

Appendix 8

2040 Controlled Access Alternative

Synchro Output

HCM 6th TWSC
 1: US 50 & Pine Cone Rd

Intersection						
Int Delay, s/veh	16					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑↑	↑↑↑	↗		↗
Traffic Vol, veh/h	67	1066	2711	34	0	105
Future Vol, veh/h	67	1066	2711	34	0	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Yield	-	None
Storage Length	650	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	1159	2947	37	0	114

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	2947	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	5.34	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	3.12	-	-
Pot Cap-1 Maneuver	~ 40	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	~ 40	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-



























Approach	EB	WB	SB
HCM Control Delay, s	36	0	217.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	~ 40	-	-	-	99
HCM Lane V/C Ratio	1.821	-	-	-	1.153
HCM Control Delay (s)	\$ 608	-	-	-	217.3
HCM Lane LOS	F	-	-	-	F
HCM 95th %tile Q(veh)	7.7	-	-	-	7.6

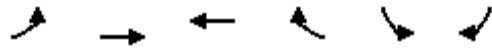
Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th Signalized Intersection Summary

2: River Rd/Retail Rd & US 50

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	54	963	10	16	2791	59	10	5	10	119	5	202
Future Volume (veh/h)	54	963	10	16	2791	59	10	5	10	119	5	202
Initial Q (Qb), veh	0	0	0	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	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	1047	0	17	3034	57	11	5	10	129	5	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	3000		156	3075	57	357	118	237	347	397	
Arrive On Green	0.08	0.59	0.00	0.09	0.60	0.60	0.21	0.21	0.21	0.21	0.21	0.00
Sat Flow, veh/h	1781	5106	1585	1781	5161	96	1411	557	1113	1398	1870	0
Grp Volume(v), veh/h	59	1047	0	17	1995	1096	11	0	15	129	5	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1853	1411	0	1670	1398	1870	0
Q Serve(g_s), s	3.8	12.8	0.0	1.1	68.7	70.2	0.7	0.0	0.9	9.7	0.3	0.0
Cycle Q Clear(g_c), s	3.8	12.8	0.0	1.1	68.7	70.2	1.0	0.0	0.9	10.5	0.3	0.0
Prop In Lane	1.00		1.00	1.00		0.05	1.00		0.67	1.00		0.00
Lane Grp Cap(c), veh/h	141	3000		156	2028	1104	357	0	355	347	397	
V/C Ratio(X)	0.42	0.35		0.11	0.98	0.99	0.03	0.00	0.04	0.37	0.01	
Avail Cap(c_a), veh/h	141	3000		156	2028	1104	357	0	355	347	397	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.6	12.8	0.0	50.4	23.7	24.0	37.7	0.0	37.5	41.7	37.3	0.0
Incr Delay (d2), s/veh	2.0	0.3	0.0	1.4	16.5	25.4	0.0	0.0	0.0	3.0	0.1	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	8.0	0.0	0.9	37.2	44.0	0.5	0.0	0.6	6.6	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.6	13.2	0.0	51.8	40.1	49.4	37.7	0.0	37.6	44.8	37.4	0.0
LnGrp LOS	D	B		D	D	D	D	A	D	D	D	
Approach Vol, veh/h		1106	A		3108			26			134	A
Approach Delay, s/veh		15.4			43.5			37.7			44.5	
Approach LOS		B			D			D			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	15.0	75.0		30.0	14.0	76.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		25.5	10.5	70.5		25.5	9.5	71.5				
Max Q Clear Time (g_c+I1), s		3.0	3.1	14.8		12.5	5.8	72.2				
Green Ext Time (p_c), s		0.1	0.0	8.5		0.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			36.4									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												






















HCM 6th Signalized Intersection Summary 3: US 50 & Fortune Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖↗		↖↖↗		↖	↗
Traffic Volume (veh/h)	213	0	2356	119	124	510
Future Volume (veh/h)	213	0	2356	119	124	510
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	0	1870	1870	1870	1870
Adj Flow Rate, veh/h	232	0	2561	116	135	415
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2
Cap, veh/h	461	0	2755	124	341	515
Arrive On Green	0.13	0.00	0.55	0.55	0.19	0.19
Sat Flow, veh/h	3456	232	5178	225	1781	1585
Grp Volume(v), veh/h	232	52.2	1732	945	135	415
Grp Sat Flow(s),veh/h/ln	1728	D	1702	1830	1781	1585
Q Serve(g_s), s	7.5		55.9	57.7	8.0	23.0
Cycle Q Clear(g_c), s	7.5		55.9	57.7	8.0	23.0
Prop In Lane	1.00			0.12	1.00	1.00
Lane Grp Cap(c), veh/h	461		1872	1006	341	515
V/C Ratio(X)	0.50		0.92	0.94	0.40	0.81
Avail Cap(c_a), veh/h	461		1872	1006	341	515
HCM Platoon Ratio	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.3		24.7	25.1	42.4	37.0
Incr Delay (d2), s/veh	3.9		9.3	17.0	0.7	9.1
Initial Q Delay(d3),s/veh	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.1		30.4	35.6	6.5	17.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.2		34.0	42.1	43.2	46.2
LnGrp LOS	D		C	D	D	D
Approach Vol, veh/h			2677		550	
Approach Delay, s/veh			36.9		45.4	
Approach LOS			D		D	
Timer - Assigned Phs			3	4		6
Phs Duration (G+Y+Rc), s			21.0	71.0		28.0
Change Period (Y+Rc), s			5.0	5.0		5.0
Max Green Setting (Gmax), s			16.0	66.0		23.0
Max Q Clear Time (g_c+I1), s			9.5	59.7		25.0
Green Ext Time (p_c), s			0.4	5.9		0.0
Intersection Summary						
HCM 6th Ctrl Delay			39.3			
HCM 6th LOS			D			

HCM 6th Signalized Intersection Summary

4: Ramp 2 & Traditions Pkwy

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	17	24	20	15	10	32	55	32	10	142	141
Future Volume (veh/h)	82	17	24	20	15	10	32	55	32	10	142	141
Initial Q (Qb), veh	0	0	0	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	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	18	0	22	16	10	35	60	32	11	154	115
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	342	69		408	247	154	480	987	490	598	803	680
Arrive On Green	0.23	0.23	0.00	0.23	0.23	0.23	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1494	302	1585	1781	1076	673	1110	2300	1141	1304	1870	1585
Grp Volume(v), veh/h	107	0	0	22	0	26	35	45	47	11	154	115
Grp Sat Flow(s),veh/h/ln	1796	0	1585	1781	0	1749	1110	1777	1665	1304	1870	1585
Q Serve(g_s), s	5.9	0.0	0.0	1.2	0.0	1.4	2.4	1.8	2.0	0.6	6.1	5.4
Cycle Q Clear(g_c), s	5.9	0.0	0.0	1.2	0.0	1.4	8.6	1.8	2.0	2.6	6.1	5.4
Prop In Lane	0.83		1.00	1.00		0.38	1.00		0.69	1.00		1.00
Lane Grp Cap(c), veh/h	412	0		408	0	401	480	763	715	598	803	680
V/C Ratio(X)	0.26	0.00		0.05	0.00	0.06	0.07	0.06	0.07	0.02	0.19	0.17
Avail Cap(c_a), veh/h	412	0		408	0	401	480	763	715	598	803	680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	0.0	36.1	0.0	36.2	24.0	20.1	20.1	20.9	21.3	21.1
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.3	0.0	0.3	0.3	0.1	0.2	0.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	0.0	0.0	1.0	0.0	1.1	1.2	1.4	1.5	0.4	5.1	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	0.0	0.0	36.3	0.0	36.5	24.3	20.2	20.3	20.9	21.8	21.6
LnGrp LOS	D	A		D	A	D	C	C	C	C	C	C
Approach Vol, veh/h		107	A		48			127			280	
Approach Delay, s/veh		39.4			36.4			21.4			21.7	
Approach LOS		D			D			C			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.0		32.0		56.0		32.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		51.5		27.5		51.5		27.5				
Max Q Clear Time (g_c+I1), s		10.6		7.9		8.1		3.4				
Green Ext Time (p_c), s		0.7		0.5		1.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				26.3								
HCM 6th LOS				C								
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												





















HCM 6th Signalized Intersection Summary

5: Seagale Rd & Ramp 3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	5	10	14	5	62	10	47	10	137	39	10
Future Volume (veh/h)	10	5	10	14	5	62	10	47	10	137	39	10
Initial Q (Qb), veh	0	0	0	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	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	5	10	15	5	0	11	51	10	149	42	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	90	181	220	73		814	854	168	794	1052	
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.00	0.56	0.56	0.56	0.56	0.56	0.00
Sat Flow, veh/h	1781	557	1113	1352	451	1585	1365	1519	298	1341	1870	1585
Grp Volume(v), veh/h	11	0	15	20	0	0	11	0	61	149	42	0
Grp Sat Flow(s),veh/h/ln	1781	0	1670	1803	0	1585	1365	0	1817	1341	1870	1585
Q Serve(g_s), s	0.6	0.0	0.9	1.1	0.0	0.0	0.4	0.0	1.8	6.8	1.2	0.0
Cycle Q Clear(g_c), s	0.6	0.0	0.9	1.1	0.0	0.0	1.6	0.0	1.8	8.6	1.2	0.0
Prop In Lane	1.00		0.67	0.75		1.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	289	0	271	293	0		814	0	1022	794	1052	
V/C Ratio(X)	0.04	0.00	0.06	0.07	0.00		0.01	0.00	0.06	0.19	0.04	
Avail Cap(c_a), veh/h	289	0	271	293	0		814	0	1022	794	1052	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.99	0.99	0.00
Uniform Delay (d), s/veh	42.3	0.0	42.5	42.6	0.0	0.0	12.1	0.0	11.9	13.8	11.7	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.1	0.5	0.1	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.7	1.0	0.0	0.0	0.3	0.0	1.4	3.9	0.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	0.0	42.9	43.0	0.0	0.0	12.1	0.0	12.0	14.4	11.8	0.0
LnGrp LOS	D	A	D	D	A		B	A	B	B	B	
Approach Vol, veh/h		26			20	A		72			191	A
Approach Delay, s/veh		42.7			43.0			12.0			13.8	
Approach LOS		D			D			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		72.0		24.0		72.0		24.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		67.5		19.5		67.5		19.5				
Max Q Clear Time (g_c+I1), s		3.8		2.9		10.6		3.1				
Green Ext Time (p_c), s		0.4		0.0		0.7		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				17.7								
HCM 6th LOS				B								
Notes												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												




















HCM 6th Signalized Intersection Summary

6: Fort Churchill Rd & Ramp 6

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	271	10	188	0	0	0	0	529	116	264	210	0
Future Volume (veh/h)	271	10	188	0	0	0	0	529	116	264	210	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	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	303	0	0				0	575	0	287	228	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, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	797	0					0	1134		1135	2454	0
Arrive On Green	0.22	0.00	0.00				0.00	0.32	0.00	0.33	0.69	0.00
Sat Flow, veh/h	3563	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	303	0	0				0	575	0	287	228	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	7.6	0.0	0.0				0.0	13.8	0.0	6.4	2.2	0.0
Cycle Q Clear(g_c), s	7.6	0.0	0.0				0.0	13.8	0.0	6.4	2.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	797	0					0	1134		1135	2454	0
V/C Ratio(X)	0.38	0.00					0.00	0.51		0.25	0.09	0.00
Avail Cap(c_a), veh/h	797	0					0	1134		1135	2454	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	0.95	0.95	0.00
Uniform Delay (d), s/veh	34.6	0.0	0.0				0.0	29.0	0.0	25.8	5.4	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.0				0.0	1.6	0.0	0.1	0.1	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(95%),veh/ln	6.2	0.0	0.0				0.0	10.1	0.0	4.7	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.9	0.0	0.0				0.0	30.7	0.0	25.9	5.4	0.0
LnGrp LOS	D	A					A	C		C	A	A
Approach Vol, veh/h		303	A					575	A		515	
Approach Delay, s/veh		35.9						30.7			16.9	
Approach LOS		D						C			B	
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		28.0		77.0			39.0	38.0				
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5				
Max Green Setting (Gmax), s		23.5		72.5			34.5	33.5				
Max Q Clear Time (g_c+I1), s		9.6		4.2			8.4	15.8				
Green Ext Time (p_c), s		0.9		1.6			1.0	3.7				
Intersection Summary												
HCM 6th Ctrl Delay			26.7									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												






















HCM 6th Signalized Intersection Summary

7: Fort Churchill Rd & Ramp 7

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	181	119	345	598	202	0	0	293	624
Future Volume (veh/h)	0	0	0	181	119	345	598	202	0	0	293	624
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	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				197	129	0	650	220	0	0	318	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, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				349	366		792	2591	0	0	1644	
Arrive On Green				0.20	0.20	0.00	0.23	0.73	0.00	0.00	0.46	0.00
Sat Flow, veh/h				1781	1870	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				197	129	0	650	220	0	0	318	0
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				12.0	7.1	0.0	21.4	2.1	0.0	0.0	6.3	0.0
Cycle Q Clear(g_c), s				12.0	7.1	0.0	21.4	2.1	0.0	0.0	6.3	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				349	366		792	2591	0	0	1644	
V/C Ratio(X)				0.56	0.35		0.82	0.08	0.00	0.00	0.19	
Avail Cap(c_a), veh/h				349	366		792	2591	0	0	1644	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	0.87	0.87	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				43.6	41.7	0.0	43.9	4.7	0.0	0.0	19.0	0.0
Incr Delay (d2), s/veh				6.5	2.6	0.0	8.2	0.1	0.0	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(95%),veh/ln				9.9	6.4	0.0	14.9	1.3	0.0	0.0	4.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				50.1	44.3	0.0	52.1	4.7	0.0	0.0	19.3	0.0
LnGrp LOS				D	D		D	A	A	A	B	
Approach Vol, veh/h					326	A		870			318	A
Approach Delay, s/veh					47.8			40.1			19.3	
Approach LOS					D			D			B	
Timer - Assigned Phs				3	4		6	8				
Phs Duration (G+Y+Rc), s				32.0	60.0		28.0	92.0				
Change Period (Y+Rc), s				4.5	4.5		4.5	4.5				
Max Green Setting (Gmax), s				27.5	55.5		23.5	87.5				
Max Q Clear Time (g_c+I1), s				23.4	8.3		14.0	4.1				
Green Ext Time (p_c), s				1.1	2.3		0.9	1.6				
Intersection Summary												
HCM 6th Ctrl Delay				37.4								
HCM 6th LOS				D								
Notes												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												























HCM 6th Signalized Intersection Summary

8: Ramp 10 & Bryce

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	5	131	20	15	5	284	317	20	10	352	589
Future Volume (veh/h)	231	5	131	20	15	5	284	317	20	10	352	589
Initial Q (Qb), veh	0	0	0	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	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	251	5	0	22	16	4	309	345	20	11	383	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	386	8		275	223	56	475	1750	101	347	1199	
Arrive On Green	0.22	0.22	0.00	0.15	0.15	0.15	0.14	0.51	0.51	0.34	0.34	0.00
Sat Flow, veh/h	1748	35	1585	1781	1444	361	3456	3415	197	1017	3554	1585
Grp Volume(v), veh/h	256	0	0	22	0	20	309	179	186	11	383	0
Grp Sat Flow(s),veh/h/ln	1783	0	1585	1781	0	1805	1728	1777	1835	1017	1777	1585
Q Serve(g_s), s	15.7	0.0	0.0	1.3	0.0	1.1	10.2	6.5	6.6	0.9	9.6	0.0
Cycle Q Clear(g_c), s	15.7	0.0	0.0	1.3	0.0	1.1	10.2	6.5	6.6	7.5	9.6	0.0
Prop In Lane	0.98		1.00	1.00		0.20	1.00		0.11	1.00		1.00
Lane Grp Cap(c), veh/h	394	0		275	0	278	475	911	940	347	1199	
V/C Ratio(X)	0.65	0.00		0.08	0.00	0.07	0.65	0.20	0.20	0.03	0.32	
Avail Cap(c_a), veh/h	394	0		275	0	278	475	911	940	347	1199	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.83	0.83	0.83	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.5	0.0	0.0	43.5	0.0	43.4	49.0	15.9	15.9	31.2	29.5	0.0
Incr Delay (d2), s/veh	8.1	0.0	0.0	0.6	0.0	0.5	2.6	0.4	0.4	0.2	0.7	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.4	0.0	0.0	1.1	0.0	1.0	7.7	5.0	5.2	0.5	7.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.0	0.0	44.0	0.0	43.9	51.6	16.3	16.3	31.4	30.2	0.0
LnGrp LOS	D	A		D	A	D	D	B	B	C	C	
Approach Vol, veh/h		256	A		42			674			394	A
Approach Delay, s/veh		50.6			44.0			32.5			30.3	
Approach LOS		D			D			C			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		66.0		31.0	21.0	45.0		23.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		61.5		26.5	16.5	40.5		18.5				
Max Q Clear Time (g_c+I1), s		8.6		17.7	12.2	11.6		3.3				
Green Ext Time (p_c), s		2.4		0.9	0.4	2.7		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			35.6									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

9: Chaves Rd & Ramp 11



























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	15	10	172	15	283	10	313	133	324	154	25
Future Volume (veh/h)	25	15	10	172	15	283	10	313	133	324	154	25
Initial Q (Qb), veh	0	0	0	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	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	16	10	187	16	0	11	340	0	352	167	24
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	166	104	336	29		410	600		590	1654	234
Arrive On Green	0.15	0.15	0.15	0.20	0.20	0.00	0.32	0.32	0.00	0.17	0.53	0.53
Sat Flow, veh/h	1781	1076	673	1647	141	1585	1192	1870	1585	3456	3125	442
Grp Volume(v), veh/h	27	0	26	203	0	0	11	340	0	352	94	97
Grp Sat Flow(s),veh/h/ln	1781	0	1749	1788	0	1585	1192	1870	1585	1728	1777	1791
Q Serve(g_s), s	1.6	0.0	1.5	12.2	0.0	0.0	0.8	18.1	0.0	11.3	3.1	3.2
Cycle Q Clear(g_c), s	1.6	0.0	1.5	12.2	0.0	0.0	4.0	18.1	0.0	11.3	3.1	3.2
Prop In Lane	1.00		0.38	0.92		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	275	0	270	365	0		410	600		590	940	948
V/C Ratio(X)	0.10	0.00	0.10	0.56	0.00		0.03	0.57		0.60	0.10	0.10
Avail Cap(c_a), veh/h	275	0	270	365	0		410	600		590	940	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	43.6	0.0	43.6	42.9	0.0	0.0	30.2	33.8	0.0	45.9	14.0	14.1
Incr Delay (d2), s/veh	0.7	0.0	0.7	6.0	0.0	0.0	0.1	3.8	0.0	1.6	0.2	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	1.3	10.0	0.0	0.0	0.4	13.7	0.0	8.6	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.3	0.0	44.3	48.9	0.0	0.0	30.3	37.7	0.0	47.5	14.2	14.3
LnGrp LOS	D	A	D	D	A		C	D		D	B	B
Approach Vol, veh/h		53			203	A		351	A		543	
Approach Delay, s/veh		44.3			48.9			37.4			35.8	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	25.0	43.0		23.0		68.0		29.0				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	20.5	38.5		18.5		63.5		24.5				
Max Q Clear Time (g_c+I1), s	13.3	20.1		3.6		5.2		14.2				
Green Ext Time (p_c), s	0.8	1.9		0.1		1.2		0.8				
Intersection Summary												
HCM 6th Ctrl Delay				39.0								
HCM 6th LOS				D								
Notes												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th TWSC
 1: US 50 & Pine Cone Rd

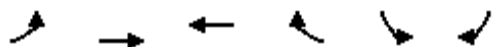
Intersection						
Int Delay, s/veh	2.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑↑	↑↑↑	↗		↗
Traffic Vol, veh/h	135	2927	1524	33	0	110
Future Vol, veh/h	135	2927	1524	33	0	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	Yield	-	None
Storage Length	650	-	-	0	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	147	3182	1657	36	0	120
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	1657	0	-	0	-	829
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.34	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.12	-	-	-	-	3.92
Pot Cap-1 Maneuver	186	-	-	-	0	269
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	186	-	-	-	-	269
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	SB			
HCM Control Delay, s	3.2	0	28.7			
HCM LOS			D			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	186	-	-	-	269	
HCM Lane V/C Ratio	0.789	-	-	-	0.444	
HCM Control Delay (s)	72.4	-	-	-	28.7	
HCM Lane LOS	F	-	-	-	D	
HCM 95th %tile Q(veh)	5.4	-	-	-	2.2	

HCM 6th Signalized Intersection Summary

2: River Rd/Retail Rd & US 50

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	179	2550	17	15	1571	85	10	5	10	366	5	143
Future Volume (veh/h)	179	2550	17	15	1571	85	10	5	10	366	5	143
Initial Q (Qb), veh	0	0	0	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	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	195	2772	0	16	1708	82	11	5	10	398	5	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	331	2876		32	1973	95	476	162	323	466	543	
Arrive On Green	0.19	0.56	0.00	0.02	0.40	0.40	0.29	0.29	0.29	0.29	0.29	0.00
Sat Flow, veh/h	1781	5106	1585	1781	4992	239	1411	557	1113	1398	1870	0
Grp Volume(v), veh/h	195	2772	0	16	1164	626	11	0	15	398	5	0
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1827	1411	0	1670	1398	1870	0
Q Serve(g_s), s	10.5	54.5	0.0	0.9	33.0	33.1	0.6	0.0	0.7	29.8	0.2	0.0
Cycle Q Clear(g_c), s	10.5	54.5	0.0	0.9	33.0	33.1	0.8	0.0	0.7	30.5	0.2	0.0
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.67	1.00		0.00
Lane Grp Cap(c), veh/h	331	2876		32	1345	722	476	0	485	466	543	
V/C Ratio(X)	0.59	0.96		0.51	0.87	0.87	0.02	0.00	0.03	0.85	0.01	
Avail Cap(c_a), veh/h	331	2876		178	1345	722	476	0	485	466	543	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.1	21.9	0.0	51.1	29.2	29.2	26.8	0.0	26.7	37.6	26.5	0.0
Incr Delay (d2), s/veh	2.7	10.3	0.0	11.9	7.6	13.2	0.0	0.0	0.0	14.4	0.0	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.2	28.9	0.0	0.9	20.0	22.6	0.4	0.0	0.5	17.5	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	32.2	0.0	63.1	36.8	42.4	26.8	0.0	26.7	52.0	26.5	0.0
LnGrp LOS	D	C		E	D	D	C	A	C	D	C	
Approach Vol, veh/h		2967	A		1806			26			403	A
Approach Delay, s/veh		32.8			39.0			26.7			51.7	
Approach LOS		C			D			C			D	
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		35.0	6.4	63.6		35.0	24.0	46.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		30.5	10.5	50.5		30.5	19.5	41.5				
Max Q Clear Time (g_c+I1), s		2.8	2.9	56.5		32.5	12.5	35.1				
Green Ext Time (p_c), s		0.1	0.0	0.0		0.0	0.3	4.9				
Intersection Summary												
HCM 6th Ctrl Delay			36.4									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												























HCM 6th Signalized Intersection Summary 3: US 50 & Fortune Dr



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↔↔		↑↑↑		↔	↔
Traffic Volume (veh/h)	532	0	1428	106	200	267
Future Volume (veh/h)	532	0	1428	106	200	267
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	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	0	1870	1870	1870	1870
Adj Flow Rate, veh/h	578	0	1552	103	217	217
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2	2	2	2
Cap, veh/h	656	0	2549	169	260	533
Arrive On Green	0.19	0.00	0.52	0.52	0.15	0.15
Sat Flow, veh/h	3456	578	5060	325	1781	1585
Grp Volume(v), veh/h	578	52.0	1080	575	217	217
Grp Sat Flow(s),veh/h/ln	1728	D	1702	1812	1781	1585
Q Serve(g_s), s	17.1		23.4	23.4	12.4	11.1
Cycle Q Clear(g_c), s	17.1		23.4	23.4	12.4	11.1
Prop In Lane	1.00			0.18	1.00	1.00
Lane Grp Cap(c), veh/h	656		1774	944	260	533
V/C Ratio(X)	0.88		0.61	0.61	0.83	0.41
Avail Cap(c_a), veh/h	757		1774	944	373	633
HCM Platoon Ratio	1.00		1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00		1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4		17.6	17.6	43.6	26.8
Incr Delay (d2), s/veh	10.6		1.6	2.9	10.5	0.5
Initial Q Delay(d3),s/veh	0.0		0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.5		13.4	14.6	10.3	7.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.0		19.2	20.6	54.1	27.3
LnGrp LOS	D		B	C	D	C
Approach Vol, veh/h			1655		434	
Approach Delay, s/veh			19.7		40.7	
Approach LOS			B		D	
Timer - Assigned Phs			3	4		6
Phs Duration (G+Y+Rc), s			24.9	59.7		20.3
Change Period (Y+Rc), s			5.0	5.0		5.0
Max Green Setting (Gmax), s			23.0	45.0		22.0
Max Q Clear Time (g_c+I1), s			19.1	25.4		14.4
Green Ext Time (p_c), s			0.9	10.7		0.9
Intersection Summary						
HCM 6th Ctrl Delay			30.1			
HCM 6th LOS			C			






















HCM 6th Signalized Intersection Summary

4: Ramp 2 & Traditions Pkwy

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	15	10	28	37	10	13	163	28	10	179	84
Future Volume (veh/h)	135	15	10	28	37	10	13	163	28	10	179	84
Initial Q (Qb), veh	0	0	0	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	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	147	16	0	30	40	10	14	177	27	11	195	68
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	19		339	238	59	873	2322	349	933	1402	1188
Arrive On Green	0.16	0.16	0.00	0.16	0.16	0.16	0.75	0.75	0.75	0.75	0.75	0.75
Sat Flow, veh/h	1075	117	1585	1397	1444	361	1116	3098	465	1178	1870	1585
Grp Volume(v), veh/h	163	0	0	30	0	50	14	100	104	11	195	68
Grp Sat Flow(s),veh/h/ln	1192	0	1585	1397	0	1805	1116	1777	1787	1178	1870	1585
Q Serve(g_s), s	12.0	0.0	0.0	0.0	0.0	2.5	0.4	1.6	1.6	0.3	3.1	1.2
Cycle Q Clear(g_c), s	14.5	0.0	0.0	1.6	0.0	2.5	3.4	1.6	1.6	1.9	3.1	1.2
Prop In Lane	0.90		1.00	1.00		0.20	1.00		0.26	1.00		1.00
Lane Grp Cap(c), veh/h	262	0		339	0	297	873	1332	1339	933	1402	1188
V/C Ratio(X)	0.62	0.00		0.09	0.00	0.17	0.02	0.08	0.08	0.01	0.14	0.06
Avail Cap(c_a), veh/h	543	0		621	0	662	873	1332	1339	933	1402	1188
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	0.0	0.0	37.3	0.0	37.7	4.2	3.5	3.5	3.7	3.7	3.4
Incr Delay (d2), s/veh	2.4	0.0	0.0	0.1	0.0	0.3	0.0	0.1	0.1	0.0	0.2	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.7	0.0	0.0	1.2	0.0	2.0	0.1	0.9	0.9	0.1	1.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	0.0	0.0	37.4	0.0	37.9	4.2	3.6	3.6	3.8	3.9	3.5
LnGrp LOS	D	A		D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		163	A		80			218			274	
Approach Delay, s/veh		46.3			37.7			3.6			3.8	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		83.2		21.8		83.2		21.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		57.5		38.5		57.5		38.5				
Max Q Clear Time (g_c+I1), s		5.4		16.5		5.1		4.5				
Green Ext Time (p_c), s		1.3		0.9		1.5		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			16.9									
HCM 6th LOS			B									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												





















HCM 6th Signalized Intersection Summary

5: Seagale Rd & Ramp 3

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	5	10	21	5	166	10	28	22	182	26	10
Future Volume (veh/h)	10	5	10	21	5	166	10	28	22	182	26	10
Initial Q (Qb), veh	0	0	0	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	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	5	10	23	5	0	11	30	22	198	28	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	21	42	97	8		1277	879	645	1249	1639	
Arrive On Green	0.04	0.04	0.04	0.04	0.04	0.00	0.88	0.88	0.88	0.88	0.88	0.00
Sat Flow, veh/h	1411	557	1113	925	222	1585	1382	1003	735	1352	1870	1585
Grp Volume(v), veh/h	11	0	15	28	0	0	11	0	52	198	28	0
Grp Sat Flow(s),veh/h/ln	1411	0	1670	1147	0	1585	1382	0	1738	1352	1870	1585
Q Serve(g_s), s	0.0	0.0	0.9	1.9	0.0	0.0	0.1	0.0	0.4	2.3	0.2	0.0
Cycle Q Clear(g_c), s	0.6	0.0	0.9	2.8	0.0	0.0	0.3	0.0	0.4	2.7	0.2	0.0
Prop In Lane	1.00		0.67	0.82		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	132	0	63	106	0		1277	0	1523	1249	1639	
V/C Ratio(X)	0.08	0.00	0.24	0.26	0.00		0.01	0.00	0.03	0.16	0.02	
Avail Cap(c_a), veh/h	542	0	549	532	0		1277	0	1523	1249	1639	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.9	0.0	49.1	50.4	0.0	0.0	0.8	0.0	0.8	1.0	0.8	0.0
Incr Delay (d2), s/veh	0.3	0.0	1.9	1.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.7	1.4	0.0	0.0	0.0	0.0	0.1	0.5	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.2	0.0	51.0	51.7	0.0	0.0	0.8	0.0	0.9	1.3	0.8	0.0
LnGrp LOS	D	A	D	D	A		A	A	A	A	A	
Approach Vol, veh/h		26			28	A		63			226	A
Approach Delay, s/veh		50.2			51.7			0.9			1.2	
Approach LOS		D			D			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		96.5		8.5		96.5		8.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		61.5		34.5		61.5		34.5				
Max Q Clear Time (g_c+I1), s		2.4		2.9		4.7		4.8				
Green Ext Time (p_c), s		0.3		0.1		0.8		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				9.0								
HCM 6th LOS				A								
Notes												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												




















HCM 6th Signalized Intersection Summary

6: Fort Churchill Rd & Ramp 6

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	971	10	643	0	0	0	0	354	384	487	310	0
Future Volume (veh/h)	971	10	643	0	0	0	0	354	384	487	310	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	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	1063	0	0				0	385	0	529	337	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, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	1510	0					0	949		624	1743	0
Arrive On Green	0.42	0.00	0.00				0.00	0.27	0.00	0.06	0.16	0.00
Sat Flow, veh/h	3563	0	1585				0	3647	1585	3456	3647	0
Grp Volume(v), veh/h	1063	0	0				0	385	0	529	337	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1728	1777	0
Q Serve(g_s), s	25.7	0.0	0.0				0.0	9.4	0.0	15.9	8.6	0.0
Cycle Q Clear(g_c), s	25.7	0.0	0.0				0.0	9.4	0.0	15.9	8.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1510	0					0	949		624	1743	0
V/C Ratio(X)	0.70	0.00					0.00	0.41		0.85	0.19	0.00
Avail Cap(c_a), veh/h	1510	0					0	949		773	1743	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.33	0.33	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	0.83	0.83	0.00
Uniform Delay (d), s/veh	24.8	0.0	0.0				0.0	31.6	0.0	47.9	26.0	0.0
Incr Delay (d2), s/veh	2.8	0.0	0.0				0.0	1.3	0.0	6.2	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(95%),veh/ln	16.6	0.0	0.0				0.0	7.5	0.0	12.1	7.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	0.0	0.0				0.0	32.9	0.0	54.1	26.2	0.0
LnGrp LOS	C	A					A	C		D	C	A
Approach Vol, veh/h		1063	A					385	A		866	
Approach Delay, s/veh		27.6						32.9			43.3	
Approach LOS		C						C			D	
Timer - Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		49.0		56.0			23.5	32.5				
Change Period (Y+Rc), s		4.5		4.5			4.5	4.5				
Max Green Setting (Gmax), s		44.5		51.5			23.5	23.5				
Max Q Clear Time (g_c+I1), s		27.7		10.6			17.9	11.4				
Green Ext Time (p_c), s		4.2		2.4			1.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			34.4									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												






















HCM 6th Signalized Intersection Summary

7: Fort Churchill Rd & Ramp 7

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	264	117	483	634	692	0	0	533	409
Future Volume (veh/h)	0	0	0	264	117	483	634	692	0	0	533	409
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
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				287	127	0	689	752	0	0	579	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, %				2	2	2	2	2	0	0	2	2
Cap, veh/h				619	650		783	2014	0	0	1056	
Arrive On Green				0.35	0.35	0.00	0.07	0.19	0.00	0.00	0.30	0.00
Sat Flow, veh/h				1781	1870	1585	3456	3647	0	0	3647	1585
Grp Volume(v), veh/h				287	127	0	689	752	0	0	579	0
Grp Sat Flow(s),veh/h/ln				1781	1870	1585	1728	1777	0	0	1777	1585
Q Serve(g_s), s				13.2	5.0	0.0	20.7	19.4	0.0	0.0	14.4	0.0
Cycle Q Clear(g_c), s				13.2	5.0	0.0	20.7	19.4	0.0	0.0	14.4	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				619	650		783	2014	0	0	1056	
V/C Ratio(X)				0.46	0.20		0.88	0.37	0.00	0.00	0.55	
Avail Cap(c_a), veh/h				619	650		872	2014	0	0	1056	
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	0.00	0.76	0.76	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				26.6	24.0	0.0	47.2	26.4	0.0	0.0	31.0	0.0
Incr Delay (d2), s/veh				2.5	0.7	0.0	7.5	0.4	0.0	0.0	2.0	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(95%),veh/ln				9.9	4.2	0.0	15.0	13.7	0.0	0.0	10.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				29.1	24.6	0.0	54.7	26.8	0.0	0.0	33.0	0.0
LnGrp LOS				C	C		D	C	A	A	C	
Approach Vol, veh/h					414	A		1441			579	A
Approach Delay, s/veh					27.7			40.1			33.0	
Approach LOS					C			D			C	
Timer - Assigned Phs				3	4		6	8				
Phs Duration (G+Y+Rc), s				28.3	35.7		41.0	64.0				
Change Period (Y+Rc), s				4.5	4.5		4.5	4.5				
Max Green Setting (Gmax), s				26.5	28.5		36.5	59.5				
Max Q Clear Time (g_c+I1), s				22.7	16.4		15.2	21.4				
Green Ext Time (p_c), s				1.1	3.1		1.5	6.2				
Intersection Summary												
HCM 6th Ctrl Delay				36.3								
HCM 6th LOS				D								
Notes												
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

8: Ramp 10 & Bryce

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	5	233	20	15	5	263	664	20	10	327	370
Future Volume (veh/h)	252	5	233	20	15	5	263	664	20	10	327	370
Initial Q (Qb), veh	0	0	0	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	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	274	5	0	22	16	4	286	722	20	11	355	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	359	7		60	49	12	838	2236	62	250	1235	
Arrive On Green	0.20	0.20	0.00	0.03	0.03	0.03	0.24	0.63	0.63	0.35	0.35	0.00
Sat Flow, veh/h	1751	32	1585	1781	1444	361	3456	3532	98	718	3554	1585
Grp Volume(v), veh/h	279	0	0	22	0	20	286	363	379	11	355	0
Grp Sat Flow(s),veh/h/ln	1783	0	1585	1781	0	1805	1728	1777	1853	718	1777	1585
Q Serve(g_s), s	15.5	0.0	0.0	1.3	0.0	1.1	7.2	9.9	9.9	1.2	7.6	0.0
Cycle Q Clear(g_c), s	15.5	0.0	0.0	1.3	0.0	1.1	7.2	9.9	9.9	11.1	7.6	0.0
Prop In Lane	0.98		1.00	1.00		0.20	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	365	0		60	0	61	838	1125	1173	250	1235	
V/C Ratio(X)	0.76	0.00		0.37	0.00	0.33	0.34	0.32	0.32	0.04	0.29	
Avail Cap(c_a), veh/h	365	0		314	0	318	838	1125	1173	250	1235	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.72	0.72	0.72	1.00	1.00	0.00
Uniform Delay (d), s/veh	39.4	0.0	0.0	49.6	0.0	49.6	32.8	8.9	8.9	29.7	24.8	0.0
Incr Delay (d2), s/veh	14.1	0.0	0.0	3.7	0.0	3.1	0.2	0.5	0.5	0.3	0.6	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.8	0.0	0.0	1.1	0.0	1.0	5.4	6.4	6.6	0.4	5.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	0.0	0.0	53.4	0.0	52.7	33.0	9.4	9.4	30.1	25.4	0.0
LnGrp LOS	D	A		D	A	D	C	A	A	C	C	
Approach Vol, veh/h		279	A		42			1028			366	A
Approach Delay, s/veh		53.5			53.0			16.0			25.6	
Approach LOS		D			D			B			C	
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		71.0		26.0	30.0	41.0		8.0				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		51.5		21.5	10.5	36.5		18.5				
Max Q Clear Time (g_c+I1), s		11.9		17.5	9.2	13.1		3.3				
Green Ext Time (p_c), s		5.3		0.6	0.1	2.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			25.0									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

9: Chaves Rd & Ramp 11

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	15	10	229	15	628	10	294	143	286	269	25
Future Volume (veh/h)	25	15	10	229	15	628	10	294	143	286	269	25
Initial Q (Qb), veh	0	0	0	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	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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	16	10	249	16	0	11	320	0	311	292	24
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	40	25	328	21		381	615		924	2125	174
Arrive On Green	0.04	0.04	0.04	0.20	0.20	0.00	0.33	0.33	0.00	0.27	0.64	0.64
Sat Flow, veh/h	1781	1076	673	1679	108	1585	1064	1870	1585	3456	3327	272
Grp Volume(v), veh/h	27	0	26	265	0	0	11	320	0	311	155	161
Grp Sat Flow(s),veh/h/ln	1781	0	1749	1786	0	1585	1064	1870	1585	1728	1777	1821
Q Serve(g_s), s	1.6	0.0	1.5	14.7	0.0	0.0	0.8	14.6	0.0	7.6	3.6	3.7
Cycle Q Clear(g_c), s	1.6	0.0	1.5	14.7	0.0	0.0	4.5	14.6	0.0	7.6	3.6	3.7
Prop In Lane	1.00		0.38	0.94		1.00	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	67	0	66	349	0		381	615		924	1135	1163
V/C Ratio(X)	0.40	0.00	0.40	0.76	0.00		0.03	0.52		0.34	0.14	0.14
Avail Cap(c_a), veh/h	314	0	308	349	0		381	615		924	1135	1163
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.96	0.96	0.96
Uniform Delay (d), s/veh	49.4	0.0	49.4	39.9	0.0	0.0	26.5	28.6	0.0	31.0	7.5	7.5
Incr Delay (d2), s/veh	3.9	0.0	3.8	14.4	0.0	0.0	0.1	3.1	0.0	0.2	0.2	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	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	1.3	12.4	0.0	0.0	0.4	11.3	0.0	5.7	2.5	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	0.0	53.2	54.3	0.0	0.0	26.6	31.7	0.0	31.2	7.7	7.8
LnGrp LOS	D	A	D	D	A		C	C		C	A	A
Approach Vol, veh/h		53			265	A		331	A		627	
Approach Delay, s/veh		53.3			54.3			31.5			19.4	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	32.6	39.0		8.4		71.6		25.0				
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s	13.5	34.5		18.5		52.5		20.5				
Max Q Clear Time (g_c+I1), s	9.6	16.6		3.6		5.7		16.7				
Green Ext Time (p_c), s	0.4	1.8		0.1		2.0		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				31.2								
HCM 6th LOS				C								
Notes												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												