A	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.7			29.7	41.0		29.3				
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0				
Max Green Setting (Gmax), s		53.0			12.0	36.0		37.0				
Max Q Clear Time (g_c+I1), s		2.0			2.0	24.7		21.6				
Green Ext Time (p_c), s		1.0			0.1	1.6		2.7				
Intersection Summary												
HCM 6th Ctrl Delay			29.5									
HCM 6th LOS			C									

Prince Street Bike Lane Alternative - SAT
 HCM 6th Signalized Intersection Summary
 95: W Alamo Ave & S Prince St

01/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑		↑	↑	
Traffic Volume (veh/h)	90	516	106	0	0	0	0	174	124	122	147	0
Future Volume (veh/h)	90	516	106	0	0	0	0	174	124	122	147	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1885	1885				0	1885	1885	1870	1870	0
Adj Flow Rate, veh/h	98	561	115				0	189	135	133	160	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	1	1				0	1	1	2	2	0
Cap, veh/h	117	699	151				0	330	235	672	1166	0
Arrive On Green	0.27	0.27	0.27				0.00	0.32	0.32	0.49	1.00	0.00
Sat Flow, veh/h	442	2636	569				0	1023	731	1781	1870	0
Grp Volume(v), veh/h	413	0	361				0	0	324	133	160	0
Grp Sat Flow(s),veh/h/ln	1863	0	1783				0	0	1754	1781	1870	0
Q Serve(g_s), s	18.9	0.0	16.8				0.0	0.0	13.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	18.9	0.0	16.8				0.0	0.0	13.8	0.0	0.0	0.0
Prop In Lane	0.24		0.32				0.00		0.42	1.00		0.00
Lane Grp Cap(c), veh/h	494	0	473				0	0	565	672	1166	0
V/C Ratio(X)	0.84	0.00	0.76				0.00	0.00	0.57	0.20	0.14	0.00
Avail Cap(c_a), veh/h	766	0	733				0	0	565	672	1166	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	0.00	1.00	0.93	0.93	0.00
Uniform Delay (d), s/veh	31.2	0.0	30.4				0.0	0.0	25.4	12.2	0.0	0.0
Incr Delay (d2), s/veh	2.7	0.0	1.0				0.0	0.0	4.2	0.0	0.2	0.0
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 BackOfQ(50%),veh/ln	8.6	0.0	7.1				0.0	0.0	6.2	1.2	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	0.0	31.4				0.0	0.0	29.5	12.3	0.2	0.0
LnGrp LOS	C	A	C				A	A	C	B	A	A
Approach Vol, veh/h		774						324			293	
Approach Delay, s/veh		32.8						29.5			5.7	
Approach LOS		C						C			A	
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		61.1			27.1	34.0		28.9				
Change Period (Y+Rc), s		5.0			5.0	5.0		5.0				
Max Green Setting (Gmax), s		43.0			9.0	29.0		37.0				
Max Q Clear Time (g_c+I1), s		2.0			2.0	15.8		20.9				
Green Ext Time (p_c), s		0.6			0.1	1.1		3.0				
Intersection Summary												
HCM 6th Ctrl Delay			26.3									
HCM 6th LOS			C									

Westbound Right-Turn Lane Removal - Synchro Results
The Village Concept
Main Street & Prince Street

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↗	↖			↖	↗
Traffic Volume (veh/h)	0	0	0	103	397	37	67	202	0	0	196	25
Future Volume (veh/h)	0	0	0	103	397	37	67	202	0	0	196	25
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1841	1856	1767	1841	1870	0	0	1841	1841
Adj Flow Rate, veh/h				123	473	44	80	240	0	0	233	30
Peak Hour Factor				0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %				4	3	9	4	2	0	0	4	4
Cap, veh/h				273	1108	107	487	916	0	0	734	622
Arrive On Green				0.41	0.41	0.41	0.08	0.98	0.00	0.00	0.40	0.40
Sat Flow, veh/h				667	2702	262	1753	1870	0	0	1841	1560
Grp Volume(v), veh/h				336	0	304	80	240	0	0	233	30
Grp Sat Flow(s),veh/h/ln				1822	0	1808	1753	1870	0	0	1841	1560
Q Serve(g_s), s				13.3	0.0	11.9	2.6	0.3	0.0	0.0	8.7	1.2
Cycle Q Clear(g_c), s				13.3	0.0	11.9	2.6	0.3	0.0	0.0	8.7	1.2
Prop In Lane				0.37		0.14	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				747	0	741	487	916	0	0	734	622
V/C Ratio(X)				0.45	0.00	0.41	0.16	0.26	0.00	0.00	0.32	0.05
Avail Cap(c_a), veh/h				747	0	741	537	916	0	0	734	622
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.82	0.82	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				21.3	0.0	20.9	15.2	0.5	0.0	0.0	20.7	18.4
Incr Delay (d2), s/veh				2.0	0.0	1.7	0.0	0.6	0.0	0.0	1.1	0.1
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 BackOfQ(50%),veh/ln				6.0	0.0	5.3	1.0	0.3	0.0	0.0	3.9	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				23.3	0.0	22.6	15.3	1.1	0.0	0.0	21.8	18.6
LnGrp LOS				C	A	C	B	A	A	A	C	B
Approach Vol, veh/h					640			320			263	
Approach Delay, s/veh					23.0			4.6			21.5	
Approach LOS					C			A			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.1	44.9		46.0		54.0						
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0						
Max Green Setting (Gmax), s	7.0	37.0		41.0		49.0						
Max Q Clear Time (g_c+I1), s	4.6	10.7		15.3		2.3						
Green Ext Time (p_c), s	0.0	0.9		2.7		0.9						
Intersection Summary												
HCM 6th Ctrl Delay											17.8	
HCM 6th LOS											B	

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↕	↑			↑	↕
Traffic Volume (veh/h)	0	0	0	78	633	65	115	232	0	0	264	45
Future Volume (veh/h)	0	0	0	78	633	65	115	232	0	0	264	45
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1885	1885	1885	1900	1885	0	0	1900	1900
Adj Flow Rate, veh/h				81	659	68	120	242	0	0	275	47
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				1	1	1	0	1	0	0	0	0
Cap, veh/h				145	1236	134	474	924	0	0	728	617
Arrive On Green				0.41	0.41	0.41	0.11	0.98	0.00	0.00	0.38	0.38
Sat Flow, veh/h				354	3014	326	1810	1885	0	0	1900	1610
Grp Volume(v), veh/h				427	0	381	120	242	0	0	275	47
Grp Sat Flow(s),veh/h/ln				1867	0	1826	1810	1885	0	0	1900	1610
Q Serve(g_s), s				17.5	0.0	15.5	3.9	0.3	0.0	0.0	10.4	1.9
Cycle Q Clear(g_c), s				17.5	0.0	15.5	3.9	0.3	0.0	0.0	10.4	1.9
Prop In Lane				0.19		0.18	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				766	0	749	474	924	0	0	728	617
V/C Ratio(X)				0.56	0.00	0.51	0.25	0.26	0.00	0.00	0.38	0.08
Avail Cap(c_a), veh/h				766	0	749	498	924	0	0	728	617
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.83	0.83	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.6	0.0	22.0	15.5	0.5	0.0	0.0	22.2	19.6
Incr Delay (d2), s/veh				2.9	0.0	2.5	0.1	0.6	0.0	0.0	1.5	0.2
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 BackOfQ(50%),veh/ln				8.1	0.0	7.0	1.5	0.3	0.0	0.0	4.9	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				25.5	0.0	24.4	15.6	1.1	0.0	0.0	23.7	19.8
LnGrp LOS				C	A	C	B	A	A	A	C	B
Approach Vol, veh/h					808			362			322	
Approach Delay, s/veh					25.0			5.9			23.2	
Approach LOS					C			A			C	
Timer - Assigned Phs	1	2		4			6					
Phs Duration (G+Y+Rc), s	10.7	43.3		46.0			54.0					
Change Period (Y+Rc), s	5.0	5.0		5.0			5.0					
Max Green Setting (Gmax), s	7.0	37.0		41.0			49.0					
Max Q Clear Time (g_c+I1), s	5.9	12.4		19.5			2.3					
Green Ext Time (p_c), s	0.0	1.1		3.4			0.9					
Intersection Summary												
HCM 6th Ctrl Delay					20.0							
HCM 6th LOS					B							

HCM 6th Signalized Intersection Summary
 96: S Prince St & Main St

01/30/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕		↗	↖			↖	↗
Traffic Volume (veh/h)	0	0	0	82	586	71	107	161	0	0	176	61
Future Volume (veh/h)	0	0	0	82	586	71	107	161	0	0	176	61
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1870	1885	1900	1885	1885	0	0	1885	1900
Adj Flow Rate, veh/h				93	666	81	122	183	0	0	200	69
Peak Hour Factor				0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %				2	1	0	1	1	0	0	1	0
Cap, veh/h				147	1103	141	549	964	0	0	748	639
Arrive On Green				0.38	0.38	0.38	0.12	1.00	0.00	0.00	0.40	0.40
Sat Flow, veh/h				390	2921	373	1795	1885	0	0	1885	1610
Grp Volume(v), veh/h				445	0	395	122	183	0	0	200	69
Grp Sat Flow(s),veh/h/ln				1866	0	1818	1795	1885	0	0	1885	1610
Q Serve(g_s), s				17.5	0.0	15.5	3.5	0.0	0.0	0.0	6.4	2.4
Cycle Q Clear(g_c), s				17.5	0.0	15.5	3.5	0.0	0.0	0.0	6.4	2.4
Prop In Lane				0.21		0.21	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				705	0	687	549	964	0	0	748	639
V/C Ratio(X)				0.63	0.00	0.57	0.22	0.19	0.00	0.00	0.27	0.11
Avail Cap(c_a), veh/h				705	0	687	664	964	0	0	748	639
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.93	0.93	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				22.9	0.0	22.3	12.8	0.0	0.0	0.0	18.3	17.1
Incr Delay (d2), s/veh				4.3	0.0	3.5	0.1	0.4	0.0	0.0	0.9	0.3
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 BackOfQ(50%),veh/ln				8.2	0.0	7.0	1.2	0.1	0.0	0.0	2.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				27.1	0.0	25.7	12.8	0.4	0.0	0.0	19.2	17.4
LnGrp LOS				C	A	C	B	A	A	A	B	B
Approach Vol, veh/h					840			305			269	
Approach Delay, s/veh					26.5			5.4			18.7	
Approach LOS					C			A			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.3	40.7		39.0		51.0						
Change Period (Y+Rc), s	5.0	5.0		5.0		5.0						
Max Green Setting (Gmax), s	11.0	30.0		34.0		46.0						
Max Q Clear Time (g_c+I1), s	5.5	8.4		19.5		2.0						
Green Ext Time (p_c), s	0.1	0.8		3.2		0.7						
Intersection Summary												
HCM 6th Ctrl Delay											20.5	
HCM 6th LOS											C	